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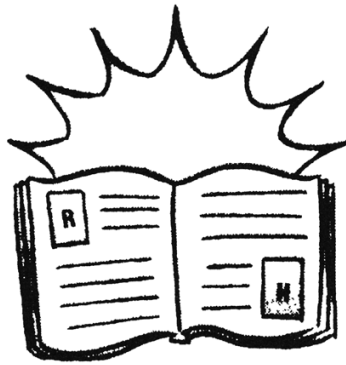
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# *Reading Horizons*

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# Reading Horizons

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## Volume 55, Number 1

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# Reading Horizons

A Journal of Literacy and Language Arts

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in all of education than reading



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## **English-Spanish Cognates in the Charlotte Zolotow Award Picture Books: Vocabulary, Morphology, and Orthography Lessons for Latino ELLs**

**José A. Montelongo, New Mexico State University**  
**Anita C. Hernández, New Mexico State University**  
**Roberta J. Herter, California Polytechnic State University**

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### **Abstract**

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English-Spanish cognates are words that are orthographically and semantically identical or nearly identical in English and Spanish as a result of a common etymology. Because of the similarities in the two languages, Spanish-dominant Latino English Language Learners (ELLs) can be taught to recognize English cognates thereby increasing their bilingualism and bi-literacy for these two languages. There are over 20,000 English-Spanish cognates, many of the academic vocabulary words. Despite their vast educational potential, however, cognates are typically excluded as a word category in the language arts curriculum, thus denying Latino ELLs of a resource for acquiring English-Spanish bilingualism and bi-literacy. English-Spanish cognates may be distinguished from non-cognate words by their rule-governed morphological and orthographic structures. To capitalize on the inherent differences between cognates and non-cognates, the present manuscript presents morphological and orthographic strategies that can be used to teach Latino ELLs to recognize the rich cognate vocabulary found in picture books, specifically, those books which have been cited as Charlotte Zolotow Award winners and honor books. Through these strategically designed language activities revolving around the read-alouds of the Zolotow Award books, teachers can introduce Latino ELLs to cognates in the early primary school years to encourage their development of bilingualism and bi-literacy.

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## **English-Spanish Cognates in the Charlotte Zolotow Award Picture Books: Vocabulary, Morphology, and Orthography Lessons for Latino ELLs**

Latino English Language Learners (ELLs) are among the fastest growing groups in the United States. Many Latino ELLs enter the primary grades having learned Spanish as their first language. For these students, becoming literate in both Spanish and English is a desirable and very reachable goal. Designing teaching materials and strategies that will promote the bi-literacy development of Latino ELLs should be foremost among the goals of bilingual educators.

An innovative way for teachers to encourage the development of Spanish-English bi-literacy is to teach primary school Latino ELLs about English-Spanish *cognates* through picture book read-alouds. Cognates are words in English and Spanish that are similar in spelling and meaning as a result of a common Latinate etymology. The following pairs of English/*Spanish* words are examples of cognates: animal/*animal*, curiosity/*curiosidad*, and impossible/*imposible*. By learning about the cognates contained in the picture books that are read aloud to them, Latino ELLs can build a bi-literacy foundation early in their education that will earn them access to thousands of vocabulary words and myriads of new concepts and ideas.

English-Spanish cognates constitute an especially important subpopulation of the English language. There are more than 20,000 English-Spanish cognates (Nash, 1999), many of which are the academic vocabulary words important for school success. More than 70% of the 570 words on the Academic Word List (AWL) are English-Spanish cognates (Hiebert & Lubliner, 2008). Not surprisingly, most of the subject headings in the Dewey Decimal System are English-Spanish cognates (Montelongo, 2012).

Despite their prominence in the English lexicon, textbooks, and trade books, cognates are seemingly non-existent as a category of words in the school curriculum. Anecdotal evidence suggests that language arts and content

area textbooks devote less attention to cognates as a classification of words than they do to highly specialized words such as palindromes, homonyms, and homographs, whose numbers and usefulness do not nearly approach the educational or numerical significance of cognates. As a result of the inattention to cognates, Latino ELLs are deprived of a classificatory word scheme that can help them understand the differences between the language they know (Spanish) and the one they are to acquire (English).

Classificatory schemes are useful if students learn ways to differentiate one word category from another. Fortunately, this is the case with English-Spanish cognates and non-cognates. Cognates, because of their Latinate origin, typically possess morphological structures that are different from those of non-cognates. Many cognates consists of a prefix, a root word, and a suffix (e.g., *impermeable*), whereas non-cognates simply stand alone (e.g., *clever*). The differences in morphology between cognates and non-cognates make it possible for students to learn to recognize cognates on the basis of morphological structure. As a result, teachers can design morphology lessons using the cognate vocabulary in picture books to teach students to recognize cognates.

Teachers can also design orthography lessons using the cognates from the read-aloud picture books. This is due to the fact that there are spelling regularities for transforming English words to Spanish words. As part of the cognate instruction they give, teachers can present spelling conversion rules to help students recognize cognate patterns and become better spellers.

Teaching English-Spanish cognates to Latino ELLs represents an “assets” approach in literacy instruction—one that builds on the knowledge that students already have—in contrast to a “deficit” approach, which assumes that Latino English learners are deficient because they lack English (Valencia, 2010). As pointed out by Lubliner and Hiebert (2011), English-Spanish cognates benefit Latino ELLS with “funds of knowledge” that give them access to academic vocabularies—an advantage to acquiring language in the language arts, mathematics, sciences, and social sciences. Students who learn a Latinate language such as Spanish have an advantage in learning and reading academic vocabulary over their peers who don’t (Corson, 1997). Teaching Latino ELLS about cognates and their morphology and orthography enhances the inherent verbal prowess that accompanies bilingualism and bi-literacy.

### Picture Books and Cognate Vocabulary Words

Picture books are an excellent source for vocabulary because their composition includes words much richer than those found in basal readers (Beck, McKeown, & Kucan 2002; 2008). Research has demonstrated that elementary schoolchildren learn new vocabulary words through picture book read-alouds, especially when they are accompanied by meaningful activities. Successful vocabulary-building strategies built around picture book read-alouds include the use of definitions, examples, imagery, and morphemic analysis among others (Kindle, 2009).

Picture books are an exceptional resource for English-Spanish cognates (Montelongo, Duran, & Hernandez, 2013). Teaching Latino ELLs about cognates may be seen as naturally powerful vocabulary-building strategy because it builds upon the many Spanish words that these students can already define, cite examples of, and imagine. Including cognate morphology and orthography lessons are especially applicable as picture book read-aloud activities.

In an influential book on vocabulary instruction, Beck, McKeown, and Kucan (2002) developed a three-tiered scheme for selecting the words from read-aloud picture books to teach as enriched vocabulary. *Tier One* words are defined as those high-frequency words such as *book*, *red*, and *apple* that do not require direct classroom instruction as to their meanings because students have learned them through experiences outside of school. *Tier Two* words, on the other hand, are those vocabulary words that: a) are not ordinarily used or heard in daily language; b) appear across a variety of content areas; c) are important for understanding a selection; and d) allow for rich representations and connections to other words (Kucan, 2012). Beck, et al. (2002) suggested that teachers dedicate the majority of their vocabulary instructional time to teach *Tier Two* words. The words *incredible*, *satisfy*, and *tolerate* are examples of *Tier Two* words. Finally, *Tier Three* words are those lower frequency words that are specific to particular topics: *aphid*, *antenna*, and *pollen*. As *Tier Three* words do not usually appear across a variety of texts, their definitions should be explicitly taught when their meanings are necessary for the understanding of a particular text.

Along with their definitions of the three tiers for selecting vocabulary words from picture books, Beck, McKeown, and Kucan (2002) listed examples

of Tier Two target vocabulary words for instruction from each of the 83 read-aloud picture books they sampled. Among the examples presented by Beck, et al. (2002) were: *concentrate*, *impatient*, and *ridiculous* which are the cognates of the Spanish words *concentrar*, *impaciente*, and *ridículo*, respectively. That some of the examples presented by Beck and her associates were cognates is no accident. An analysis of the Beck, et al. (2002) Tier Two vocabulary words revealed that more than half of the words (53%) were English-Spanish cognates (Montelongo, Hernandez, Goenaga de Zuazu, Esquivel, Serrano-Wall, Plaza, Madrid, & Campos, 2016). Similar results were found in an analysis of the example Tier Two cognate words listed in a later book by Beck, McKeown, and Kucan (2008).

### **Quality Picture Books—The Charlotte Zolotow Award**

To design rich cognate vocabulary lessons to accompany read-alouds, teachers require quality picture books. This is consistent with the findings of Fisher, Flood, Lapp, and Frey (2004), who observed that expert teachers chose high-quality picture books for their read-alouds, where quality is defined as a book that has won a book award (e.g., Caldecott Medal Award) or by its appearance on a list of recommended books by a prominent literacy organization (e.g., The American Library Association).

In this paper, we present the exemplary set of quality picture books that have been awarded the Charlotte Zolotow Award and how these books can be used to design cognate vocabulary, morphology, and orthography lessons. The award honors the work of the famous children's books author, Charlotte Zolotow (1915-2013), and is given yearly to the best picture book and honors books for children. The award is overseen by the Cooperative Children's Book Center (2015), the children's literature school at the School of Education, University of Wisconsin-Madison.

The picture books that have been honored as Charlotte Zolotow Award winners or honor books contain many English-Spanish cognates. The average number of cognates for each of the 180 award and honor books for the years (2000-2015) was 24.96. The picture books, *Ma Dear's Aprons* (McKissack 2000) and *Uncle Peter's Amazing Chinese Wedding* (Look, 2006) each contain over eighty cognates. On the other hand, the pre-school picture books, *Apple Pie ABC* (Murray, 2012) and *How to Heal a Broken Wing* (Graham, 2008) each contain only three. The Zolotow picture books range in reading levels from board books to

sixth-grade reading levels according to levels provided by the Accelerated Reader Book Finder (Renaissance Learning, 2015).

The Charlotte Zolotow Award books contain many instances of Tier Two words. Examples of Tier Two words and the Charlotte Zolotow books from which they were drawn are presented in Table 1. The examples of the Tier Two cognate pairs in the table typify the richness of the vocabulary in the Zolotow picture books. Pairs such as *devastate/devastar*, *ament/lamentar* and *patient/paciente*, stand out in contrast to basic sight words typically found in basal readers. Since many of the cognates are in a Latino ELL's Spanish listening vocabulary, learning the English cognate establishes a connection in memory between the English word and its meaning in Spanish.

**Table 1:** Examples of Tier Two cognate words from the Charlotte Zolotow Award books.

Picture Book	Examples of Tier Two Cognate Words
<i>A Sick Day for Amos McGee</i>	alarm/ <i>alarma</i> ; allergy/ <i>alergia</i> ; patient/ <i>paciente</i> ; prepare/ <i>preparar</i>
<i>All You Need for a Snowman</i>	absolutely/ <i>absolutamente</i> ; except/ <i>excepto</i> ; surprise/ <i>sorpresa</i> ; triple/ <i>triple</i>
<i>Always and Forever</i>	companion/ <i>compañero</i> ; memory/ <i>memoria</i> , problem/ <i>problema</i> ; suggest/ <i>sugerir</i>
<i>Balloons Over Broadway</i>	articulate/ <i>articular</i> ; destination/ <i>destino</i> ; magnificent/ <i>magnífico</i> ; pattern/ <i>patrón</i>
<i>Click, Clack, Moo Cows that Type</i>	decide/ <i>decidir</i> ; furious/ <i>furioso</i> ; neutral/ <i>neutral</i> ; ultimatum/ <i>ultimatum</i>
<i>Country Fair</i>	content/ <i>contento</i> ; nervous/ <i>nervioso</i> ; section/ <i>sección</i> ; vote/ <i>votar</i>

**Table 1:** cont.

<i>George Washington's Teeth</i>	battle/ <i>batalla</i> ; fierce/ <i>feroz</i> ; invade/ <i>invadir</i> ; secure/ <i>seguro</i> ; sentinel/ <i>centinela</i>
<i>How I Learned Geography</i>	devastate/ <i>devastar</i> ; enthusiasm/ <i>entusiasmo</i> misery/ <i>miseria</i> ; savor/ <i>saborear</i>
<i>Mabela the Clever</i>	attention/ <i>atención</i> ; initiate/ <i>iniciar</i> ; offer/ <i>ofrecer</i> ; society/ <i>sociedad</i>
<i>Pictures from our Vacation</i>	appear/ <i>aparecer</i> ; interesting/ <i>interesante</i> ; journey/ <i>jornada</i> ; surprised/ <i>sorprendido</i>
<i>The All-I'll Ever Want Christmas Doll</i>	excitement/ <i>excitación</i> ; harmony/ <i>armonía</i> ; imaginary/ <i>imaginario</i> ; sculpture/ <i>escultura</i>
<i>Three Cheers for Catherine the Great</i>	certain/ <i>cierto</i> ; entire/ <i>entero</i> ; mystery/ <i>misterio</i> ; promise/ <i>prometer</i>
<i>Uncle Peter's Amazing Chinese Wedding</i>	ceremony/ <i>ceremonia</i> ; champion/ <i>campeón</i> ; fertility/ <i>fertilidad</i> ; science/ <i>ciencia</i>
<i>Zen Shorts</i>	accent/ <i>acento</i> ; exclaim/ <i>exclamar</i> ; lament/ <i>lamentar</i> ; preoccupied/ <i>preocupado</i>

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### **Morphology and Orthography Lessons to Accompany the Picture Book Read-Alouds**

There are several types of morphology lessons teachers can design with the cognates they find in the Zolotow picture books they use for read-alouds. Since many cognates are derived from Latin and Greek roots, it is possible for teachers to use cognate prefixes, roots, and suffixes to show the morphological relatedness of words both across and within English and Spanish.

Teachers can promote the development of a cognate-recognition strategy by teaching their Latino ELLs that certain Latin and Greek prefixes are identical or similar in both English and Spanish. Teachers can then provide their students with lessons on such prefixes along with examples of English-Spanish cognate pairs that share the same prefix. From these examples, Latino ELLs can learn the prefixes which signal the presence of a cognate and use this knowledge to recognize cognates. The prefix, /inter-/, for example, can be

**Table 2:** Prefix generalizations and examples from the Charlotte Zolotow Award Books.

Prefix	Meaning	Book	Example Cognates
ad-	to, toward	<i>Mrs. Crump's Cat</i> <i>Ready for Anything</i> <i>Helen's Big World: The Life of Helen Keller</i>	admire/admirar admit/admitir
bi-	two	<i>Princess Hyacinth (The Surprising Tale...)</i>	bicycle/bicicleta binoculars/binoculares
con-	with, together	<i>When I Was Young in the Mountains</i> <i>Balloons Over Broadway: The True Story...</i>	congregation/ congregación construct/ construir
dis-	not	<i>Monet Paints a Day</i> <i>Precious and the Boo Hag</i>	disappear/desaparecer disobey/desobedecer
e-	out	<i>Who Will I Be, Lord?</i> <i>Pierre in Love</i>	education/educación enormous/enorme
extra-	outside	<i>Tia Isa Wants a Car</i> <i>Tea Cakes for Tosh</i>	extra/extra extract/extracto
im-	not	<i>Click, Clack, Moo: Cows That Type</i> <i>Mary Smith</i>	impatient/impaciente impossible/imposible
in-	into	<i>Clever Beatrice: An Upper Peninsula Conte</i> <i>Cool Cat, Hot Dog</i> <i>Uncle Peter's Amazing Chinese Wedding</i>	insist/insistir inspire/inspirar
inter-	between, among	<i>Lilly's Big Day</i>	intercept/inteceptar interpret/interpretar
pre-	before	<i>Maxwell's Mountain</i> <i>Zen Shorts</i>	predictable/predecible preoccupy/preocupar
re-	again	<i>Henry's First-Moon Birthday</i> <i>I Stink!</i> <i>Gorilla! Gorilla!</i>	reconstruct/reconstruir recycle/reciclar
sub-	below	<i>Niño Wrestles the World</i>	submarine/submarine submission/sumisión
super-	above	<i>Flicker Flash</i> <i>Little Dog Poems</i> <i>Circle Dogs</i>	superhero/superheroe supervise/supervisar
tri-	three	<i>All You Need for a Snowman</i> <i>Country Fair</i>	triangle/triángulo triple/triple
uni-	one	<i>Sick Day for Amos McGee</i>	unicycle/uniciclo uniform/uniforme



found in the English and Spanish cognate pairs: interfere/*interferir*, interrupt/*interrumpir*, and intersection/*intersección* among others. Having learned these examples, students can generalize this knowledge to other encounters with words possessing /inter-/: intercept/*interceptar*, interrogate/*interrogar* and interval/*interval*. Examples of common Latin and Greek prefixes and their

**Table 3:** Examples of suffix generalizations from the Charlotte Zolotow Award Books.

Picture Books	Suffix Generalization	Examples
<i>Balloons over Broadway...</i>	<b>-al/-ico</b>	electrical/eléctrico magical/mágico mechanical/mecánico
<i>Pierre in Love</i>	<b>-ance/-ancia</b>	distance/distancia; elegance/elegancia; importance/importancia
<i>A River of Words: The Story of William Carlos Williams</i>	<b>-ary/-ario</b>	literary/literario; ordinary/ordinario; salary/salario
<i>Monet Paints a Day</i>	<b>-ent/-ente</b>	crescent/creciente; different/diferente; frequent/frecuente
<i>Princess Hyacinth (The Surprising Tale of a Girl Who Floated)</i>	<b>-ly/-mente</b>	exactly/exactamente; firmly/firmente; horribly/horriblemente
<i>Maxwell's Mountain</i>	<b>-ous/-oso</b>	glorious/ <i>glorioso</i> ; rigorous/ <i>riguroso</i> ; studious/ <i>estudioso</i>
<i>Year of the Jungle</i>	<b>-sion/-sión</b>	confusion/ <i>confusión</i> ; explosion/ <i>explosión</i> ; television/ <i>televisión</i>
<i>Lily's Big Day</i>	<b>-tion/-ción</b>	exception/ <i>excepción</i> ; perfection/ <i>perfección</i> ; reception/ <i>recepción</i>
<i>Uncle Peter's Amazing Chinese Wedding</i>	<b>-ty/-dad</b>	fertility/ <i>fertilidad</i> ; quality/ <i>cualidad</i> ; specialty/ <i>especialidad</i>

associated English-Spanish cognates are presented in Table 2, along with the titles of Zolotow Award books where they can be found.

Teachers can also use suffixes and word endings to show the relatedness of English suffixes and Spanish suffixes. For example, teachers can use cognates to show the relationships between English suffixes and Spanish ones. Examples of suffix generalizations and the Charlotte Zolotow Award books from which they were drawn are presented in Table 3. As may be inferred from Table 3, there are consistent English-to-Spanish suffix generalizations that Latino ELLs can use to transform English words to Spanish words and the converse. For example, many English adverbs that end in the suffix, “-ly,” become Spanish adverbs that end in “-mente” as in finally/*finalmente*.

Along with affix generalizations, teachers can use Latin and Greek roots shared by English and Spanish to derive the meanings of words possessing those roots. Several of the root word generalizations from the Charlotte Zolotow Award books are shown in Table 4 along with their meanings and etymologies. Using the cognates as a ground, a teacher can brainstorm with the Latino ELLs to generate other instances of English and/or Spanish words having a particular root. For example, the root word, -fend-, as in defend/*defender*, can be used to yield the cognates, indefensible/*indefendible* and defensive/*defensivo*. The same root can also be used to generate other cognates such as offend/*ofender* and offense/*ofensa*, as well as fender/*defensa*.

English-Spanish cognates may also be used to design lessons that specifically teach spelling rules for converting English words to Spanish words and vice-versa. For example, the English words possessing the /ph/ digraph may be transformed into Spanish words where the English digraph is replaced by the grapheme /f/ as in the examples: elephant/*elefante*, digraph/*digrafo*, and pharmacy/*farmacia*. Also, the English words, “statue,” “skeleton,” and “spectacle,” become the Spanish words beginning with the epenthetic schwa: *estatua*, *esqueleto*, and *espectáculo*, respectively.

In addition to helping them recognize cognates and develop their vocabularies, there are spelling generalizations involving English double consonants that can be taught to make Latino ELLs better spellers. Many English words having double consonants become Spanish words with single consonants and vice-versa. The English “tunnel” becomes the Spanish túnel.

**Table 4:** Examples of root word generalizations from the Charlotte Zolotow Award Books.

Picture Book	Root Generalization (meaning; Etymology)	Examples
<i>Helen's Big World: The Life of Helen Keller</i>	<b>-auto-</b> (self; Greek)	autobiography/autobiografía
<i>Dave the Potter: Artist, Poet, Slave</i>	<b>-basi-</b> (at the bottom; Greek)	basic/básico
<i>Mrs. Crump's Cat</i>	<b>-clar-</b> (clear; Latin)	declare/declarar
<i>Mary Smith</i>	<b>-duc-</b> (lead; Latin)	conduct/conducir
<i>How I Learned Geography</i>	<b>-extra-</b> (outer; Latin)	strange/extraño
<i>Swirl by Swirl: Spirals in Nature</i>	<b>-fend-</b> (strike; Latin)	defend/defender
<i>Sophie's Squash</i>	<b>-ger-</b> (bear, carry; Latin)	suggest/sugerir
<i>Three by the Sea</i>	<b>-herb-</b> (grass; Latin)	herb/hierba
<i>My Garden</i>	<b>-in-</b> (not; Latin)	invisible/invisible
<i>We March</i>	<b>-jus-</b> (justice; Latin)	justice/justicia
<i>The Cow That Laid an Egg</i>	<b>-mot-</b> (motion; Latin)	commotion/conmoción
<i>Sleep Like a Tiger</i>	<b>-nunci-</b> (announce; Latin)	announce/anunciar
<i>Flabbermashed about You</i>	<b>-phon-</b> (sound; Greek)	microphone/micrófono
<i>Tia Isa Wants a Car</i>	<b>-rid-</b> (laugh; Latin)	ridiculous/ridículo
<i>Helen's Big World: The Life of Helen Keller</i>	<b>-sci-</b> (know; Latin)	conscious/consciente
<i>Maxwell's Mountain</i>	<b>-typ-</b> (model; Greek)	typical/típico
<i>County Fair</i>	<b>-uni-</b> (one; Latin)	unicycle/uniciclo
<i>Precious and the Boo Hag</i>	<b>-vict-</b> (conquer; Latin)	victory/victoria
<i>A Sick Day for Amos McGee</i>	<b>-zo-</b> (animal; Greek)	zoo/zoológico

Likewise, the Spanish word, *tráfico* becomes the English word, “traffic.” Spelling generalizations for English words having double consonants are presented in Table 5.

### Concluding Remarks

In today's elementary schools, English-Spanish cognates are an understudied and under-taught category of words. The sheer number of cognates and

**Table 5:** . Examples of spelling generalizations from the Charlotte Zolotow Award Books.

Picture Book	Spelling Generalization	Cognate Example
<i>Niño Wrestles the World</i>	cc→c	accept/aceptar
<i>The Hello, Goodnight Window</i>	dd→d	middle/medio
<i>Oscar's Half-Birthday</i>	ff→f	traffic/tráfico
<i>Always and Forever</i>	gg→g	suggestion/sugerencia
<i>Oh, No!</i>	ll→l	allergy/alergia
<i>Superdog, The Heart of a Hero</i>	mm→m	comment/comentar
<i>Bear Snores On</i>	nn→n	tunnel/túnel
<i>An Island Grows</i>	pp→p	appear/aparecer
<i>Pierre in Love</i>	rr→r	hurricane/huracán
<i>Samantha on a Roll</i>	ss→s	depression/depresión
<i>Chavela and the Magic Bubble</i>	tt→t	confetti/confeti
<i>Silent Music: A Story from Baghdad</i>	-ph-/f-	calligraphy/caligrafía
<i>Meet the Dogs of Bedlam Farm</i>	-th-/t-	therapy/terapia
<i>Samantha on a Roll</i>	sc-/esc-	scene/escena
<i>The Hatseller and the Monkeys</i>	sp-/esp-	spirit/espíritu
<i>Three Cheers for Catherine the Great</i>	st-/est-	stamp/estampilla

their value as academic vocabulary words demand their inclusion into the curriculum. Curriculum experts and curriculum writers need to design and incorporate morphology and orthography lessons on cognates that will foster the cognate recognition strategies described in this manuscript. Teachers in the earliest elementary grades can take the initiative and design their own cognate morphology and orthography lessons to give Latino ELLs the deserved linguistic advantage that follows from the acquisition and knowledge of the English and Spanish languages. The present analysis of the Charlotte Zolotow Award books suggest that the picture books that have been recognized by this award are excellent vehicles for designing the morphology and orthography lessons to accompany read-alouds that aim to teach the cognate recognition strategies.

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## **Motivated to Engage: Learning from the Literacy Stories of Preservice Teachers**

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### **Abstract**

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The influence of motivation on readers' behaviors has received wide attention in literacy scholarship. The importance of readers' motivations for reading becomes critical when considered in relation to readers' engagement with reading activities and their perceptions of themselves as competent. This article presents a qualitative study of pre-service teachers' literacy history stories and reflections on their identities as literate individuals. The stories represented pre-service teachers' perceptions of home and school literacy experiences that either motivated or discouraged them from engaging in literacy activities. Their reflections were an account of how their experiences may have influenced their current self-perceptions and engagement with literacy. The findings provide insight into the ways in which specific literacy practices and conditions surrounding those practices motivated students to engage or discouraged them from engaging in literacy activities across time. This study has implications for how literacy educators think about motivation and its value in supporting learners across time.

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## **Motivated to Engage: Learning from the Literacy Stories of Preservice Teachers**

Classroom teachers act as important gatekeepers of literacy access, knowledge, and motivation for elementary learners, with an influence sometimes extending well beyond students' membership in particular classrooms. As Ruddell and Unrau (2004) point out, teachers' content knowledge and pedagogical decisions are strongly influenced by the affective and cognitive factors that made up their own backgrounds in classrooms. So, teachers implement literacy instruction under the influence of their own histories, creating literacy experiences that may place a lasting stamp on their students. This perpetuating cycle continues to color the perspectives of successive generations of literacy learners.

The significance of this cycle for teacher education became clear to us as a result of reading the stories of pre-service teachers in our courses, who wrote about and reflected upon literacy experiences that they perceived to have had an impact on their current literate identities. Gathered as part of a larger study on the influence of the "apprenticeship of observation" (Lortie, 1975, p. 61), this collection of stories sheds light on the experiences of these students, but may also hold important implications for classroom teachers regarding a broad range of school practices and the long-lasting effects they can have on literacy learners. Applegate and Applegate (2004) explain the troubling impact that pre-service teachers, who are not readers themselves, might have on their students' literacy futures, a finding they label "The Peter Effect" (p. 556). This finding increases our urgency as teacher educators to identify school experiences from our pre-service teachers' literacy histories that tended to motivate or discourage their literacy interest. As a result of our concern, we examined these stories with the following questions in mind: 1) What patterns do we see in the literacy histories of pre-service elementary teachers? and 2) What can we learn about school-based literacy practices from pre-service teachers' stories?

We were struck by the consistency in our participants' stories with respect to experiences that they perceived to motivate and discourage them from engaging in literacy in the moment and/or throughout their lives. We were reminded of the power that teachers, ourselves included, have over who our students become. In this article, we share stories of school literacy practices remembered by our students, accompanied by their perceptions of the ways these experiences motivated or discouraged them from literacy interactions. We end with our interpretations of what the patterns in this data might reveal about the long-lasting influence of school literacy instruction.

### **Literature Review**

To contextualize our study, and because our data were collected from students enrolled in a literacy course in their teacher education program, we consider the body of work on the use of literacy histories as a pedagogical tool in pre-service teacher education. From there we move to a review of the literature on motivation to read. This body of work is relevant as we consider the stories pre-service teachers told about the experiences that were motivating and discouraging for them as they developed their literate identities.

### **Literacy Histories with Pre-Service Teachers**

Since the early 1990's, accessing narrative ways of knowing and learning through the use of literacy history and autobiography has become more and more common in pre-service teacher education (Clandinin & Connelly, 1996; Conle, 1996; Heydon & Hibbert, 2010; LeFevre, 2011). It is believed that "narratives have the potential as a rich platform to make visible some of one's existing theories and beliefs about learning and teaching and from which to develop new theories and beliefs" (LeFevre, 2011, p. 781). Teacher educators engage pre-service teachers in exploring their literate pasts for multiple purposes. Research suggests that literacy histories have been used as curriculum in literacy courses to examine links between pre-service teachers' remembered experiences and their developing stances about literacy learning and teaching (Boggs-Golden, 2009; Roe & Vukelich, 1998). Literacy histories have also been used in more specific ways to support pre-service teachers in developing their understandings of diverse learners and to prepare them for diverse settings (Clark & Medina, 2000; Rogers, Marshall, & Tyson, 2006), to examine how pre-service teachers convey agency as learners

(Johnson, 2008), to explore pre-service teachers' digital practices (Burnett, 2009), and to relocate pre-service teachers' literacy experiences from a personal to a political frame (Heydon & Hibbert, 2010).

In a study that examined what and how pre-service teachers learned through sharing and witnessing autobiographical narratives in a literacy methods course, LeFevre (2011) found that pre-service teachers learned to question dominant stories, develop a community of learners, and understand different perspectives. With regard to using autobiographical stories as curriculum, one important finding from this study was that pre-service teachers' stories brought to light problematic literacy teaching practices. For example, the researcher refers to a story one pre-service teacher wrote about his experience with round robin reading. LeFevre concludes that "the intensity of emotion it created for many of his peers in class created a strong place from which to examine the limitations of a specific literacy strategy commonly used in primary classrooms" (p.784). While interactions around pre-service teachers' stories afford them powerful opportunities to critically reflect about literacy teaching and learning, we propose the narrative products themselves can tell us a lot about the literacy practices that motivate and discourage literacy learners.

### **Motivation to Read**

The influence of motivation on readers' behaviors has received wide attention in literacy scholarship. Guthrie and Wigfield (2000) define reading motivation as "the individual's personal goals, values, and beliefs with regard to the topics, processes, and outcomes of reading" (p. 405). Viewed in this way, motivation is a set of affective factors that leads individual readers to perceive reading and themselves as readers in certain ways. The importance of readers' motivations for reading becomes critical when considered in relation to readers' engagement with reading activities. In a recent review of research on reading engagement, Guthrie, Wigfield, and You (2012) identified motivation as one important influence that mediates readers' engagement with text. Guthrie, Klauda, and Ho (2013) defined reading engagement as "the act of reading to meet internal and external expectations" (p.8). Thus, engagement refers to actions taken toward reading, while motivation refers to affective factors that influence individuals' engagement with reading.

While motivation is generally considered to be a set of personally held characteristics housed within the learner, Guthrie and Wigfield (2000) point out the possibilities for external entities, including classroom environments, to support or discourage readers' motivation to engage in reading. Instructional practices such as releasing control over students' learning, supplying texts related to students' interests, providing reading strategy instruction, supporting student collaboration, using rewards and praise, utilizing evaluation methods, and understanding students' background experiences have been shown in studies to affect students' motivation and achievement in reading (Guthrie, Wigfield, & You, 2012). These authors point out that classroom practices can influence learner motivation, stating that "affirming practices may foster positive affect and motivational growth, while at the same time undermining practices, such as negative feedback, controlling instruction, and irrelevance, may generate decreases in motivation" (p. 625).

Most of this work has been conducted in the moment, looking at students' current perspectives on literacy activities. For example, Edmunds and Bauserman (2010) questioned elementary students regarding things that excited them about different kinds of text and about reading in general, finding that elements such as personal interests and adult involvement swayed some readers toward certain kinds of books. Marinak and Gambrell (2008) studied how the proximity and choice of a reward might affect third graders' intrinsic motivation to read, concluding that links between the reward and the behavior influenced students' motivation to read. Thus, information exists to help us understand current conditions that might support students' inclination to actively engage in classroom reading activities. What appears to be lacking is a retrospective consideration of the ways that school activities affect individuals' perspectives on reading and other forms of literacy over the long term. Our examination of pre-service teachers' recollections of their own literacy experiences and the cumulative effects they have had on their current perspectives may hold important implications for classroom teachers hoping to inspire in their students a lifelong tendency toward literacy engagement.

### **Methods**

We value narrative as a powerful force in the construction of identity. Like Bruner (1996), we recognize that the stories people tell are the ways in which they make meaning of their own experiences and that meaning shifts

and changes as stories are told and retold across social contexts. Therefore, in examining pre-service teachers' narrative accounts of past literacy experiences, we are less concerned with the accuracy of their memories than with their perceptions of the events, as it is these perceptions that shape their motivations and thus their literate identities.

We examined the work of 82 students who were enrolled in our four sections of an introductory literacy course in a teacher preparation program in a university in the Midwest. Of the 82 participants, there were 77 females and 5 males. Fifty-three participants were elementary education majors, 23 (4 males) were special education majors, 3 were middle level majors, 2 were English majors, and there was one male geology major.

The first assignment in the course required students to use a multi-modal tool to create a literacy history timeline in which they shared a full range of events from earliest memories to more recent experiences with literacy. In the assignment, we required students to include a minimum of eight stories about events occurring across the span of early childhood, elementary school, middle school, high school, and college. We encouraged them to write about specific memories of literacy rituals and/or experiences that occurred both in and out of school. In addition to their timeline, students wrote a reflection that addressed how they thought the events in their literacy history contributed to their identities as literate beings.

### **Data Collection and Analysis**

In reading and re-reading approximately 650 stories and 82 reflections written by our students, we named and coded specific practices and students' retrospective responses to them. Our initial coding process was recursive in that, as we added new codes, we returned to previously coded data with a focus on the new codes. As we conducted this initial coding, we recognized some commonalities in the home and school practices they described, such as book related projects, round robin reading, and literacy assessment; and in circumstances that students attributed to their being motivated to participate or discouraged from participating in literacy activities. From here, we posed these questions of the data: Which practices motivated students to engage in literacy activities? Which practices discouraged students from engaging with literacy activities? To answer these questions, we cross-referenced categories of classroom practices with patterns from the data revealing students'

perceptions of activities as motivating (e.g. intrinsic and extrinsic motivation, motivated by activity or program, motivated by interest) or discouraging (e.g. abandoning reading, loss of interest in reading, deterred by activity or program) to arrive at a set of classroom practices that motivated students to engage with literacy, and a second set of practices that discouraged students from engaging in literacy (see Table 1).

**Table 1:** *Top five literacy practices that motivate and discourage students.*

Categories of Practices that Motivate	Data References	Categories of Practices that Discourage	Data References
Choices	33	Required Reading	32
School Writing Experience	33	Grades and Test Scores	15
Multi-modal Literacy	19	School Writing Experience	11
Grades and Test Scores	15	Round Robin Reading	8
Read Alouds	12	Book Related Projects	6

We were intrigued by the fact that two categories, school writing and grades and test scores, appeared on both lists. We felt that this outcome warranted further investigation. We subsequently explored the ways that students described each practice, to identify patterns in their responses and to draw some conclusions about the conditions that might allow these classroom practices to be viewed by students as motivating or discouraging to their literacy engagement.

### Findings

In creating lists of practices that motivated and discouraged our students, we were not surprised that choice, read aloud, and multimodal literacies appeared on the “motivate” list, as these are practices that are commonly regarded to be well- received by learners and supportive of their literacy interests and achievement (e.g. Guthrie & Humenick, 2004; Morrow &

Gambrell, 2000; Serafini, 2011). We were equally underwhelmed that required reading, round robin reading, and book related projects appeared on the “discourage” list, also based on commonly held understandings about these practices (e.g. Allington, 1980; Pressley et al, 2003). Interestingly, though, school writing experiences and grades and test scores appeared in the top five practices on both lists. In the following sections we present data that exemplifies the ways in which school writing experiences and grades and test scores both motivated and discouraged students’ literacy involvement. Further, we explore the conditions under which students were motivated or discouraged by these activities. Finally, we discuss some implications of these findings for literacy instruction in school settings.

### **School Writing Experiences that Motivated Students**

Our students recognized in their literacy histories that school writing experiences could be both interesting and enjoyable. For example, one student recalled:

In my second grade class, we always had different topics to write about and prompt our creativity and imagination. Some of these topics included "my best Christmas" or "my worst booboo." This began my love for writing. I could express myself in anyway that I would want to and it could never be wrong. Writing at this time always brought me great happiness. It was one of my biggest hobbies.

This student enjoyed using her imagination and being creative in her writing. She viewed writing in second grade as a space where she could express herself without ever being wrong. She learned to love writing so much that it became one of her hobbies. While some students seemed more intrinsically motivated to engage in writing, others reflected on how they were encouraged by their teachers, as this student did when she wrote, “I continued to acquire more and more of a desire and excitement for writing. I had teachers who really encouraged my writing skills and allowed me to freely write and express myself in many different ways with many different techniques.”

As we read and reread students recollections of past experiences that motivated them to want to write, we noticed and named patterns that spoke to the conditions under which students developed a fondness for writing. Students seemed to perceive writing in a positive light when teachers recognized their

strengths, when they wrote for authentic purposes, when they had extended time to work on writing, and when they experienced writing in a low risk environment.

**Teacher recognition of strengths.** It was common to read that teacher feedback focused on strengths in writing contributed to learners feeling more confident in themselves as writers. One student wrote:

When it came to defending something I started to believe in, the writing came to me easier. I was confident when I turned the paper in and when I got it back my teacher gave me even more confidence. I remember her remarks about how well I supported my argument and how impressed she was with my writing skills. She even kept my paper to use as an example for her future classes! This was the confident (sic) boost I needed and it drove me to work even harder in school knowing I was able to write.

This student remembered feeling a certain level of confidence in submitting a persuasive piece of writing. The positive comments from her teacher pushed her beyond being satisfied with a product to a level of confidence that encouraged her to write more and further develop her writing skills.

Another student committed to writing after being invited to participate in a writing group. She remembered:

When I was in the eighth grade, I got a sheet from my Language Arts teacher that asked me to join a writing group. It was an invite only group and I had never heard of it before. It was the first year my Junior High was doing this group and at first I was very reluctant to join it. I went up to my teacher and asked him why I had received an invitation. This is when he told me he saw great potential in my writing and knew I was a very creative individual. After hearing this, I jumped at the chance and went to the all day workshop to join it. From then on every day at lunch on Wednesdays, I went into the library and worked on my writing skills with a group instead of going out to recess. I got incredibly involved in my writing and tended to excel in my language arts classes after joining the group.

At first, this student questioned the invitation because she didn't perceive herself as a "good writer." But a few words of encouragement from a caring



teacher shifted her perspective and created a context in which this student could take a risk. She chose to engage in the group, and in doing so, made a commitment to working on writing.

**Writing for authentic purposes.** In addition to being motivated when teachers recognized their strengths, students were more likely to engage in writing when they were asked to write for authentic purposes. One example is from a student who described her involvement in creating a class newspaper. She wrote:

In 8th grade we had a student teacher named Miss Hasler. During her time student teaching in our English class, she did very creative units that were interesting to me. One of the units she taught was about the newspaper. She explained that we would be writing our own newspaper as a class and we would be assigned certain sections of it. I was assigned to the interview a teacher and do it yourself section. We spent a lot of class time brainstorming questions and researching information for our articles until they were perfect. In the end, our class newspaper turned out awesome! It showed that each and everyone of us had some kind of writing talent whether we previously knew it or not. Today I still own my copy of the 8th grade class newspaper!

As described by this student, the newspaper unit allowed for students to work in different ways to create a product that would have a real audience. The student acknowledged that the learners in the class worked on their articles until “they were perfect.” They became invested in their writing work.

Another student shared the experience of writing to a pen pal. “As a fourth grader, I was also privileged enough to have a pen-pal from across the country. We learned how to write and type accurate letters. It was a great experience, and a good social builder.” In this example, the student refers to writing as a positive social experience. At the same time, she acknowledges the impact it had on her writing in that genre and on her accuracy in writing.

**Extended time to work on writing.** Students appreciated and enjoyed writing projects that they worked on over time. One student remembered:

In seventh grade we were given the opportunity to write, illustrate, and publish a book. We spent weeks developing a storyline and drawing the pictures, and finally, after a lot of hard work, we sent

our books in to the publisher.

This student perceived the experience of developing and creating a book in a positive light, as indicated by the words “given the opportunity.” She fully engaged even though it was “hard work.” Sometimes students became more invested when they worked on writing over a period of time. Another student recalled her first experience writing a research paper. She wrote:

For this project, a certain topic was chosen for the students to study more in depth and sub-divided for each individual classroom. From there, each student choose a topic within the subtopic to do a research report on. The theme for my classroom was the animals in the Rainforest. The animal I choose was the Margay, and we spent a total of 2 months preparing for our Rainforest themed Restaurant. This was one of the first research papers I had ever written, and made me feel like my writing skills were improving.

Working on a writing project over time provided a context in which this student saw her skills improve, contributing to her motivation to engage.

**Low risk environment.** A final condition that contributed to students’ motivation to engage with writing was the opportunity to write in a space where all ideas are appreciated. This student recalls a fourth grade writing experience:

In fourth grade my class was required to write a story. I chose to write an adventure story about my best friend and myself. I remember being excited about the assignment and sharing my ideas with my best friend. My teacher at the time encouraged the class to be creative and she was very accepting of our ideas.

For this student, believing that her ideas were important and would be accepted, was a motivating factor and encouraged her engagement.

### **School Writing Experiences that Discouraged Students**

While more often than not, school writing experiences were motivating for students, there were a number of stories that indicated this was not always the case. Some students found writing to be difficult, developed a dislike for it, and were discouraged from engaging in writing beyond required school

assignments. For example, one student reflected:

So in 7th grade I had a teacher, Mrs. Mead who focused a lot on grammar. I did not know much about grammar because my previous teachers did not focus on that. Up until that point I thought I was a good writer and she made me feel like I had no idea what I was doing. This class made it hard for me to want to do papers and feel like a good writer.

Again we recognized patterns across students' literacy histories that spoke to us about the conditions under which learners become discouraged. Students acknowledged turning away from writing when teachers recognized and pointed out their weaknesses, and when they felt they were working in a high risk environment.

**Teacher recognition of weaknesses.** Similar to the way recognition of student strengths was motivating for students, recognition of weaknesses often discouraged students from engaging in positive ways with writing. Often our students perceived teachers as being critical of their weaknesses without offering instructional support. For example, one student shared:

My problems of having the main ideas but not having my writing flow together and be choppy were coming back. This teacher made me feel like I had no idea what I was doing though. She was not trying to be helpful she just would tell me what I did wrong, and not give advice. That made me even less of a confident writer than I previously was.

For this student, who seemed to have recognized this weakness in herself, the teacher's reminder that came with no support zapped her confidence and made her less likely to engage in writing. Having weaknesses pointed out can be debilitating for students well beyond the actual experience. Another student recalled:

I remember in second grade we started to learn how to write in cursive. It was hard for me and my teacher always made me feel like I was really bad at it, and would point me out when I did not know how to correctly write in cursive. On top of learning cursive I always had to have a special name tag so I had help

writing my last name. My writing experience in second grade did not give me a good outlook on writing. I was embarrassed all the time.

For this student, the feeling of embarrassment had long-lasting negative effects on learning and her willingness to engage in classroom learning.

**High risk environment.** In opposition to a low-risk environment that can be a motivating factor for learners, a high-risk environment was almost always a discouraging factor. Many students shared stories of stress and pressure associated with writing assignments. For example, this student remembered and wrote about an experience from high school:

My Junior year of high school, I took an AP English course. During this class, we did a big research paper and I did mine on the occult themes in Shakespeare's writing. We spent an entire quarter on this paper so needless to say it was a big part of our grade. Due to that fact, there was a lot of pressure put on this paper which was the first big research paper I had ever written. Since there was so much emphasis on the grade, I can't say that I was too thrilled about the assignment, and to this day I dread writing research papers.

Stress, regardless of its cause, is almost always a factor that deters students from choosing to engage in writing. Timed writing assessments were another example of a stress-inducing situation that was reflected in our data. This student shared an experience she remembered about timed writing assessments. "I remember the time limit being very nerve wracking for me. I usually need a longer time to process information and comprehend a reading, so I didn't always do very well on timed writings." This is a student who was accustomed to doing well in school. She enjoyed school and learning but became stressed when she had to produce writing under the pressure of a timer.

### **Grades and Test Scores**

Experiences with grades and test scores were obviously significant to the pre-service teachers' memories about literacy, since they appeared often in their stories. What is less clear, based on the pre-service teachers' recalled experiences, is collective agreement regarding the tendency of grades and test scores to be motivating or discouraging. Experiences with grades and test scores

appeared high on both lists when this practice was cross-referenced with students' perceptions of experiences that motivated or discouraged. When patterns in the students' stories were examined more closely, it became apparent that there were ways that grades and test scores had motivated students' involvement with literacy and ways that they had discouraged students' literacy engagement.

### **Grades and Test Score Experiences that Motivated Students**

Some of the pre-service teachers' stories explained occasions in which they perceived the inclusion of grades and test scores to support their ongoing involvement with literacy activities. As we examined these narratives, we noticed patterns in conditions that appeared to motivate their literacy engagement, including challenges posed by assignment requirements and confidence that was increased by good grades. Alternately, the stories also expressed the pre-service teachers' perceptions of being inspired specifically by non-graded elements of literacy activities.

**Challenge of assignment requirements.** One pattern evident in the stories of students who found grades and test scores motivating was the challenge posed by graded assignments. Some students were motivated to pursue literacy activities when there was a graded or scored component of the experience, explaining that this presented a challenge that inspired them to proceed. One student, describing an assignment in which a grade depended on memorizing definitions and being tested on them, explained, "My teacher would give us extra credit if we found those words in books and I think that this also pushed me to read because I wanted to find those new words." This student was clearly inspired by the opportunity to pursue reading in order to demonstrate her ability. Another student was similarly motivated by Accelerated Reader (AR) quizzes, stating,

We were all involved in Accelerated Reader. I loved when I was able to go up a level. We had to gain points based off of the books we read and quizzes we took for them. It was fun to read a difficult book in order to gain all the possible points for that book.

In contrast to many other AR stories we examined, this pre-service teacher recalled the Accelerated Reader program in a positive light, clearly

motivated to pursue ongoing reading challenges in order to meet AR demands.

**Confidence from good grades.** In another pattern apparent in pre-service teachers' stories, successful performance on literacy tasks, as evidenced by high grades from teachers, appeared to increase students' confidence and motivate them to continue to pursue literacy experiences. As one student explained, "My grades have proved writing to be my strength in literacy. Writing keeps me engaged and focused. I feel a sense of accomplishment when I finish a paper or story. I look forward to sharing my writings with others." Another pre-service teacher described the motivation she gained from receiving a high score on a writing assignment, stating,

When first being introduced to the idea of a term paper, I was not looking the least bit forward to it. I pondered on different topics for a long time and decided to pick a topic that was interesting to me. I wrote my term paper and felt really good about it. When it was graded and returned to me with a 96 on top I could not believe my eyes. I had never received this high of score on any type of literacy project in high school. This event is what helped boost my self-esteem in the literacy subject.

It is obvious that this student viewed the high grade on this assignment as an affirmation of her writing ability, which in turn motivated her to continue her pursuit of literacy involvement.

**Inspiration of non-evaluated activities.** Unlike the two patterns in which students were motivated by grades and test scores, the third motivational condition is important chiefly due to what is absent. In these stories, pre-service teachers specifically noted that they were inspired by literacy activities that lacked an evaluative element. Pre-service teachers explained that they pursued these literacy activities for the intrinsic value of the experience rather than as a graded or assessed task. For example, one student explained that she began to realize the power of literacy in her life when she began to write a journal for herself rather than as a school assignment:

As I got older, my literacy skills began to change. I began to write in a journal just for personal pleasure and found that writing was an outlet for me. This is when I realized that writing does not always need to be associated with school work and assignments,

that I can enjoy writing in my free time without a grade being attached to it.

In another example, a student emphasized that the lack of literacy assessments in her experiences are responsible for her ongoing enjoyment and success with literacy tasks.

I never felt pressured to score well on an exam or a quiz, and I never felt like the school sponsored programs were a hassle. I think that this mentality is the reasoning behind my love for reading and writing. Some may argue that because I was never tested on the material I did not learn as much as I should have from the lessons; however, I'd argue that I learned more. I learned at my own pace, and took away what I felt was important or relevant from the text, inducing critical thinking, and personal connections—skills that are still helpful to me now, as a college student.

These stories explicitly acknowledge the absence of evaluation as an integral part of the value the pre-service teachers perceive to be contained in the experiences.

### **Grades and Test Score Experiences that Discouraged Students**

Predictably, some stories expressed pre-service teachers' angst over graded activities, leading to a failure of the experiences to keep students interested in continued pursuit of literacy involvement. Two patterns in conditions that prompted students' discouragement over literacy experiences were feelings of anxiety over assessed experiences and an over-emphasis on evaluation.

**Anxiety from assessment.** Several pre-service teachers discussed the anxiety they felt when they were assessed during literacy tasks, as exemplified by this statement:

When I was in seventh grade, my English class started a program called Accelerated Reader. At the beginning of the year we had to take a reading test to find out what my reading level was. I was so nervous for the test. Standardized tests gave me a lot of anxiety when I was younger.

In a representative example, one student described an early experience of reading assessment and the negative way that it made her view her reading ability:

Every quarter my second grade year we had a reading activity in which one by one all of the students would go in the hallway and read a short passage to a woman sitting across from us. As we were reading the woman in front of us would have a red marker and would mark every time our pace slowed down or we pronounced a word incorrectly. During this reading activity, I always remember feeling scared and nervous during my turn. While I was reading, I remember only focusing on when this woman would make a mark on her copy of the passage. This was an activity that scared me away from reading because as a young reader, I felt that making mistakes were bad and in a way I felt that it told me I was a bad reader.

Contrary to the stories of students who were inspired by literacy challenges, these students noted their dismay over assessment experiences. For these students, the anxiety brought on by evaluation of their performance was enough to turn them away from literacy activities.

**Limited by an over-emphasis on evaluation.** Some stories described the way that an over-emphasis on evaluation of literacy tasks actually reduced their potential to support students' literacy learning. Numerous pre-service teachers mentioned the Accelerated Reader (AR) program in explaining that an overarching focus on assessment reduced their desire to participate beyond the explicit expectations. One student stated:

Something that had a not so positive effect on my literacy journey was the Accelerated Reader program. I no longer enjoy reading as much as I used to because of this program. This program caused me to feel inferior to my peers because I had a lower reading level than some of my friends. I also disliked this program because it put a limit on what books I could read. I strongly disliked the tests following the book where you were rewarded points. I found myself choosing the books not because I wanted to read them, but because I wanted to read a book with a high level of points to reach my goal easier. After Accelerated



Reader was finished, I was relieved to eliminate the stress of the points and found myself choosing other activities over reading because of my negative experience.

In one particularly poignant story, a student describes how constant pressure to exhibit her abilities through assessments that she felt did not display her true competence created a feeling of being disconnected from school-based literacy:

The entirety of my high school career was wrapped around the idea of me believing that I did not have much to contribute to the academic world. I was spiraling down a staircase with absolutely no intellectual confidence. Although I did encounter some hands-on classes that I really enjoyed, I was always assessed by the means of multiple choice/Scantron. I struggled because I knew the material inside and out but I was unable to fully comprehend the questions being asked. Although I learned how to become a semi-successful test-taker, I went through school feeling passionless. I glazed over Middle and High School in a passionless way, having a constant fear of failure and assumptions that someone else was always academically better than me. There was no passion in me to learn because my literacy skills were not fit for industrial schooling, and the entirety of my high school was based on industrial schooling.

These pre-service teachers perceived an over-reliance on literacy assessments to have created roadblocks to their ongoing literacy involvement as students.

### **Discussion and Implications**

Existing research suggests that students' motivations are related to their level of engagement with literacy (Guthrie, Wigfield, & You, 2012). These authors also note that external factors, over which educators have much control, influence students to be motivated or discouraged to engage in literacy activities. Several studies have also demonstrated strong correlations between motivation and reading achievement (e.g. Gottfried, 1990; Unrau & Schlackman, 2006; Wang & Guthrie, 2004). While motivation has been addressed extensively in literacy research, and there are clear links between motivation, engagement, and progress, we contend that this body of work has

not influenced classroom practice as much as is needed for more students to leave K-12 schools (and potentially enter teacher education programs) as confident and competent literate individuals.

Our retrospective look at pre-service teachers' stories and reflections confirmed that some practices (read-aloud, choice) primarily motivated students to engage with literacy activities, while other practices (required reading, round robin reading) caused them to be discouraged, suggesting that these practices should be either incorporated into or dismissed from classrooms, respectively. However, every practice that was reflected in our data set did not fall neatly into one, or the other, of these categories. While there is research that demonstrates the tendency of some practices to motivate or discourage students' literacy beliefs, it is clear that not all practices can be so easily categorized. There has been much practical attention paid to differentiating for learning needs but not nearly enough focus on the ways that school practices might motivate or discourage different students toward or away from literacy engagement.

Our analysis of school writing experiences revealed that the conditions surrounding writing experiences greatly influenced how students were motivated toward or discouraged from engaging in literacy activities, and that the conditions were relatively consistent across learners. For example, students were motivated to engage in writing activities when their teachers recognized and emphasized their strengths, but when teachers emphasized weaknesses in writing, students were more likely to avoid writing. This finding is consistent with some studies demonstrating the deleterious effects of negative feedback on students' valuing of literacy experiences (e.g. Strambler & Weinstein, 2010). Evidence from the current study raises important questions about issues of motivation in instructional contexts. If we consistently emphasize student strengths, when and how do we instruct in ways that extend students' current understandings? Is there a balance between positive and constructive feedback that will both challenge and continue to motivate students?

In analyzing grading practices, we found that conditions surrounding the practices influenced learners' motivations; however, there was less consistency in those conditions across students. In other words, the same evaluative conditions motivated some students to engage with and others to be discouraged from literacy activities. These varied perspectives about the motivational influence of grades, testing, and evaluation in schools mirrors a

lack of clarity on this relationship in the education research (Guthrie & Coddington, 2009). Our evidence demonstrated that some students thrived on the prospect of earning a good grade and were motivated to engage for that grade, while others feared the grade and were motivated to avoid graded activities. Again, our findings prompt practical questions. How can grading practices be used to motivate all learners? Is it possible to differentiate grading practices in equitable ways? What will grades mean if we differentiate our grading practices?

We believe that these questions hold important implications for both practitioners and researchers. While our study extends previous research on motivation, much remains to be learned about the varied roles that school activities might play in students' long-term literacy motivation. As these pre-service teachers' stories make clear, school practices have a life-long influence on the ways that they viewed literacy and its role in their lives. We urge teachers and researchers to explore these questions in practical contexts in pursuit of increased understanding regarding ways that differentiating for motivation might lead to increased literacy engagement, proficiency, and agency.

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## **The Contribution of Morphological Knowledge to 7th Grade Students' Reading Comprehension Performance**

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### **Abstract**

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In this study, we examined the role of morphology, an important yet largely understudied source of difficulty, in reading ability among 7th grade students in one junior high school in the southwestern United States. We sought to find out how much variance in reading ability is accounted for by these students' morphological knowledge, and whether skilled readers do in fact have higher levels of morphological knowledge than less skilled student peers. We found that students' sensitivity to the morphological structure of words accounted for 18% of the variance in these students' reading performance. We further found that skilled readers had a significantly higher level of sensitivity to the structure of words than did less skilled readers. In light of these findings, we offer recommendations for interpreting and using the results obtained to better understand and scaffold students' morphological knowledge, with the goal of helping promote students' vocabulary growth and reading comprehension performance.

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## **The Contribution of Morphological Knowledge to 7<sup>th</sup> Grade Students' Reading Comprehension Performance**

### **What is Morphology?**

Morphology generally refers to how words are formed and how they fit together into the syntactic structure of sentences to create meaning. Knowledge of word formation, which consists of a mix of implicit awareness and explicit knowledge of the internal structure of words, is often referred to as morphological knowledge or morphological awareness. Following Carlisle (2010), we define morphological knowledge or awareness as a student's conscious awareness of the morphemic structure of words, and the ability to reflect on and effectively manipulate that structure.

Linguists make a distinction between two general classes of morphological formations in English (e.g., Curzan & Adams, 2006; Feldman, 1995). The first class pertains to words that differ in their derivational affixes but share a base root word or morpheme. For instance, the words “instruction” and “instructor” share the root word “instruct,” but they are generally considered to be different words and to have different meanings. The second class of morphological formations refers to words that differ in their inflectional affixes and share a base root or morpheme but are considered to be versions of the same words. For instance, the base root word “instruct” can retain its core meaning with inflectional affixes, such as ‘ing’ or ‘ed,’ but they have a new syntactic purpose indicating tense (how an event is located in time) and aspect (how an event is viewed relative to time), as in the words “instructing” or “instructed.”

Another important distinction that linguists make between these two classes of morphemes is that while derivational formations often change the parts of speech, inflectional formations do not change word class membership to which the base word belongs. For instance, adding the suffix ‘er’ to the verb ‘read’ changes its part of speech from verb to noun. On the other hand, adding the



morpheme 's' at the end of the verb 'read' does not change its part of speech.

Because space does not permit a detailed explanation of the finer distinctions between derivational and inflectional morphology, we provide, at the end of this article, a set of recommended resources that readers will find helpful in gaining a fuller understanding and appreciation of morphology in terms of its theoretical and research underpinnings, its assessment, and its teaching.

### **What Role Does Morphology Play in Reading Ability?**

Researchers agree that, as teachers, we should expect morphological knowledge and skills to contribute to children's vocabulary development and reading comprehension for the simple reason that morphological processing contributes directly to language comprehension. Carlisle (2004) noted that in the act of comprehending texts, "Morphologically complex words contribute lexical, semantic, and syntactic information" (p. 333). In other words, readers who understand the morphemic structure of words have a distinct advantage not only in word decoding, but also in vocabulary and comprehension processes. Snow, Burns, and Griffin (1998) maintained that knowledge of morphology is important because it helps readers connect word forms and meanings within the structure of sentences. For example, "Children learn that events having already occurred are marked by morphological inflections such as 'ed'. For children, sensitivity to morphology may be an important support skill in reading and spelling" (p. 74).

In asserting the significance of morphological knowledge, Carlisle (2010) noted that, "Access to morphemes and the richness of linguistic information about them (e.g., grammatical roles, semantic features) affects the facility of lexical processing, including learning new words" (p. 465). Understanding morphemes allows students to recognize relationships in words so that decoding for meaning may occur more effectively. In other words, learning to read and comprehend words and sentences requires sensitivity to the morphological, and by extension, the syntactic structure of sentences. While morphological knowledge and skills begin to develop in the early stages of language and reading development, researchers (e.g., Carlisle, 2004; Feldman, 1994, 1995) noted that these competencies are likely to become more explicit for students in the upper elementary, middle and high school grades for two reasons. First, during these years, most students tend to be more immersed in

reading, writing, and thinking about language because “morphologically complex words are sufficiently common in children’s texts to make it likely that morphological processing plays a role in reading.” (Carlisle, 2004, p. 329). Second, as students progress through the grades, they develop, through direct and indirect teaching, increasingly sophisticated metalinguistic skills, including knowledge about how words and sentences are formed, which enable them to read and write well.

The study of morphology and its effects on various aspects of reading and writing has significantly expanded during the past several years. Syntheses of this research (e.g., Carlisle, 2010; Feldman, 1995; Nagy, Berninger, & Abbott, 2006; McCutchen, Logan, & Biangardi-Orpe, 2009) indicate that the role of morphological knowledge has been implicated in a growing number of correlational and experimental research studies that have provided strong evidence for positive associations among morphology, vocabulary, and reading comprehension performance. Findings from these research studies provide evidence that morphological knowledge and skills contribute to students’ ability to manipulate and analyze words. These skills are helpful in advancing their vocabulary development and achieving effective reading comprehension skills, especially when reading more complex text materials (e.g., Carlisle, 1995, 2004, 2010; Nagy, et.al., 2006; Singson, Mahony, & Mann, 2000).

Insights from research on morphology also indicate that students can be taught to improve their morphological knowledge and skills. For instance, children can learn word definitions by understanding the meanings of the various established prefixes and suffixes that attach to them (Carlisle, 2000; Anglin, 1993; Nagy, et.al., 2003). Knowing that the prefix ‘re’ means ‘do again’ helps children learn new words that have the same prefix. In one study, Green, et.al. (2003) found that improved morphological knowledge gives students the ability to use the different parts of words to provide meaning so that they may more effectively decode, comprehend, and spell correctly. In addition to decoding, vocabulary, and reading comprehension, spelling ability is closely associated with morphological awareness as suffixes and prefixes often have unique spellings, such as “-tion” or “-ance,” as they give meaning and purpose to words with these morpheme additions.

### **The Present Study**

In light of the above findings relative to morphology and its role in reading

and writing development, we sought to examine the role of morphological knowledge in reading comprehension among a group of struggling 7<sup>th</sup> grade readers in one junior high school in the south central United States. Specifically, in this correlational study, we wanted to find out how much reading comprehension variance is accounted for by 7<sup>th</sup> grade students' morphological knowledge, and to determine whether skilled 7<sup>th</sup> grade readers show more sensitivity to the morphological structure of words than less skilled student peers. Specifically, we wanted to find answers to the following two related research questions:

How much variance in reading ability is accounted for by 7<sup>th</sup> grade students' morphological knowledge?

Do skilled 7<sup>th</sup> grade readers have higher levels of morphological knowledge than less skilled reader peers?

## **Method**

### **Instructional Setting**

The study took place in one middle/junior high school located in a socio-economically and ethnically diverse community (pop: 18,000) in the south central United States. The school has an enrollment of approximately 1100 students in grades 6 through 8 with a 25:1 average student to teacher ratio. The percentage of students eligible for a free or reduced price lunch is approximately 36%. The demographic profile of the students shows that 52% of the students were female and 48% were male. Ethnicities represented included 7% African-American, 13% Hispanic, 76% White, 1% American Indian/Alaskan Native, 1% Asian, and 3% two or more races.

### **Study Participants**

A total of fifty-three students enrolled in two intact sections of seventh grade classrooms in one junior high school in the southwestern United States participated in the study. Student demographics included 26 Male, 27 Female; 2 African-American, 44 Caucasian, 7 Hispanic; 1 English learner, 1 dyslexic, and 3 students with special needs. Table 1 provides a demographic profile of the student population in terms of gender, ethnicity, language, and special needs designation.

**Table 1:** *Student Demographic Profile.*

Gender	
Male	26
Female	27
Total	53
Ethnicity	
African-American	2
Caucasian	44
Hispanic	7
Special Needs	
English Learner	1
Student with Dyslexia	1
Special Education	3

### **Data Sources**

The data collected originated from a morphological knowledge test, and a reading ability test administered to all students in early March of the school year. We used the McCutchen Measure of Explicit Morphological Knowledge (McCutchen et al., 2009) to assess students' sensitivity to the morphological structure of words during reading. This assessment measure, which takes about 20 minutes to administer, consists of having students read a stem word and then write a morphological derivative of the stem to complete a sentence. For example, students are given a stem such as "farm" and asked to write the appropriate morphological derivative "farmer" to complete the sentence "My uncle raises cows and is a \_\_\_\_\_." The measure has a reported internal  $\alpha$  reliability of .79.

We used the reading scores from the Texas Assessment of Knowledge and Skills (TAKS) test (Texas Education Agency, 2010) administered during mid-March of the school year to determine students' attainment of reading skills required under Texas education standards for the language arts. The TAKS test is a standardized criterion-referenced test used in Texas public and charter

schools to assess students' attainment of reading, writing, math, science, and social studies skills required under Texas education standards.

### Data Analyses

We used multiple regression analyses to examine the contribution of morphological knowledge to students' reading ability. Prior to conducting the analyses, we screened the data to help ensure that the assumptions of normality, collinearity, and outliers have been met. We used t-tests to assess whether levels of morphological knowledge varied significantly among students varying in levels of comprehension. To examine differences in reading performance among students with differing levels of morphological knowledge, we reviewed students' reading performance on the TAKS test, and created a set of two groups differing in overall reading scores. Thus, we grouped the TAKS scores into percentiles and placed students whose scores fell in the 40<sup>th</sup> percentile or below to a low skilled reader group (Group 1), and those scoring at the 50<sup>th</sup> percentile or higher in the skilled reader group (Group 2). In an attempt to create two groups that were significantly different in terms of reading ability, we excluded students whose scores fell between the 40<sup>th</sup> and 50<sup>th</sup> percentiles.

### Results

In this study, we sought to find out how much variance in reading ability is accounted for by struggling seventh students' morphological knowledge, and whether skilled readers do in fact have higher levels of morphological knowledge than less skilled student peers.

*How much variance in reading ability is accounted for by students' morphological knowledge?* The results of the regression analysis in Table 2 show a significant effect of morphological knowledge ( $F= 3.98$ ,  $p= .027$ ). The R-square value in the model (R-Square = .177) indicates that students' sensitivity to the morphological structure of words accounted for 18% of the variance in reading comprehension. These findings corroborate the important role morphological knowledge plays in reading comprehension.

Do skilled readers have higher levels of morphological knowledge than less skilled student peers? Using t-tests, we compared the levels of morphological knowledge between two groups of students varying in reading ability. As Table 3 shows, we found that skilled readers (Mean=26.23; SD= 3.15) had a significantly higher level of sensitivity to the structure of words than did less

**Table 2:** Results of Standard Multiple Regression to Predict Reading Comprehension from Morphological Knowledge

Variables	M(SD)	R	R-Squared	Beta
Morphological Knowledge	25.02 (3.27)	.421	.177	.421
TAKS Test	739.23 (81.20)			

skilled readers (Mean =23.40; SD= 3.13), and this difference was statistically different as indicated by the associated t-test  $t(35)=2.69$ ,  $p=.011$ .)

### Discussion

The results of this study indicate that seventh grade students' levels of morphological knowledge are positively associated with their reading performance on standardized criterion-referenced tests of reading ability. These findings provide additional support for a growing number of studies that have established a positive relationship between students' sensitivity to the structure of words and their ability to read with adequate comprehension (e.g., Carlisle, 2010; Green et al., 2003; McCutchen et al., 2009).

While the positive relationship between morphological knowledge and reading comprehension ability is not new, this research confirms that morphology, beyond students' orthographic and phonological knowledge, plays an important role in students' ability to recognize the structure of words, which helps determine their meanings within the context in which they are used. In other words, as Feldman (1994) noted "Morphology underlies the productivity

**Table 3:** Differences in Morphology Knowledge by Skilled & Less Skilled Readers

Variable	Skilled Readers (n=22) M(SD)	Less Skilled Readers (N=15) M(SD)	t(35)
Morphology	26.23 (3.15)	23.40 (3.13)	2.69 ( $p=.011$ )

of the word-formation process and word fit into the syntactic frame of a sentence.” (p. 442).

However, we want to caution readers against interpreting this study’s results as implying causal relations between student levels of morphological knowledge and reading comprehension performance. The existence of a positive relationship between these two variables gives us constructive clues that can help uncover reasons for low performance on these variables, but it does not reveal the underlying causes, which may be influenced by an array of other variables not measured by the assessments used in this study. In this particular case, the results can be most useful when they are considered in combination with diagnostic information gained from an analysis of the strengths and weaknesses gleaned from these assessments.

For instance, in reviewing student performance on the McCutchen Measure of Explicit Morphological Knowledge, we found that several students, particularly among less skilled readers, had difficulty completing sentences requiring the use of inflectional as well as derivational suffixes. Examples of errors in inflectional affixes include words with endings such as the plural morphemes ‘-s,’ and the past tense marker ‘-ed.’ Examples of errors in derivational affixes include morphological transformations from adjectives (e.g., *distant*, *deep*) to nouns (e.g., *distance*, *depth*) or verbs (e.g., *allow*, *sign*) to nouns (e.g., *allowance*, *signature*). In general, less skilled readers received lower scores, on average, on the morphology test than did their skilled reader peers. It is evident that several of the less skilled readers would benefit from explicit instruction in the morphemic structure of words, an important aspect of language understanding that clearly influences students’ ability to read and write effectively.

### **Implications and Applications**

The results of this study indicate that 7<sup>th</sup> grade students’ levels of morphological knowledge are positively associated with their reading performance on standardized criterion-referenced tests of reading ability. These findings provide additional support for the relatively small but growing number of studies that have established a positive relationship between students’ sensitivity to the structure of words and their ability to read with adequate comprehension (e.g., Carlisle, 2010; Green et al., 2003; McCutchen et al., 2009).

The findings of this study have important implications for classroom

instructional practices. Research indicates that students' knowledge of the internal structure of words helps them unlock the meaning of words and sentences in which those words are used (Carlisle, 2010; Green et al., 2003; McCutchen et al., 2009). Enhancing students' understanding of the morphemic structure of words is in turn, associated with higher levels of reading comprehension performance. Results from the 2009 and 2011 National Assessment of Educational progress results indicate students who scored higher on NAEP vocabulary questions also scored higher in reading comprehension (National Center for Education Statistics, 2012). In light of these findings, we offer the following six recommendations or actions for upper elementary and middle grade teachers to consider when working to develop students' morphological knowledge and skills.

*Recommendation #1: Assess students' knowledge of morphology.* Because morphology has been shown to explain sizeable variance in students' reading comprehension, we suggest that it should be included in reading assessment and instruction. There are various methods used for assessing morphological knowledge that vary in terms of what aspects of morphology assessed (e.g., inflectional, derivational) and in terms of how these aspects of morphology are assessed (oral, written), [see Deacon, Parrila, and Kirby (2008)] for a review of these methods. For purposes of our study, we used the *McCutchen Measure of Explicit Morphological Knowledge* (McCutchen et al., 2009), which has sufficient technical adequacy (reported internal reliability=.79) and validity. The measure, which is available publicly at no cost, consists of 30 items requiring students to read a stem word and then write a morphological derivative of the stem to complete a sentence. This measure is relatively easy to use and interpret, and takes about 15-20 minutes to administer depending on students' reading ability levels. Other measures of morphological awareness can be found in Singson et al. (2000).

*Recommendation #2: Use assessment data to inform instruction.* When the goal of reading instruction is to determine the sources of reading comprehension difficulties, consider using the results obtained from assessments such as the *McCutchen Measure of Explicit Morphological Knowledge* in combination with diagnostic information gained from other available formal or informal assessments. Proficient comprehension of text is influenced by various factors, including difficulty learning to read words accurately and fluently, low levels of metalinguistic awareness, insufficient vocabulary and



conceptual knowledge to support comprehension of text, lack of knowledge and skill in use of cognitive strategies to improve comprehension or repair it when it breaks down, and absence or loss of initial motivation to read (Cain, 2010).

*Recommendation #3: Scaffold instruction to help students build knowledge of how to analyze and use inflectional and derivational word endings.* Knowing that words are formed with meaningful word parts such as roots and affixes, how these word parts are related, and how they combine in spelling and writing helps students read words accurately, fluently, and with comprehension. It is estimated that more than half of the words in written English are morphologically complex, and that the majority of these words have meanings that can be inferred from the meanings of their component parts (Hiebert, 2013; Nagy & Townsend, 2012). It is important that students receive sufficient guidance as they learn to recognize the presence of morphemes in words through explanation, modeling, and guided practice. Graves (2006) recommends that students need a lot of scaffolding through modeling, coaching, prompting, encouragement, and feedback delivered at just the right time. For guidance on how to scaffold instruction in reading, see Graves & Graves (1994) and Hogan & Pressley (1997).

*Recommendation #4: Use a consistent framework for organizing instruction aimed at advancing students' morphological knowledge.* When teaching students to develop knowledge of the internal structure of words, and how that knowledge can be used to create meaning, it is important for teachers to use a framework as a guide for organizing instruction. This is done in part to help ensure instruction is implemented in a coherent manner, and also to help document whether students are learning word formation processes and using that knowledge to understand and create increasingly complex texts. Although there are several frameworks that have been shown to work quite well in helping teachers organize instruction in their classrooms for such purposes, we recommend using the Gradual Release of Responsibility framework developed by Pearson and Gallagher (1983), or a lesson format for teaching common prefixes developed by Graves (2006). The Gradual Release of Responsibility framework consists of four inter-related

*Contribution of Morphological Knowledge to Reading Comprehension Performance* • 50

components including verbal explanation, modeling, guided practice, and independent practice. This approach permits teachers to hold the majority of responsibility in teaching at the beginning of the lesson, but then slowly release that responsibility over to the students until learning is fully controlled by them. The Graves lesson format is fairly similar in that it includes reviewing, prompting, and guiding students to independent use of the specific strategies using common prefixes (e.g., *un*, *re*, *in*, *dis*, *non*, *mis*) and a strategy for using prefixes to unlock the meanings of unknown words. A typical lesson begins with a presentation introducing each prefix and illustrating its use with familiar and unfamiliar words, worksheets consisting of brief exercises requiring the use of the prefix in context-rich sentences, follow-up exercises requiring additional use and manipulation of the prefixes, and opportunities to independent or guided practice using the prefixes learned in authentic contexts such as text reading and writing. We encourage teachers to modify or adapt this framework depending on students' grade levels and needs. The recommended resources we describe below provide examples of how to plan, organize, and deliver instruction using these and other approaches. These resources also include lists of common inflectional and derivational affixes that will help guide instruction.

*Recommendation #5: Integrate the teaching of morphological knowledge across the disciplines.*

In an effort to significantly advance students' morphological knowledge and skills, we suggest that language arts, science, social studies, and mathematics teachers work in teams as they plan to incorporate the teaching of morphology across their respective disciplines. Depending on grade level and student needs, teachers can begin by first determining what aspects of morphology knowledge and skills they should emphasize in their teaching, how much time they should devote to the teaching of these skills, and what instructional strategies they might consider using when teaching these skills. A noteworthy example of a cross-disciplinary approach to teaching words is Harvard University's *Word Generation* program that focuses on the teaching of academic vocabulary for middle grade students across the language arts, science, mathematics, and social studies classrooms (Snow & Lawrence, 2011; Snow, Lawrence, White, 2009). The program employs several strategies to help ensure that students learn words in a variety of contexts. Each day of the week for 15 minutes a day, teachers in different content areas teach the same 5 high utility target words in different contexts through

brief and engaging cross-content passages. The cross-content focus on a small number of words each week enables students to understand the variety of ways in which words are related, and the multiple exposures to words provide ample opportunities for deeper understanding.” (For more detailed information about *Word Generation*®, visit the program’s website at <http://wg.serpmedia.org/index.html>.)

*Recommendation #6: Use existing resources to help build your morphological content and pedagogical knowledge.* Interestingly, the teaching of morphological knowledge, although important, is often omitted from instruction in teacher education programs, and in school curriculum materials. In addition to programs such as Word Generation, we recommend a set of annotated resources (see Appendix), which support the development of students’ morphological knowledge and skills.

### **Summary & Conclusions**

In summary, the findings of our study are consistent with a growing body of research linking students’ morphological knowledge and skills to important literacy achievement outcomes, particularly vocabulary development and reading comprehension performance. This body of research indicates that students’ understanding of how words work, particularly as they relate to inflectional and derivational morphology, is meaningfully associated with their ability to read and understand what they read. This research further indicates that students with poor morphology knowledge are more likely to have reading comprehension difficulties than peers with higher levels of morphological knowledge. A related research finding is that at nearly all grade levels, students benefit from instruction focused on the teaching of morphological knowledge and skills.

Strengthening students’ language skills, including but not limited to morphology, is important, particularly in light of the expectations of the Common Core State Standards for English language arts, which call for additional language use, and increasingly sophisticated language use above the standards that have been previously used in schools (National Governors Association, 2010). Putting the common-core standards into practice in

classrooms presents a substantial change for language arts and content area teachers in the nation's public schools; but for educators who work with all students, including those who speak English as a second language (i.e., English learners), the shifts in instruction are expected to be even more complex. Because language demands grow significantly across the grades, instruction will have to move well beyond the teaching of fundamental components of reading to include instruction on how to read and comprehend linguistically varied and complex texts, construct text understandings, and communicate ideas in writing.

Our suggested recommendations and actions relative to the assessment and teaching of students' morphological knowledge and skills are designed to assist teachers across the language arts, science, mathematics, and social studies disciplines in assessing students' levels of morphological knowledge, and designing instruction that addresses the needs of these students. Incorporating recommendations such as these and others described in some of the recommended resources can and should help enhance classroom instructional practices and enhance students' achievement outcomes.

We recommend that teachers representing the language arts, social studies, science, and mathematics disciplines adopt a similar strategy as it has been found to significantly impact students' vocabulary development and content learning. We suggest that teachers across these disciplines work together to coordinate the teaching of morphological knowledge and skills. Depending on grade level (upper elementary, middle or high school), student needs, and instructional schedules, teachers can determine what aspects of morphology to teach, which instructional strategies to use, and how much time to devote to such teaching. Carefully coordinating the teaching of morphology across the disciplines provides an opportunity for students to learn about words and how they are used to make meaning in diverse contexts.

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## Appendix

### Recommended Resources to Support the Development of Students' Morphological Knowledge

Bear, D. Invernizzi, M., Templeton, S., & Johnson, F. (2011). *Words their way: Word study for phonics, vocabulary, and spelling instruction*. New York: Pearson.

This book presents a dynamic instructional approach to word study, providing a practical way to study words with students in the classroom. It provides the tools literacy educators need to carry out word study instruction aimed at engaging K-12 students in learning about how words work and how this knowledge supports literacy learning.

Curzan, A. & Adams, M. (2006). *How English works*. New York: Pearson.

In this book, Curzan and Adams provide a reader-friendly, comprehensive and detailed explanation of how various components of language operate, including but not limited to the sound system of language or phonology, word formation or morphology, word meanings or semantics.

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

In this synthesis of research, Carlisle provides an extensive review of research on the effects of instruction on morphological knowledge and skills on various aspects of reading and writing ability across a range of grade levels and type of students.

Feldman, L.B. (1995). *Morphological aspects of language processing*. Hillsdale, NJ: Erlbaum.

In this edited volume, language and literacy experts address the development of morphological awareness and its role in the acquisition of reading skills among a diverse set of readers.

Graves, M. F., Ruda, M., Sales, G., & Baumann, J. F. (2012). Teaching prefixes: Making strong instruction even stronger? In J.F. Baumann & E. B.



Kame'enui. *Vocabulary instruction: Research to practice* (pp. 95-115). New York: Guilford Press.

In this chapter, Graves, Ruda, Sales, and Baumann describe a research-based approach to prefix instruction, and provide a well developed, deeply described five-day lesson framework aimed at building students' understanding and use of prefixes when reading and writing.

Hiebert, E. (2000-2015). *TextProject, Inc.* <http://www.textproject.org>.

TextProject.org provides free high-quality resources including strategies, tools, and texts that are designed to help bring struggling readers to high levels of literacy. The website also has a variety of other open-access, online resources, including vocabulary lessons and webinars.

Kieffer, M. J., & Lesaux, N. K. (2007). Breaking down words to build meaning: Morphology, vocabulary, and reading comprehension in the urban classroom. *The Reading Teacher*, 61(2), 134-144.

In this article, Kieffer and Lesaux report findings of a study aimed at teaching students to understand morphology as a means of improving reading comprehension performance, particularly for students with limited English proficiency. They offer a set of principles for teachers to use when integrating the teaching of morphology with literacy instruction.

Nagy, W., & Townsend, D. (2012). Words as Tools: Learning Academic Vocabulary as Language Acquisition. *Reading Research Quarterly*, 47(1), 91-108.

In this article, Nagy and Townsend discuss the role of academic vocabulary within academic language, examine research on academic vocabulary, and offer recommendations on how to improve instructional practices when using words as tools for communicating and thinking about language across the disciplines.





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## **Reading Comprehension Strategies in Secondary Content Area Classrooms: Teacher Use of and Attitudes Towards Reading Comprehension Instruction**

**Molly K. Ness, Fordham University**

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### **Abstract**

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The purpose of this mixed methodology study was to identify the frequency of reading comprehension instruction in middle and high school social studies and science classrooms. An additional purpose was to explore teachers' perceptions of and beliefs about the need for reading comprehension instruction. In 2,400 minutes of direct classroom observation, a total of 82 minutes (3%) of reading comprehension instruction was observed. The qualitative findings reveal that teachers did not feel qualified or responsible for providing explicit instruction on reading comprehension. Teachers pointed to the pressure to cover content in preparation for state standardized tests as barriers to providing reading instruction.

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**Editors' Note:** We decided to end this volume of *Reading Horizons* with a previously published article from 2009. The article, "Reading Comprehension Strategies in Secondary Content Area Classrooms: Teacher Use of and Attitudes Towards Reading Comprehension Instruction" is as relevant for the success of secondary students in 2015/2016 as it was in 2009. It is essential that each content teacher understands the literacy demands of their discipline and provides their students with strategies for meeting these demands. This article provides useful suggestions for doing just that



In today's middle and high schools, a significant number of students struggle with the complex academic and literacy tasks they encounter in their content area classes. According to the Alliance for Excellent Education, approximately 8 million students in grades 4-12 read well below grade level (Heller & Greenleaf, 2007). Of those struggling secondary readers, nearly 70% struggle with reading comprehension (Biancarosa & Snow, 2006). For the purpose of this study, reading comprehension will be defined as, "the process of simultaneously extracting and constructing meaning through interaction and involvement with written language" (Snow, 2002, p. 11). The academic importance of reading comprehension cannot be understated, leading researchers to claim that, "the most important thing about reading is comprehension" (Gambrell, Block, & Pressley, 2002, p. 3).

There is clear evidence that reading comprehension instruction is highly beneficial for students of all levels. When teachers explain and model a single comprehension strategy or multiple strategies, as well as provide guided and independent practice with feedback until students begin to use the strategy independently, the reading levels of middle and high school students improve (e.g. Biancarosa & Snow, 2006; Collins, 1991; Deshler, Ellis, & Lenz, 1996; National Reading Panel, 2000; Rosenshine & Meister, 1996; Schorzman & Cheek, 2004; Stevens, 2003; Wood, Winne, & Carney, 1995). As a result of such convincing evidence, perhaps the most widely cited recommendation for improving reading comprehension is increasing explicit instruction in comprehension strategies (National Reading Panel, 2000). In its report, the National Reading Panel (NRP) (2000) highlights the importance of comprehension strategy instruction, explaining, "The idea behind explicit instruction of text comprehension is that comprehension can be improved by teaching students to use specific cognitive strategies or to reason strategically when they encounter barriers to comprehension when reading" (p. 4-39). Highlighting the importance of comprehension instruction, the NRP (2000) found research evidence for the following eight reading comprehension strategies.

1. *Comprehension monitoring* in which the reader learns how to be aware or conscious of his or her understanding during reading and learns procedures to deal with problems in understanding as they arise.
2. *Cooperative learning* in which readers work together to learn strategies in the context of reading.
3. *Graphic and semantic organizers*, which allow the reader to represent graphically (write or draw) the meanings and relationships of the ideas that underlie the words in the text.
4. *Story structure* from which the reader learns to ask and answer who, what, where, when, and why questions about the plot and, in some cases, maps out the time line, characters, and events in stories.
5. *Question answering* in which the reader answers questions posed by the teacher and is given feedback on the correctness.
6. *Question generation* in which the reader asks himself or herself why, when, where, why, what will happen, how, and who questions.
7. *Summarization* in which the reader attempts to identify and write the main or most important ideas that integrate or unite the other ideas or meanings of the text into a coherent whole.
8. *Multiple strategy instruction* in which the reader uses several of the procedures in interaction with the teacher over the text. Multiple-strategy teaching is effective when the procedures are used flexibly and appropriately by the reader or the teacher in naturalistic contexts. (p. 4-6)

Furthermore, evidence shows that reading instruction in specific domains, such as science (Barton, Heidema, & Jordan, 2002; Greenleaf, Brown, & Litman, 2004; Norris & Phillips, 1994) and social studies (Mosborg, 2002; Perfetti, Britt, & Georgi, 1995) can improve student understanding and learning. In spite of this evidence, teachers are often reluctant to provide explicit reading comprehension instruction in their secondary classrooms. Teachers point to the lack of instructional time and the pressure to cover content as barriers to literacy instruction (Bulgren, Deshler, & Schumaker, 1997; Bulgren, Deshler, Schumaker, Lenz, 2000; Deshler, Schumaker, Lenz,

Bulgren, Hock, Knight, et al., 2001; O'Brien, Stewart, & Moje, 1995; Scanlon, Deshler & Schumaker, 1996). Additionally, in seeing themselves as content specialists, secondary teachers may feel that it is not their job to teach reading (Greenleaf, Schoenbach, Cziko, & Mueller, 2001).

### **Purpose of the Present Study**

Despite the evidence highlighting how effective comprehension promotes student achievement, such instruction appears to be a rare event rather than the instructional norm (Block & Pressley, 2002). In her milestone work, Durkin (1978-79) noted that less than 1% of instructional time was used for comprehension strategies in elementary classrooms. Though these findings have been extended to the upper elementary level (Hodges, 1978; Pressley, Wharton-McDonald, Hampston, & Echevarria, 1998), this work has yet to be extended to middle and high schools, leaving researchers to wonder about the degree of reading comprehension instruction in content area classrooms as well as teachers' perceptions about the necessity of such instruction (Trabasso & Bouchard, 2002).

The purpose of the present study was to examine the extent to which secondary teachers included explicit comprehension strategies in routine classroom instruction. Additionally, in collecting qualitative data, the researcher hoped to give voice to teachers' attitudes, perceptions, and beliefs about reading comprehension instruction in content area classrooms. In examining the instructional practices of four middle school content area teachers and four high school content area teachers, the following questions were addressed.

1. To what degree do middle and high school content area teachers incorporate reading comprehension strategies in their science and social studies classrooms?
2. What are teachers' attitudes towards the need and usefulness of reading comprehension instruction in content area classrooms? What factors influence these attitudes?

Underpinning this research is the belief that reading comprehension instruction is particularly important to middle and high school students as they encounter informational text in their content area classes. Recently, multiple research reports (Alvermann, 2001; Biancarosa & Snow, 2006; Kamil, 2003; Heller & Greenleaf, 2007; Torgesen, Houston, Rissman, Decker, Roberts,

Vaughn, et al., 2007) have endorsed reading comprehension instruction as a significant way to improve students' retention and understanding of the domain-specific information in secondary content area classrooms. With regard to comprehension instruction in secondary classrooms, experts recommend the following: "Continue to teach comprehension processing for as long as students need it. Certainly, that means at least middle and high school" (Pressley & Block, 2002, p. 390).

### **Methodology**

This mixed methodology study occurred during three consecutive months in the 2005-2006 academic year. Data was collected in two phases: Phase I with a quantitative focus, and Phase II with a qualitative focus. The target population for this study consisted of four middle school teachers and four high school teachers in public schools.

### **Setting**

Data collection occurred at two rural schools in Virginia: 1) Pine Wood Middle School, housing 430 students in grades 6-12, and 2) Pine Wood High school, housing 782 students in grades 9-12. According to recent census reports, the surrounding county had a population of 15,244 people, with a racial makeup of 90.99% White, 6.45% African American, 0.19% Native American, 0.45% Asian, and 1.32% Latino. The median household income was \$45,931, with 6.6% of the population living below the poverty line. The only middle and high school in the county, Pine Wood Middle and Pine Wood High Schools, shared conjoined campuses, with nearly 100% of middle school students continuing onto the high school. These two schools were selected because of their mixed-level classes, their high rates of student retention and graduation, their prioritizing reading and writing across the curriculum in school improvement plans, and their high-stakes test scores at or above state averages.

At Pine Wood Middle School, 25% of students participated in the federal free lunch program. Approximately 1.7% of the student body received English as a Second or Other Language (ESOL) support. Based on a school-wide initiative to assess readers using the Bader Reading and Language Inventory (2004), 28% of students read on grade level, 32% read above grade level, and 40% read below grade level. Pine Wood Middle School classes were 45 minutes in length. At Pine Wood High School, 15% of students participated in the federal free lunch program. Approximately 1% of the student body received

**Table 1:** *Participants*

Teacher	Subject	Grade	Total Years Teaching	Age at time of Study	Gender	Race	Area of Certification	Highest Degree Held
1	Earth Science	6	1	23	Female	White	Secondary Education (6-12) with Natural Sciences Endorsement	M.Ed.
2	Physical Science	8	11	65	Female	White	Secondary Education (6-12) with Humanities Endorsement	M.Ed.
3	World Geography	8	6	29	Male	White	Middle Grade with Social Studies Endorsement	J.D.
4	World Geography	8	27	55	Female	White	Middle Grade with Humanities & Social Science Endorsement	M.Ed.
5	Chemistry	11	8	50	Male	White	Secondary Education (6-12) with Natural Sciences Endorsement	M.Ed.
6	Earth Science	9	15	49	Female	White	Secondary Education (6-12) with Natural Sciences Endorsement	M.B.A.
7	United States History	11	6	33	Female	Asian	Secondary Education (6-12) with Social Science Endorsement	J.D.
8	World History and Geography	10	8	37	Male	White	Secondary Education (6-12) with Social Science Endorsement	M.Ed.

English as a Second or Other Language (ESOL) support and nearly 45% of matriculating seniors continue on to two- or four-year colleges. Based on the Bader Reading and Language Inventory (2004), 65% of students read on grade level, 15% read above grade level, and 20% read below grade level. Pine Wood High School classes were 90 minutes in length meeting every other day.

### **Participants**

A stratified purposeful sampling approach was chosen for this study. In August 2005, a total of 23 secondary science and social studies teachers were contacted by both letter and email asking for their participation. So as to not influence teacher participation or later classroom observations, teachers were told that the purpose of the study was to observe teachers' instructional strategies in content area classrooms. Ten teachers agreed to the study; purposeful sampling secured eight total participants: two middle school science teachers, two middle school social studies teachers, two high school science teachers, and two high school social studies teachers. Prior to the study, the researcher had no relationship with any of the teacher participants. All of the teachers held state certifications in their content areas. Since earning their teaching certification, only four participants had completed additional graduate classes in assessment and special education. See Table 1 for data on the eight participants.

### **Data Sources and Collection**

Data came from two sources: 1) 2,400 minutes of direct classroom observation over a three-month period, and 2) open-ended teacher interviews subsequent to the completion of classroom observations.

### **Phase I: Direct Classroom Observations**

To determine the frequency of reading comprehension instruction in eight secondary content area classrooms, the researcher observed 2,400 minutes of class- room instruction. Each teacher was observed for a total of five hours, broken into thirty-minute increments. To arrange mutually convenient observation times, the teachers were contacted through email, phone calls, and notes prior to each session. As a result, teachers were fully aware in advance of my coming into the classroom.

To examine the teacher inclusion of reading comprehension instruction, a coding system was modified from previous work (Coyne, 1981; Durkin, 1978-



**Table 2:** *Classroom Observation Coding System*

Category	Code
Non-Comprehension Instruction	Didactic Instruction of New Material (DI-N) Didactic Instruction of Review Material (DI-R) Assignment (AS) Transition (TR) Non-instruction (NI) Participatory Approach (PA)
Comprehension Instruction	Question Answering (CI-QA) Question Generation (CI-QG) Summarization (CI-S) Graphic Organizers (CI-GO) Text Structure (CI-TS) Cooperative Learning (CI-CL) Comprehension Monitoring (CI-MO) Multiple Strategies (CI-MS)

1979). Because my focus of investigation was reading comprehension instruction, I adapted previous coding systems by eliminating irrelevant codes, modifying codes, and adding codes specific to reading comprehension instruction. Two categories of codes were created: 1) Non-comprehension Instruction, and 2) Comprehension Instruction. Table 2 provides an overview of the codes, with additional information available in Appendix A.

The Comprehension Instruction codes, taken from the NRP's (2000) meta-analysis, were selected because of the strong body of research proving their efficacy. In order to be coded as Comprehension Instruction, the teacher had to not only provide it but also give some explanation for how, when, and why to employ the comprehension strategies. More specifically, the Comprehension Instruction codes were used when one or more of the following teacher behaviors occurred (Duke & Pearson, 2002):

- An explicit description of the strategy and when and how it should be used.
- Teacher and/or student modeling of the strategy in action.
- Collaborative use of the strategy in action.

- Guided practice using the strategy with gradual release of responsibility.
- Independent use of the strategy. (pp. 208-210)

Non-comprehension Instruction codes included other routine classroom instruction, such as the giving and completion of assignments, teacher-led lectures and presentation of content, and transition between classroom activities. The Didactic Instruction codes (Didactic Instruction of New Material and Didactic Instruction of Review Material) emerged from Alvermann (2002), who noted that teacher-centered instruction, also referred to as the transmission approach, and dominates middle and high school instruction. In Didactic Instruction, the teacher presents information to students through lectures, PowerPoint presentations, and structured note-taking. The Assignment code (AS) pertained to instances when giving and completing in- and out-of-class assignments. In the Participatory Approach code (PA), students acted as the conveyors of information as they worked in small groups or gave oral presentations of projects and research papers. The Transition code (TR) marked instances when the teacher gave transitory directions, including taking out or putting away materials and shifting instructional topics. The Non-Instruction code (NI) noted times when the teacher was not engaged in instructional behavior which included recording grades, behavior management, or off-task conversation.

While observing the class, teacher behavior was coded in 30 second increments adapted from similar protocols (Taylor, Pearson, Clark, & Walpole, 1999). Only one code for each interval was allotted; in the rare instances when multiple codes were observed, the most prevalent behavior was coded. In addition to re-cording codes, qualitative notes were made about the instruction in that interval, including teacher directions, materials used, and student behaviors. This process was repeated for the 30-minute duration of observation. Also, being cognizant that teachers often follow a daily classroom routine, observation times were scattered so each teacher was observed during a variety of periods at a variety of times.

Because of the heavy reliance on the definition of codes in this study, a reliability check was performed prior to formal observations. A video of a secondary content area classroom was obtained and independently coded for this video. The results were then compared to the coding of the same video by

a doctoral student well versed in statistics and classroom observations. These checks established an intracoder reliability of 0.92.

Phase II: Teacher Interviews. In the second phase of the larger study, the same eight teachers were interviewed during hour-long, open-ended interview sessions. The purpose of the interviews was to examine teachers' instructional strategies with regard to content area literacy and reading comprehension. Teachers were asked to define and explain the reading comprehension instruction they provided, to discuss their beliefs about reading and literacy in their classrooms, and to explain their instructional priorities and challenges. All interviews were recorded and transcribed, which were member-checked as participants confirmed their interview transcripts.

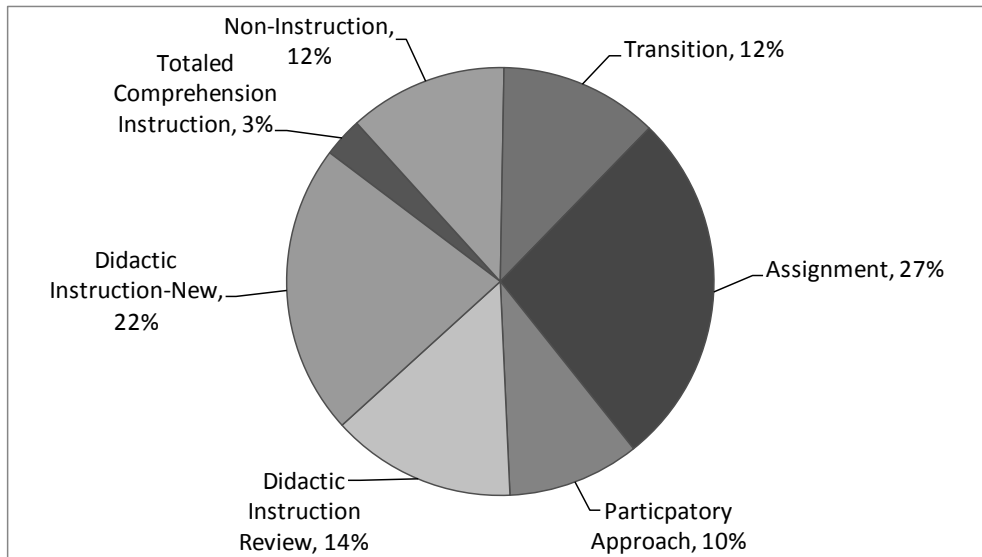
### **Data Analysis**

Quantitative data was analyzed using a three-step process: 1) the total comprehension instruction across all eight teachers, 2) the total comprehension instruction across science and across social studies teachers, and 3) disaggregating the data by individual teachers. Data was examined by the means and standard deviations for the total of reading comprehension instruction, as well as disaggregated by content area, grade level, and individual teacher.

In analyzing the teacher interviews, Patton's (1990) framework was applied. In Phase I, informal analysis, interviews and notes recorded in classroom observations were read. In Phase II, coding, all data sources were reread with analytic memos added. In Phase III, initial category creation, potential categories that emerged from data were gathered. In Phase IV, category confirmation, the coding process of data continued to establish positive and negative cases for each category. In Phase V, conferencing, categories across multiple data sources were confirmed and, if necessary, resolved discrepancies with participants through triangulation.

### **Reading Comprehension Instructional Findings**

The overarching intent of this study was to examine the frequency of reading comprehension strategy instruction in secondary content area classrooms, as well as to give voice to teachers' beliefs about reading comprehension instruction. In 2,400 minutes of instruction, a total of 82 minutes of reading comprehension instruction occurred. Thus, over the course of this study, reading comprehension instruction comprised only 3% of



**Figure 1:** *Percentage Breakdown of Classroom Instruction*

classroom observations. In order to show how classroom instruction occurred in secondary content area classrooms, Figure 1 and Table 3 tally and depict the results from classroom observations of all eight participants.

### **Phase I Findings**

Of the reading comprehension instruction that occurred, the reliance on only three comprehension strategies was noted: Text Structure, Question Answering, and Summarization. Of these three, Question Answering was most prevalent, with 62 minutes overall. The use of Text Structure as a reading comprehension strategy occurred in middle school science and social studies and high school science classrooms, for a total of 18 minutes. Lastly, two minutes of Summarization as a reading comprehension strategy occurred in one middle school social studies classroom.

### **Reading Comprehension in Middle School Classrooms**

Of 600 total minutes observed in middle school social studies classrooms, reading comprehension strategies made up 60 minutes (10%) of instruction. Reading comprehension instruction in middle school social studies classrooms far exceeded comprehension instruction in other grades and in science classes. Though reading comprehension instruction was highest for middle school social studies teachers, only one teacher, Teacher 4, provided reading comprehension instruction.

By far, the most heavily favored reading comprehension strategy was Question Answering, with 48 minutes of inclusion in these middle school classrooms. Teacher 4 led the class in orally answering the questions taken directly from the end of the chapter, then providing feedback about the correctness of students' answers. After concluding a chapter, he then directed students to independently work on questions from the end of the chapter. Teacher 4 used Text Structure as a comprehension strategy, primarily through coaching students on how to examine maps, bold type, and chapter titles and subtitles. In a geography lesson on third world countries, the teacher called students' attention to charts, graphs, and pictures in a text- book chapter on the factors that impact global life expectancy. In that same class, Teacher 4 assisted students in reading bar graphs and pie charts, explaining, "Let's examine the pie

**Table 3:** Breakdown of Classroom Instruction Across Eight Participants

[illegible]

chart. What information does it give us? Why did the publisher include it on this page?” The same teacher also provided two minutes of instruction on Summarization. In a lesson on latitude and climate zones, he led whole-group practice in “summing up what the chapter tells us about precipitation and climate zones.” As students raised their hands to orally summarize the reading, the teacher provided feedback to the students about omitted material of importance.

### **Reading Comprehension in High School Classrooms**

Of the 600 total minutes observed in high school social studies classrooms, no explicit instruction on reading comprehension strategies occurred. In that same time, reading comprehension instruction accounted for only three minutes (0%) of instruction. Similar to the middle school science classrooms, high school science teachers relied only upon teaching Text Structure and Question Answering. During instruction on climate zones, high school science students worked in small groups to research the temperature, climate controls, latitude and longitude, and average precipitation of a predetermined city. During this activity, Teacher 5 instructed students to look at information provided in textbook tables and charts. She asked students, “What information can we gather from that chart? Remember, it’s there for a reason, not just to fill up space.”

### **Reading Comprehension Instructional Findings**

Thus, in disaggregating a total of 82 minutes of reading comprehension instruction, the data indicated that more reading comprehension instruction occurred in middle school classrooms (79 minutes total) than in high school classrooms (three minutes total). Additionally, social studies teachers were more likely to incorporate reading comprehension instruction (60 minutes) than science teachers (22 minutes). Of the eight NRP (2000) reading comprehension strategies, middle and high school content area teachers favored three: Question Answering (62 minutes), Text Structure (18 minutes), and Summarization (two minutes).

### **Phase II Findings**

Responses from teacher interviews provided a wealth of information to explain why reading comprehension instruction was essentially absent in these classrooms. The following categories describe the teachers’ responses.

**Teachers' Understandings of Literacy and Reading Comprehension**

All participating teachers espoused their beliefs that reading was a vital part of their classroom instruction, as exemplified by a high school history teacher's statement, "Reading is very important because being able to read is the key to the student's success. It helps them remember and be able to understand the material when it is discussed in class." Though teachers understood and promoted the importance of literacy in their classroom, some participants did acknowledge that they did not provide explicit reading comprehension instruction. A high school science teacher admitted, "We don't really talk strategies in my class. I operate under the assumption that they can read it. If they get stuck, I'll help them, but I'm not spending a lot of time getting them to read." Accordingly, data from Phase I indicated this teacher provided no comprehension instruction during five hours of observation.

On the other hand, three of the eight teachers pointed out that they do provide reading comprehension instruction. Their self-reported reading comprehension strategy instruction largely included discussion of text and answering text-based questions. One high school history teacher, who provided no comprehension instruction during Phase I observations, explained, "I assign independent reading. We go over it by reading aloud and answering questions. Discussion of the readings the next day let me see if they understood the text."

Furthermore, when asked about what reading comprehension instruction meant, teachers expressed uncertainty. A middle school science teacher explained, "I often try to guide them through readings, although I am not sure if that helps reading comprehension." Other participants equated comprehension instruction with assessing whether their students understood text. A middle school social studies teacher noted, "I help students comprehend the text by asking them about the text. If they know they are held responsible for the content, students are more likely to take the time to focus on understanding the reading." Absent in their discussions about reading comprehension instruction were explanations of teacher-led think-alouds to model reading strategies, explicit explanations for when and why to use strategies, or coaching students on how to apply strategies to their independent reading.

### **Content Coverage as an Instructional Priority**

These middle and secondary teachers saw their major instructional responsibility to be covering their particular content in preparation for state standardized tests, and as such, identified themselves by their content area. Overwhelmingly, teachers identified covering content as their most pressing instructional priority. For example, a high school science teacher reasoned, “Teachers are so test-driven. We have an enormous amount of information to pour into students’ heads in order to fulfill the yearly requirements of the state standardized test.” In fact, five of the eight teachers ranked content coverage in preparation for state tests as their most pressing instructional priority. No doubt the pressure that teachers felt to cover content was closely aligned with the need to successfully pass state standardized tests.

### **Teachers’ Self-Identifications as Content Specialists**

The secondary teachers in this project identified themselves as content specialists, and as such, may have shirked any responsibility for reading comprehension instruction. One high school social studies teacher identified himself as a content teacher, explaining, “I’m not a reading specialist, so I’m not able to do all the things they say. If I did all those things, after a while I’d be a reading specialist and not a science teacher.” Another high school teacher professed that reading comprehension instruction was not her responsibility. “The role of the secondary teacher should be to improve reading but not have to teach reading comprehension at the high school level.”

### **Reading Comprehension Detracting from Content Coverage**

With the pressure to cover content, several teachers in this study saw comprehension instruction as an instructional burden which detracted from instructional time. Consider the following statements:

- “Content area teachers don’t have time to teach students how to read. We have to get them to get the content. As long as they can read and answer the questions on the SOL test, I don’t worry about reading.” (Teacher 8)
- “My priority is to teach the students the science curriculum to the best of my ability while fostering a love for science. It is hard to take time to focus on reading in a content area classroom.” (Teacher 2)



- “I’m quick to assess whether students can read the text, but I don’t have time to work on their weaknesses. We have to move on to expose them to everything on the test. Content teachers don’t provide more reading instruction because of standardized testing. I don’t have the time to sit and teach students how to read. Although it’s beneficial in the long run, I’d have to give up instructional time to teach my content.” (Teacher 4)

It appears that teachers in this study saw reading comprehension as an instructional add-on, rather than a way to promote students’ understanding and retention of content.

### **Lack of Training in Reading Comprehension Instruction**

Teacher participants also pointed to their lack of professional knowledge and training as barriers to reading comprehension instruction. One middle school social studies teacher explained, “My students have to be able to read. However, I’m not qualified to teach them how to read. In my training, I didn’t learn to teach children to read. I never felt comfortable working with reading.”

Thus, it appears that these middle and high school teachers were unlikely to provide reading comprehension for several reasons: 1) their belief that reading comprehension instruction would detract from content coverage and preparation for state testing, 2) their self-identification as content specialists, and 3) their lack of training and confidence regarding reading instruction.

### **Limitations of the Study**

Readers must keep in mind the possible limitations that might have impacted the internal and external validity of this study. Foremost, the sample size of eight participants is small. Though the amount of observational time was carefully considered and compared to similar research, 2,400 minutes of classroom observations may not have been sufficient to see comprehension instruction in action in content classrooms. In addition, observation time could have been configured in very different ways. For instance, rather than devote five hours to eight teachers, more teachers could have been observed for shorter time periods. Additionally, despite efforts to standardize the coding system, observational study inherently may have a subjective nature. Lastly, the mere presence of a researcher and the nature of observation itself may influence teacher instruction. Teachers’ behaviors might have been altered because of researcher presence.

### **Discussion and Implications**

The primary reason for conducting this research was to determine the frequency of reading comprehension instruction in middle and secondary content area classrooms and how teachers' perceptions of reading comprehension influenced their instructional decisions. Findings indicate that reading comprehension instruction in social studies and science classrooms was essentially absent because these teachers saw reading comprehension as a time-consuming detraction from their content coverage, or doubted their responsibility for or skill in providing such instruction.

The data from this study seem to suggest that middle and secondary teachers are uncertain about the what and the how of reading comprehension instruction. When asked to define reading comprehension instruction, teachers pointed to discussing text, answering questions about text, and assessing students to determine whether they understood text. The use of only three of eight National Reading Panel (2000) reading comprehension strategies suggests that teachers in the study may not have a sense of the wide range of possibilities within reading comprehension strategy instruction.

Furthermore, teachers' knowledge of how to teach such strategies was equally narrow. Students learn how to apply reading comprehension strategies through explicit descriptions of strategies, teacher explanation of how, when, and why to apply particular strategies, teacher modeling, guided practice, and gradual release of instructional responsibility until independent use of the strategy is established (Dole, 2000). Even when teachers in this study did provide reading comprehension instruction, they merely directed students to use the strategy, not how or why to do so. For instance, rather than coaching students how and why to use Question Answering as a comprehension strategy, one middle school social studies teacher responded only to the correctness of students' responses. It is possible that teachers in this study provided explicit instruction in reading comprehension strategies earlier in the school year. It is also possible that students already knew how to rely on some of these approaches and that, at the time of my observations; students were already able to use these strategies independently. Still, Duke and Pearson (2002) remind us that in effective comprehension instruction, teachers coach readers each time they approach the text.

Yet another possibility is that teachers in this study found comprehension instruction beyond their professional expertise. Walker (2005) explains that, “Because comprehension is a complex process, teachers are mystified when demonstrating how to construct meaning using content knowledge and comprehension strategies” (p. 688). In any case, absent in both participants’ teaching and in their interviews was evidence of explicit instruction in a wide variety of reading comprehension strategies.

It is also possible that teachers in this study did not provide comprehension instruction because they viewed it as a time-consuming burden. Multiple teachers pointed to the lack of instructional time as an obstacle to reading comprehension. These findings echo previous literature in which teachers felt that they did not have enough time to include reading instruction into their classroom routines (Bulgren, Deshler, & Schumaker, 1997; Bulgren et al., 2000; Deshler et al., 2001; Scanlon, Deshler & Schumaker, 1996). If teachers do not understand how or why to teach reading comprehension, they may be unlikely to give up any precious instructional time to provide such instruction.

The minimal inclusion of reading comprehension strategies would appear to have implications for teaching preparation and on-going professional development. Firstly, it may be prudent to make significant improvements in how we train secondary teachers as they enter the field. In Virginia, where this study occurred, candidates pursuing secondary (6-12) licensure are required to take only three semester hours of reading across the curriculum. Secondly, the majority of states require only one course in literacy across the curriculum (Heller & Greenleaf, 2007). This minimal coursework may not be enough to expose content area teachers to the instructional importance of reading comprehension.

We cannot overlook the possibility that secondary teachers may come to the field because of their love for a particular domain of knowledge. Schools of education and teacher training programs would be wise to encourage future teachers to see the possibility of content area literacy integration. Moje (1996) explains that unless content literacy methods courses provide pre-service teachers with classroom contexts and reflective opportunities, these future educators may remain unconvinced of the importance of reading instruction. Thus, teacher training programs may need to show a high school biology

teacher or a middle school social studies teacher how reading comprehension instruction can support, extend, and improve student learning.

Just as teacher education programs must highlight the need for and opportunity for reading comprehension instruction, professional development must do the same for in-service teachers. In-service teachers must have meaningful professional development, including mentoring and coaching to allow them to see the realm of possibilities in reading comprehension. Such professional development initiatives may be a vast change from the status quo, as researchers Heller & Greenleaf (2007) explain, “Relatively few of the nation’s secondary school teachers have had meaningful opportunities to learn about the reading and writing practices that go on in their own content areas” (p. 18). These professional development opportunities will be even more significant if they encourage inquiry-based teacher reflection (Jacobs,

2002). Jacobs (2002) points out that though the majority of in-service professional development opportunities provide teachers with a plethora of reading strategies, these opportunities rarely ask teachers to critically examine how literacy may come to support their instructional goals.

Truly meaningful professional development opportunities may provide secondary teachers with an understanding of how reading comprehension strategies are beneficial for students’ understanding and retention of content. We must keep in mind that improving teachers’ knowledge of effective reading comprehension instruction is a long-term project. Pressley & El-Dinary (1997) indicate that it takes about a year to become proficient in teaching reading comprehension, and that teachers must understand such instruction quite well before successful implementation (e.g. Brown, Pressley, Van Meter, & Schuder, 1996). Fortunately, when secondary teachers do receive intensive professional development that emphasizes reading instruction in content areas, the results are promising (Greenleaf & Schoenbach, 2004). Until middle and secondary teachers view reading comprehension instruction as a crucial means to content acquisition, reading comprehension in middle and secondary content area classes may be pushed aside.

### **Suggestions for Future Research**

In order to gain a more comprehensive picture of reading comprehension in content classrooms, the research reported in this study must be replicated across a larger number of teacher participants and across schools set in different

contexts. It would also be beneficial to replicate this study in states which require more pre-service reading coursework than the three semester hours required in Virginia, where this study occurred. More research on whether teachers' explicit instruction of reading comprehension strategies impacts student outcomes, such as performance on standardized tests, is needed. There also appears to be research opportunities which contrast students' performance from teachers who actively pursue professional development opportunities in literacy comprehension instruction against teachers who do not.

### **Conclusion**

Just as elementary teachers provide minimal reading comprehension instruction (Durkin, 1978-79; Pressley et al., 1998), middle and secondary teachers are equally unlikely to utilize their instructional time to explain, model, and coach students through reading strategies. Unless avenues of teacher training and professional development convince teachers of the value of reading comprehension instruction, content coverage may trump the explicit strategy instruction which promotes students' understandings of text.

### **About the Author**

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## **Appendix A**

### **Classroom Observation Coding Protocol**

CODE: The category in which the observed behavior occurs.

#### **DI-NI: Didactic Instruction: New Information**

Here the teacher orally leads the class in delivering content area information, through PowerPoint, overhead projector, or lecture. Teacher behavior here focuses on information presentation. This may also include the teacher orally reading from informational or narrative text. This may also include the teacher presenting vocabulary, activating background knowledge, and setting a purpose for reading.

#### **DI-R: Didactic Instruction: Review Material**

Here the teacher leads students in a review of past material. This may include review games, asking questions, or working on test/quiz study guides. This code is also used when the teacher leads the class in reviewing answers from past tests, quizzes, or assignments.

#### **PA: Participatory Approach**

This code is reserved for instances in which students present information to the class or act as conveyors of information. As defined by Jetton and Alexander (2004), the participatory approach provides students with learning opportunities that promote peer collaboration and increase the likelihood that students will construct knowledge for themselves.

#### **AS: Assignment**

The teacher checks, gives, or assists students with an assignment. The assignment may be in-class or outside of school, and includes both assignments focusing on reading and assignments focusing on content material. Assignments may also include the teacher leading students in a writing assignment. This code also includes the teacher giving tests, reviewing homework or classwork assignment, and conferencing with students on individual work. In these assignments, students work independently without teacher-centered instruction.

**TR: Transition**

The teacher gives transitory directions, including taking out or putting away materials and shifting instructional topics.

**NI: Non-Instruction**

This code is used when the teacher is not engaged in instructional behavior. This may include recoding grades, behavior management, or Non-Instructional conversation. This may also include announcements and material distribution.

**CI-QA: Comprehension Instruction – Question Answering**

The teacher asks students to answer questions from the text as a comprehension strategy. Students independently search for answers in the text. Here the teacher provides feedback of the correctness of student responses.

**CI-QA: Comprehension Instruction – Question Generation**

The teacher asks students to generate questions from the text as a comprehension strategy. Questions can be of the who, what, why, when, where, and how nature. In addition to posing questions, students are responsible for answering them.

**CI-S: Comprehension Instruction – Summarization**

The teacher asks students to summarize informational text either orally or in writing. Here the teacher asks students to identify the main ideas and central points in a text.

**CI-GO: Comprehension Instruction – Graphic Organizers**

The teacher employs graphic organizers as a means for students to process and comprehend text. Graphic organizers can include any type of visual or semantic organizers intended to assist students with comprehension and to understand the meanings and relationships in text. This can include guided practice or independent practice.

**CI-CO: Comprehension Instruction – Cooperative Learning**

The teacher gives students independent practice in cooperative learning, where readers apply comprehension strategies together. This may include small groups or partners reading and comprehending texts together.

### **CI-CM: Comprehension Instruction – Comprehension Monitoring**

Here the teacher asks and encourages students to be metacognitive and aware of their understanding during reading. The teacher provides students with fix-it strategies to deal with such problems. Comprehension monitoring can include teacher-led think-alouds. Additional comprehension monitor includes teacher-generated discussions of comprehension difficulties and application of strategies.

### **CI-TS: Comprehension Instruction – Text Structure**

The teacher provides students with information on how to use narrative and informational text structure to understand text. This can include plot, sequencing, characters, and events in narrative text and text features such as titles, headings, pictures, captions, typography, charts, graphs, glossaries, and appendices in informational text.

### **CI-MS: Comprehension Instruction – Multiple Strategies**

Here the teacher guides students in applying several procedures with flexibility and appropriate application to increase comprehension. For this code, comprehension instruction must include at least two or more combinations of the following four strategies: question generation, summarization, clarification, and prediction (NRP, 2000).





### **History, Philosophy, and Mission of Reading Horizons**

Reading Horizons began in 1960 by Dorothy J. McGinnis as a local reading education newsletter and developed into an international journal serving reading educators and researchers. Major colleges, universities, and individuals subscribe to Reading Horizons across the United States, Canada and a host of other countries. Dedicated to adding to the growing body of knowledge in literacy, the quarterly journal welcomes new and current research, theoretical essays, opinion pieces, policy studies, and best literacy practices. As a peer-reviewed publication, Reading Horizons endeavors to bring school professionals, literacy researchers, teacher educators, parents, and community leaders together in a collaborative community to widen literacy and language arts horizons.

### **Submitting Manuscripts**

Submit manuscripts electronically to [http://scholarworks.wmich.edu/reading\\_horizons/](http://scholarworks.wmich.edu/reading_horizons/). Please submit files in Microsoft Word or RTF. Manuscripts should include references and text citations according to the 6th Edition of the Publication Manual of the American Psychological Association. Tables and graphs should be embedded in the manuscript upon submission. Manuscripts should be double-spaced, using 1.25 inch margins and 12-point font. All manuscripts are read in-house to determine a blind review process. The blind review process involves a two to three month time-frame. All manuscripts are evaluated and reviewed on the following criteria: significant contribution to body of literacy knowledge; timeliness of topic; theoretical framework/ underpinnings of manuscript; sound methodology process applied; and clarity of writing.



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There is no more crucial component in all of education than reading

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