A CONTENT ANALYSIS OF VOCABULARY INSTRUCTION IN HIGH SCHOOL COMMERCIAL LITERACY PROGRAMS

by

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A dissertation submitted to the faculty of
The University of North Carolina at Charlotte
in partial fulfillment of the requirements
for the degree of Doctor of Philosophy in
Curriculum and Instruction

Charlotte

2009

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ABSTRACT

JEAN PAYNE VINTINNER. A content analysis of vocabulary instruction in high school commercial literacy programs. (Under the direction of DR. KAREN WOOD)

The purpose of this study was to analyze the teachers' manuals of the leading commercial high school reading programs to determine the extent to which they provide effective vocabulary instruction as advocated by the leading professional organizations in literacy. By synthesizing the standards of instruction from professional organizations, effective practices for teaching vocabulary and improving students' overall performance were determined. This study evaluated the 3 leading commercial reading programs for high school students, *READ 180, Fast Track,* and *Language!*, and revealed that none of these programs met all the standards required for effective instruction.

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CHAPTER 1: INTRODUCTION

An Evolution of Expectations for Adolescents

> Today's high schools were conceived at the beginning of the 20th century to prepare students to work in an industrial economy that looked very different from the economy we have today. In the early 1900s, large comprehensive high schools were designed to educate all of a community's students efficiently. (Bill and Melinda Gates Foundation, n.d., p. 2)

In previous eras, the purpose of education had been to eliminate differences in learners and create a common ground for understanding (Smith, 2002). Where children's attention previously focused solely on traditional reading and writing skills, literacy achievement has become increasingly challenging, requiring students to manipulate a wider range of texts with increasingly difficult vocabulary to succeed personally and professionally (Moore, in press; New London Group, 1996; Pitcher et al., 2007; Sternberg, Kaplan, & Borck, 2007). To that end,

> Adolescents entering the adult world in the 21st century will read and write more than any other time in human history. They will need advanced levels of literacy to perform their jobs, run their households, act as citizens, and conduct their personal lives. They will need literacy to cope

> with the flood of information they will find everywhere they turn. (Moore, Bean, Birdyshaw, & Rycik, 1999, p. 3)

As President Obama stated in his inaugural speech, we must transform our schools to meet the demands of this new age (Obama, 2009).

Statement of the Problem

Students in middle and high school face rising levels of literacy demands each school year as classes become increasingly specialized and new critical and media literacies develop. Adolescents struggle to comprehend complex texts independently, due to their unfamiliarity with terms related to multiple new curricula and require remediation and support when learning new vocabulary terms and concepts (Moore et al., 1999). As students enter content classes, they must possess specialized vocabulary knowledge to process text (Harmon, Hedrick, Wood, & Gress, 2005; National Institute of Child Health and Human Development [NICHD], 2000). Students will be unable to comprehend subject-area material without a strong understanding of key vocabulary within each discipline (Chall & Jacobs, 2003; Kamil, 2003; Manzo, Manzo, & Thomas, 2006; NICHD, 2000).

In an effort to meet the needs of students, many high schools are implementing remedial reading courses. Since many teachers at this level are unprepared or unwilling to support content-area reading (Kamil et al., 2008; National Institute for Literacy, 2007), commercial reading programs are often adopted to provide instruction for struggling adolescent readers (O'Brien, Stewart, & Moje, 1995). Unfortunately, instruction that supports students'

understanding of specialized vocabulary in use in many classrooms has not evolved as quickly as demands of literacy in the 21st century (Blanchowicz, Fisher, Ogle, & Watts-Taffe, 2006). Many students still suffer skill and drill vocabulary practices or are restricted to encountering terms embedded in traditional texts. To date, few comprehensive reviews of these programs have been done (Slavin, Cheung, Groff, & Lake, 2008), leaving teachers and students to wonder about the effectiveness of instruction within these programs.

Significance of the Problem

In an era of high stakes accountability, students must possess basic skills to understand content and perform well on summative assessments that determine the success or failure of students, teachers, schools, and beyond. Unfortunately, many students do not have the basic reading skills expected of their grade level (Alvermann, 2001); almost three quarters of all high school students require some form of remediation in reading (Biancarosa & Snow, 2004) and are unlikely to perform well on such testing. For students to avoid retention and schools to dodge state or national interventions based on low student scores, teachers must find ways to remediate students' literacy skills so that they may be successful.

Since reading performance is a reliable indicator for students' success in reading as well as math and science (Kamil et al., 2008), reading instruction affects all aspects of learning. In order for students to be successful in high school, they need to comprehend the complexities of language and the specific vocabulary for each content-area class and apply their knowledge to a wide

variety of texts. This increased mastery of vocabulary improves their capacity to learn and leads to a greater sense of self-efficacy (Manzo et al., 2006).

This issue affects not only students but also society at large: “the emotional, social, and public health costs of academic failure have been well documented, and the consequences of the national literacy crisis are too serious and far reaching for us to ignore” (Biancarosa & Snow, 2004, p. 3). Students at risk for failure often feel their lack of abilities may hinder their chance at a fulfilling life. They face a limited possibility of pursuing postsecondary education and may find it difficult entering or finishing vocational or technical training. Since 85% of jobs presently require some postsecondary education (Lewis, 2007), these challenges limit job possibilities and can lead to a lack of satisfaction (National Governors Association, 2005). When students feel they may not be able to achieve their dreams or goals, they can create a negative self-image and give up on their education entirely (Alvermann, 2001; Grosso de Leon, 2002; Patton & Holmes, 2002).

Students without adequate skills often turn their energy toward disruption to cover their lack of ability. A low level of literacy is a major characteristic of students who pose repeated discipline problems (Brozo, 2000; Grosso de Leon, 2002; Movement for Canadian Literacy, 2003). According to Curtis and Longo (1999), “their repertoire of avoidance behaviors can include verbal outbursts, sarcastic statements directed toward the teacher or their classmates, and even complaints of illness” (p. 49). Adolescents who create continual behavior

problems often feel unaccepted or unappreciated by teachers and schools and frequently feel pushed out of education (Thornburgh, 2006).

Without basic literacy skills, many students face academic challenges and become disengaged from school. Students with low literacy skills have a greater chance at higher levels of poverty and greater instances of incarceration (Fleishman, 2005). The Literacy and Rehabilitation Act of 2003 set the standard for functional literacy equivalent to the expectations for students in the eighth grade, a level at which Alvermann (2001) claimed students must achieve to be productive rather than troublesome. While the definition of acceptable literacy proficiencies has been debated over the last 20 years or more, it is important to understand why so many of our citizens are falling below this national standard. Without proper remediation, many of these students will find themselves unable to contribute to society, finding themselves instead struggling to achieve.

Students with below grade reading levels are twice as likely to leave school as their more proficient counterparts. As a result, more than 3,000 students drop out of high school every school day (Alliance for Excellent Education [AEE], 2003; Fleishman, 2005; Grosso de Leon, 2002). Only slightly more than two thirds of entering freshman will graduate from high school, a percentage that is disproportional in minority populations (Grosso de Leon, 2002). Students who drop out of school are more than eight times more likely to be incarcerated and thus become an issue for the community at large (Bridgeland, Dilulio, & Morison, 2006). If these students are ever to become functional readers and learners, rather than counterproductive to society,

educators must find a way to overcome these self-perceptions and behaviors and find a way to build the basic skills of these low functioning students.

Purpose of the Study

The purpose of this study was to analyze the teachers' manuals of the leading commercial high school reading programs to determine the extent to which they provide effective vocabulary instruction as advocated by the leading professional organizations in literacy. The following questions framed and directed this study:

1. Based on the alignment of suggestions and standards identified within position statements from major professional organizations in the field of literacy, the International Reading Association (IRA), the National Reading Panel (NRP), the National Council of Teachers of English (NCTE), and *Reading Next,* what practices are identified as effective for supporting struggling adolescent readers' development in vocabulary?
2. To what extent do the lessons of the leading programs in use in high school classrooms uphold the practices and strategies put forth by these professional organizations?
3. To what extent do lessons within these programs offer direct vocabulary instruction or indirect vocabulary instruction where vocabulary learning is embedded within other instruction?
4. To what extent do these lessons prepare students to independently apply vocabulary knowledge and strategies to content-area material?

CHAPTER 2: REVIEW OF THE LITERATURE

This review of literature investigates (a) the adolescent literacy crisis in the United States and the challenges of teaching struggling adolescent readers and (b) the need for research-based effective practices supporting literacy development in high school classrooms. The analysis of the adolescent literacy crisis reviews a synthesis of characteristics contributing to the struggle some adolescents face during reading and the particular challenges to struggling adolescent readers. In evaluating the need for effective instruction in content-area classes, this review identifies professional organizations aimed at improving literacy and language arts instruction, looks at what is considered effective practices for teaching reading, and inherently vocabulary, to adolescents as described by *Reading Next* and the position statements of IRA, NRP, and NCTE, as well as reviews the professional literature aimed at supporting the teaching of literacy and language. Finally, an overview of commercial reading programs is provided.

Conceptual Framework

The theoretical framework for this study is three-fold. First, it is important to realize research in adolescent literacy is an emerging body of knowledge. For decades, literacy instruction for adolescents had gone unnoticed by the public. Most publishers and policymakers had felt teaching reading was the domain of

elementary schools and had little to offer high schools trying to remediate basic skills and extend instruction to support new literacies to maintain or raise graduation rates (Alvermann, 2001). Yet, recent years have shown an increase in attention to accountability for student performance and graduation rates (Moje, 2002; U. S. Department of Education, 2006b) and has prompted greater interest in basic skills interventions to increase the possibility of students' success. In fact:

> Between 1999 and 2007 national governmental agencies, educational associations, and advocacy groups published an unprecedented number of major documents on literacy instruction in secondary-school classrooms. These documents review the knowledge base on improving literacy instruction in middle- and high-school classrooms and recommend ways to implement needed reforms. (Moore, in press)

Recent initiatives such as *Reading Next* and directives from professional organizations in the field of literacy are just beginning to influence the classroom practices and the creation and development of reading programs (Lo Bianco, 2001). Unfortunately, the development of curricula and published materials often lags behind research, leaving schools unprepared to support struggling adolescent readers.

Second, it is important to realize the impact of motivation and engagement on remedial adolescent literacy instruction. Repeated failure can cause students to form a sense of *learned helplessness*; poor readers grow accustomed to failure and suffer a drop in self-esteem and motivation (Patton & Holmes, 2002).

As such, “by the ninth grade, many students have been defeated by test scores, letter grades, and special groupings” (Tovani, 2000, p. 9). O’Brien (2003) stated that students who struggle can begin to assume they cannot succeed and thus stop trying to learn. At this point, these students have come to believe they either lack the ability to function at the same level as their peers or lack the motivation to put forth the effort required to improve their skills, due to a learned sense of failure. Once students have reached this stage, it is often difficult to help them reengage in learning. If a student has not mastered reading by the third grade and no remediation is offered through middle and high school, it is unlikely the student will ever become an efficient reader (Biancarosa & Snow, 2004).

Third, since most students at this stage have learned to decode, it becomes crucial students improve basic literacy skills, hence influencing the comprehension of content-area texts. Specifically, vocabulary knowledge has a high correlation with the ability to comprehend complex subject-area texts and general intelligence (Manzo et al., 2006), and overall reading ability is a reliable predictor for students’ academic success in all content areas (Nagy, 1988; Slavin et al., 2008). Teachers must provide effective instruction on vocabulary acquisition for students to have the greatest chance of success, both in school and beyond,

The Adolescent Literacy Crisis

Due to such ideals as social promotion, lack of effective instruction, and unachieved gateways, students are entering high school without the literacy skills required to ensure their success in their coursework and prepare for their futures

(Alvermann, 2002; Grosso de Leon, 2002). Based on the benchmarks of the *1998 National Assessment of Educational Progress*, reading scores have declined over the past 15 years; now only 33% of eighth-grade students and 40% of twelfth-graders are performing at or above proficient levels (U.S. Department of Education, 2006a). This leaves approximately 70% of students between fourth and twelfth grade who struggle to read at grade level and require some form of remediation (Biancarosa & Snow, 2004).

Similar results have occurred on other measurements, such as the SAT and ACT; students' 12th-grade performance is lagging (Lewis, 2007; Moore, in press). According to Greene (2001), only 6% of all seventeen-year-olds read at levels that allow for the higher order thinking skills required to understand complicated discipline texts.

In order to address the current condition of literacy in America and create effective interventions, it is important to understand what is causing students to struggle with reading and decipher what can be done to improve the effectiveness of students and school programs.

School Characteristics Affecting Reading Performance

This slump in scores can be attributed to a multitude of trials facing high school students. The structure of high school can challenge struggling readers. Compared to elementary and middle school schedules, students have multiple teachers within a school day, each with a different style of teaching and specialized content vocabulary. This variety puts higher levels of responsibility on students to learn the performance expectations and monitor personal progress in

each class (Capella & Weinstein, 2001; Slater, 2004). Students must learn to shift their understanding of how to process text and comprehend material and terminology multiple times each day with little or no explicit reading instruction from teachers. This increased responsibility can challenge the motivation of students who are struggling to keep up academically (National School Boards Association, 2006).

In addition, literacy instruction receives less attention after the third grade; most students are asked, with little or no support, to perform reading tasks in order to learn course content (Capella & Weinstein, 2001; Chall & Jacobs, 2003; Duke, 2000). Reading in high school is far more complex than that of the earlier grades; the skills required to process texts are more complex, including advanced vocabulary and intricate text structures (Beck & McKeown, 1991; Biancarosa & Snow, 2004; Fleishman, 2005; Grosso de Leon, 2002; Jetton & Alexander, 2004; Sternberg et al., 2007). Students are asked to decode, comprehend, and analyze information all at once (Grosso de Leon, 2002). Alvermann (2001) stated content-area classes force students to deal with technical vocabulary and shifting modes of literacy, all of which are virtually impossible for struggling readers unless they receive support from teachers.

Another challenge for high school readers is the lack of appropriate time and resources. Goodlad (as cited in Bintz, 1997) discovered that time dedicated to reading accounted for only 2% of high school instruction. *Reading Next* suggested high schools should continue to incorporate adequate time for independent reading, similar to the amount dedicated in elementary school for

reading practice, during which students can explore reading and build related skills (National School Boards Association, 2006). Allen (1995) discovered that students will read and write when they are given an opportunity to do so. Educators must use this window of enthusiasm as a way to reach low ability high school students.

While materials for improving adolescent reading are available, not all are appropriate for the abilities and interests of the struggling high school readers, and there is little in the way of policy or guidelines to help school systems determine which materials are best for their students (Alvermann, 2001; Berman & Biancarosa, 2005; Biancarosa & Snow, 2004; Torgesen et al., 2007). Texts written at an appropriate level are often too childish, making them insulting to older students, and lack alignment to classroom instruction and vocabulary. Texts of interest to students and those created to impart content related to coursework in high school are often written at a level that is too challenging for struggling readers, including high percentages of new and unfamiliar words. As the material gets more difficult, it often becomes less engaging or of less relevance than earlier texts, causing motivation for high school students to drop (Biancarosa & Snow, 2004; Jetton & Alexander, 2004).

Another challenge for struggling adolescent readers is maneuvering through the growing field of literacies. As the information base doubles every five years and new textual formats enter instruction, it becomes increasingly necessary for students' literacy skills to adapt to handle a multitude of material (Grosso de Leon, 2002). Unfortunately, this comes at a time when students are

trying to adapt to greater levels of independence and higher expectations for student achievement. Without a conscious effort to support students through this transition to high school academic demands, many students will be unsuccessful.

Summary. As students enter high school, they must interact with a wide variety of materials and expectations as they travel from class to class, teacher to teacher, and content to content. Historically, content-area classes have offered little or no support as students struggle to learn material and vocabulary specific to each domain in order to comprehend an ever-increasing body of knowledge.

Student Characteristics Affecting Reading Performance

Some students face a higher chance of academic failure due to challenges associated with low socioeconomic status (Berliner, 2005), lower levels of parental education, limited proficiency with English, cognitive and physical disabilities, and low levels of family literacy (National Governors Association, 2005; Patton & Holmes, 2002). These characteristics can lead to limited access to books and models of reading and exposure to lower numbers of words than their peers. As a result, students face additional challenges when learning content-area vocabulary due to a lack of existing schema, causing them to feel less able than their classmates.

Much of adolescents' motivation is tied to how they see themselves as readers and writers. Students facing additional challenges such as those mentioned often struggle with self-efficacy. When planning effective vocabulary interventions for high school students with reading difficulties, it is important to consider the particular characteristics of older students who are building literacy

skills. One key factor in engaging older struggling readers to participate in remediation programs is motivation (Alvermann, 2001; Guthrie, et al., 2007; McCabe & Margolis, 2001; C. Shanahan, 2004; Wilhelm, Baker, & Dube, 2001; Wood, Edwards, Hill-Miller, & Vintinner, 2006). Motivation to read and write begins to decline after they enter middle school and reaches extreme apathy by high school (Biancarosa, & Snow, 2004; Ivey & Broaddus, 2001; Moore et al., 1999; Torgesen et al., 2007). Many at-risk learners will begin to disengage from instruction (Wilhelm et al., 2001). To reinvest in learning, students must see themselves and issues that are relevant to them within the content they are studying (National Council of Teachers of English [NCTE], 2006). When students see a topic as interesting or significant to their daily experience, they are more likely to be engaged and more likely to comprehend (C. Shanahan, 2004). When offering vocabulary instruction, teachers must tie new terms into previous schema and explain the application and relevance of vocabulary during school and after graduation (Biancarosa & Snow, 2004; Gambrell, Codling, & Palmer, 1996).

Le Meres (1988) stated at-risk students only participate in programs once self-esteem has been addressed and the obstacles associated with low self-esteem are overcome. Students must first begin to appreciate their own strengths and accept their weaknesses before they can begin the process of remediation. Recent research into the impact of reading teachers' instruction on students' performance showed positive correlations between students' abilities and teachers' use of behaviors and strategies to help students create positive

relationships and self-images (Parris & Block, 2007). Ultimately, students who were involved with teachers that supported their personal as well as academic growth had greater literacy gains. Alvermann's (2001) meta-analysis of research surrounding struggling high school readers supported this ideal. Results of this analysis showed students' perceptions of themselves as readers affect their motivation to learn.

Summary. Some students will face increased levels of difficulty when learning new vocabulary, due to lack of exposure to words attributed to socioeconomic, language, or cognitive processing challenges. These challenges often cause struggling readers to become disengaged from learning, leading them to fall further behind. Without proper remediation in vocabulary and reading, these individuals may face limited postsecondary opportunities.

Teacher Characteristics Affecting Student Performance

Many teachers in today's high school classrooms have little understanding of how to support literacy instruction in their classrooms; yet, they are the ones making the greatest impact on students (NCTE, 2006). Traditionally, teachers in secondary schools do not see themselves as teachers of reading. Some do not have the training or feel it necessary to teach students reading and writing skills (National School Boards Association, 2006; Phelps, 2005). Instead, they are the purveyors of content (Wright, 2007). Legislation such as No Child Left Behind added to this belief by defining *highly qualified teachers* as those with degrees in subject areas (Lewis, 2007).

Despite the fact that reading is the primary mode by which students learn material, content-area teachers have little or no pedagogical knowledge on how to teach reading (Boling & Evans, 2008). Humphrey (as cited by Bintz, 1997) discovered that teachers averaged only four hours each year of professional development devoted to literacy instruction. In order to help students succeed, all high school educators must embrace the idea of deliberately and strategically facilitating basic skills support (Parris & Block, 2007; Readance, Moore, & Rickelman, 1983) and incorporate appropriate vocabulary instruction within all content-area courses.

One of the major influences of students' reading success is teacher quality (Blair, Rupley, & Nichols, 2007; Cooper & Jackson, 2005). Research has shown that ongoing effective professional development has positively impacted student achievement (National Association of Secondary School Principals, 2005; NICHD, 2000). Teachers need explicit instruction in strategies that are appropriate to their curriculum, to help to identify students who are having difficulty processing text, and in creating a classroom environment that will allow students to be successful by offering a wide range of materials providing practice applying skills (NCTE, 2004). It is also important to show teachers how to use diagnostic information to identify key vocabulary and plan instruction (Berman & Biancarosa, 2005). Professional development for high school teachers in the field of reading needs to be ongoing and involve all stakeholders working toward the common goal of increased student achievement, including teachers, reading

specialists, resource room personnel, librarians, and administrators (Biancarosa & Snow, 2004).

In Fisher's study (2001), a school-wide effort improved the literacy skills of an entire student body. This school had a population similar to that of many urban schools: 100% qualified for free or reduced lunch and 46% of these students were English language learners. This school had one of the lowest performances in the state. Within two years, the school increased reading scores by 12% and raised the average reading level from 4.3 to 5.4. This school was successful because the entire staff was involved in the intervention. All teachers received in-service support that provided strategies to support reading and content. The staff focused on several key strategies of vocabulary instruction, including K-W-L (Ogle, 1986), reciprocal teaching (Palincsar, 1986), writing to learn (Zinsser, 1988), and think-alouds (Davey, 1983; Wilhelm, 2001), each of which had been proven effective in previous research. Disciplinary issues also decreased, due to students' increased engagement.

Summary. In the past, most high school teachers had not incorporated reading support into content-area instruction. Most had seen their responsibility as subject-matter specialists, leaving students to labor with specialized vocabulary and difficult texts without any support. Today, research shows the impact of scaffolding on the language development and overall success of students in content area, urging a reconceptualization of content-area literacy instruction.

Professional Organizations' Attempts to Affect Student Performance

Over the last century, several professional organizations have developed to share knowledge and shape educational practices. Two of the most prominent in the field of literacy are the IRA and NCTE. The IRA began in 1956 when the International Council for the Improvement of Reading Instruction and the National Association of Remedial Teachers joined together (Jerrolds, 1977). The mission of this group is to conduct and guide research in the field of literacy to shape policy and practices for instruction in the United States and around the world (International Reading Association [IRA], n.d.). The NCTE started in 1911 as a means for teachers and others in related fields to further their professional development (NCTE, 1990). Both groups have research and publishing agendas aimed at shaping public policy and school lessons to ensure that effective instruction and materials find their way into classrooms (Biancarosa & Snow, 2004).

Reading Next, based on the Advancing Literacy initiative, was commissioned by the Carnegie Corporation and created by AEE in response to a growing need to provide additional support to struggling adolescent readers. Both organizations were created to support the educational systems to meet the needs of all students, yet AEE specifically focuses on the needs of high school students at risk for academic failure. The Alliance develops recommendations for federal policy based on research in the field of education. The *Reading Next* document outlined key practices identified as instrumental in creating effective classrooms in middle and high schools. The findings of this report, as well as

additional research in this field, have lead to additional policies. These include (a) the Striving Readers Act of 2007, which provides grants to schools in order to raise student achievement through appropriate curriculum, assessments, and professional development for teachers (U.S. Department of Education, 2008), (b) the Reading for Success Title, which establishes grants for quality reading and writing programs for grades 6-12, (c) the Pathways for All to Succeed Act that allots funds to provide one literacy coach for every 20 teachers (PASS Act , 2003), and (d) the Graduation for All Act, which attempts to raise graduation rates by placing literacy coaches in high schools to support students at risk for failure (Graduation Act for All, 2008).

Summary. Over the past decade, these professional organizations have influenced classroom practices by determining effective strategies for supporting and remediating adolescent literacy and reporting the findings as directives within position statements (Moore et al., 1999; NCTE, 2004, 2006). While each of these organizations (IRA, NCTE, The Carnegie Corporation, and AEE) has been involved in extensive research in the field of literacy instruction, little has been done to synthesize the findings.

Research-Based Effective Practices Affecting Student Performance

The *Report of the National Reading Panel* (NICHD, 2000) and *Reading Next* (Biancarosa & Snow, 2004) both proposed much-needed guidelines to influence policy governing literacy programs. Each document used scientifically based studies to determine effective practices for teaching and remediating reading skills; the NRP primarily investigated younger children (but many studies

included students through high school), and *Reading Next* focused solely on adolescents. Despite some disparity in their target populations, similarities found in the practices deemed useful in raising students' literacy achievement included preteaching important terms and concepts and offering both direct and indirect instruction to support students' growing vocabulary to allow them to comprehend fully grade-level materials. This growing research base showed that some strategies are more effective at building students reading abilities, with vocabulary instruction having the greatest impact on students' performance in content-area classes.

Vocabulary instruction begins after third grade; it is not separate from other literacy instruction in earlier grades (NICHD, 2000). As students begin reading content-area materials, they require specialized vocabulary knowledge (Harmon et al., 2005). Students' success with content-area texts that include highly specific vocabulary is an indicator of overall academic success (Nagy, 1988; Slavin et al., 2008).

Vocabulary level has the highest correlation of all other factors and with intelligence (Manzo et al., 2006), establishing a definite link between reading ability and vocabulary size. Vocabulary is a crucial component of reading comprehension and a reliable predictor for a student's success in math and science (Kamil, 2003; Kamil et al., 2008; Manzo et al., 2006; Nagy, 1988; NICHD, 2000). When reading content-area texts, understanding the specific meaning of a word is necessary for full comprehension (Blanchowicz & Fisher,

2000; Chall & Jacobs, 2003). Thus, the goal of vocabulary instruction is to support students' ability to comprehend text (NICHD, 2000).

Vocabulary instruction within commercially packaged reading programs has changed little over the years (Blanchowicz et al., 2006). In fact, "vocabulary serves a core role in commercial reading programs and in other curricula areas such as science, history, or foreign language" (Pearson, Heibert, & Kamil, 2007, p. 283). Yet most basals and commercial reading programs do not offer instruction in vocabulary that will foster enough learning to improve comprehension (Graves, 2006). Current vocabulary instruction relies on skill and drill rather than deep learning (Buehl, 2007). Teachers' editions offer limited attention to the introduction of new vocabulary and do little to support students when learning new vocabulary (Grave, 2006; Moore et al., 1999).

Vocabulary instruction based on content-area literacy strategies put forth by NRP show an increase in student learning. (NICHD, 2000). Educators are beginning to see the value in teaching reading strategies in conjunction with content (O'Brien et al., 1995). Teaching reading in content areas better allow students to learn content (Kamil et al., 2008). Because of this, remedial reading course are becoming more popular in high schools (Slavin et al., 2008). Unfortunately, many middle and high school teachers have had little or no preparation to support struggling readers in content-area classes and are unprepared or unwilling to teach reading (Kamil et al., 2008; National Institute for Literacy, 2007). Many feel time spent teaching reading takes away from time for content. Content literacy has had limited success because teachers have been

unable to transfer the little information they have received from preservice and in-service professional development to their classroom practices (O'Brien et al., 1995). Since many remedial reading courses for struggling adolescent readers are supported by commercial reading programs, it is important to determine the extent to which they support practices known to be effective when teaching these students.

Contemporary secondary schools face many challenges: Instructional time is often spent preparing for end-of-year assessments, and most have little or no time or resources set aside for literacy remediation. With such high levels of accountability for students, teachers, and schools, it is important that educators find a way to incorporate meaningful explicit instruction with content-area materials (Alvermann, 2001; Biancarosa & Snow, 2004; Moore et al., 1999; NICHD, 2000).

The first of the instructional improvements outlined by *Reading Next* is the need for modeling and instruction that directly teaches students how to use strategies. The NICHD, a government body created to evaluate reading practices, provided the *Report of the National Reading Panel* (NICHD, 2000) which showed most readers acquire basic reading strategies informally, but struggling students often require more explicit formal instruction and application of academic practices. This direct instruction should include ongoing communication and interaction between students and teachers (Blair et al., 2007). Modeling of strategies must happen in all areas of curriculum to teach students how to apply skills in a variety of settings and texts (Alvermann, 2001;

Moore et al., 1999; Phelps, 2005). Effective programs offer direct instruction in skill building, metacognition, and content-area support (Alvermann, 2001; Biancarosa & Snow, 2004; Knuth & Jones, 1991; Moore et al., 1999; NCTE, 2006).

Metacognition, a method of personal assessment, must be taught in order for students to be able identify their understanding of a text and gaps in their own learning (Biancarosa & Snow, 2004; Brown, 1987; Flavell, 1979). While proficient readers vary the use of appropriate metacognitive strategies (Boulware-Gooden, Carreker, Thornhill, & Joshi, 2007), struggling readers often lack this ability and require more direct instruction (Allen, 1995; Dole, Brown, & Thrathen, 1996; Scheid, 1993). This lack of metacognitive ability causes struggling readers to be unaware of the difficulties they are having with reading and be deficient in the coping strategies to overcome them. Educators must help these students identify their weaknesses and teach them strategies to compensate while reading (Knuth & Jones, 1991). Focused instruction can teach students how to maintain an awareness of what they are reading and how to use strategies to support learning (NCTE, 2006).

According to research, struggling readers need direct instruction in vocabulary (Harmon, Hedrick, & Wood, 2005). When teachers offer explicit vocabulary instruction in content-area classes, students gain word knowledge and learn strategies and skills to support independent reading comprehension (Blanchowicz et al., 2006; Harmon et al., 2005; Kamil et al., 2008). Explicit vocabulary instruction improves both word knowledge and comprehension more

than any other factor (Bromley, 2007; NICHD, 2000). According to the *Report of the National Reading Panel* (NICHD, 2000), direct instruction in vocabulary includes preteaching words relevant to the unit or task and building students' knowledge of word morphology.

Preteaching

Struggling readers, especially those from economically challenged environments, benefit from explicit preteaching of pertinent vocabulary (Chall & Snow, 1988; NICHD, 2000). Teachers can frontload instruction by introducing new words or concepts, allowing students a greater chance at success when reading the text. Moore et al. (1995) claimed, "teachers who introduce some of the technical vocabulary students will encounter in a chapter help reduce comprehension problems" (p. 5).

Several strategies capitalize on preteaching new vocabulary. The Preview in Context approach (Readance, Bean, & Baldwin, 1989) allows teachers to choose several words to introduce that will support students' understanding of the passage without overwhelming them with too much information. Students can only effectively learn 8 to 10 words per week (Buehl, 2007). The class then reviews the word in context as the teacher reads the sentence aloud and provides words related to the key vocabulary. This allows readers to gain the meaning of the new word, relate it to previous word and concept knowledge, and apply their understanding to the text.

Another strategy is the Contextual Redefinition approach (Cunningham, Cunningham, & Arthur, 1981). As with Preview in Context, the teacher identifies

new words to learn. Students then view the words in isolation and use their prior content knowledge analyze word parts to predict the meanings of the words. They then use the context to confirm or rework their predictions. The use of prediction in this strategy causes students to become personally invested in the process of learning new words; strategic reading requires students to predict word meanings from context (Blanchowicz & Fisher, 2000).

While both strategies make use of context to support students' understanding of words, context does not provide enough information for students to understand the meaning of unfamiliar words (Beck, McKeown, & Kucan, 2002; Nagy, 1988).Struggling readers cannot rely on context alone to discover the meaning of words because they often struggle to comprehend (Curtis & Longo, 1999). Research shows that less than 15% of students are able to learn word meanings from context (McKeown & Beck, 2003; Kamil et al., 2008).

Preteaching through discussion-based activities has been linked to increased student performance (NCTE, 2004). With this type of in-depth discussion, students make personal connections to a text and practice higher order thinking skills in relation to the text while learning content material (NCTE, 2004, 2006). Accepting constructivist views that reading and writing develop through the interaction between students and with teachers, students should be allowed time to discuss work with each other while interacting with a text, similar to book clubs or literature circles (Biancarosa & Snow, 2004; Knuth & Jones, 1991; Raphael & McMahon, 1994). Too frequently, secondary classrooms are

filled with teacher- and content-centered instruction where the teacher is the giver of knowledge, and students must perform during independent practice. A more effective mode of instruction is a student-centered classroom where adolescents take charge of their own learning, and the teacher serves to direct and support this learning and uses the texts as tools for discussion and learning (Alvermann, 2001). Students can work in groups to share ideas and take turns reading aloud in pairs to increase fluency and enhance word attack skills, all the while building a sense of community (Allen, 1995; Balfanz, McPartland, & Shaw, 2002; Greene, 1979; Koskinen & Blum, 1986). Whole-class or whole-group read-alouds allow the teacher to guide readers through a text and model questioning and thinking techniques that will build comprehension.

Morphology

Morphology is helpful in learning new words (Blanchowicz et al., 2006; Harmon et al., 2005). Students can learn the meaning of new words by breaking down syllables and using knowledge of roots and affixes (Biancarosa & Snow, 2004; Padak, Newton, Rasinski, & Newton, 2008). More than one-half of English words derive from Greek and Latin roots. A large portion of unfamiliar words, almost 60%, can be decoded through strategic use of morphology (Bromley, 2007; Nagy & Anderson, 1984).

Students who struggle with reading and writing need intensive remediation directly linked to specific skills and content being covered. *Reading Next* stated that literacy programs should include instruction and practice in reading and writing in all content areas (Biancarosa & Snow, 2004). According to Alvermann

(2001), effective instruction must be embedded in multiple curricula and address the differences in students' abilities to read and write. Research has shown that learning discrete skills without the use of higher order thinking is ineffective at providing lasting reading improvement (Knott, 1986). When remediation for basic literacy skills occurs in isolation from academic and real-world applications, some students are mislabeled as struggling readers when they may actually lack experience, have different schema, or have different learning styles; proper remediation within content-area materials can expose these strengths and weaknesses (NCTE, 2004). Disciplines can take on unique text structures, involve technical vocabulary, and require critical thinking cognitive processing unlikely other subjects (NCTE, 2006; Torgesen et al., 2007). This dynamic makes it important for students to receive instruction on engaging with texts of different formats and content-specific to content-area curricula (Manzo & Manzo, 1990).

Students need both direct and indirect instruction to learn new vocabulary (NICHD, 2000; NCTE, 2006). Focusing on a single approach to vocabulary instruction will not be adequate in meeting the needs of all students (Stahl & Nagy, 2006). The *Report of the National Reading Panel* (NICHD, 2000) suggested students receive vocabulary instruction embedded in the incorporation of wide reading, semantic maps, and technology, while others purported the use of self-collection strategies to engage students in learning (Alvermann et al., 1996; Biancarosa & Snow, 2004; Carr, 1985; Haggard, 1986; Wood, 2001; Wood & Harmon, 2008).

Wide Reading

In order to be successful, students must be engaged in texts that are appealing and appropriate. Classrooms should provide a variety of texts that offer a range in difficulty and content (Biancarosa & Snow, 2004), including materials that adolescents can and want to read (Allington, 2001; Duke; 2000; Moore et al., 1999). Through exposure to multiple works that provide access to different text structures, students can increase their ability to read effectively and increase their knowledge of the world (NCTE, 2004, 2006).

Texts can also be presented in multiple mediums, including visual and electronic media (NCTE, 2006). Reading and writing of present-day adolescents incorporates digital literacies (Moore, in press). Students' access to online information can not only increase reading performance but can also have a positive affect on motivation. The novelty of working with technology can be intriguing, and students can benefit from extended literacy opportunities as well as increased computer skills. Advancing technologies need to be viewed as a tool as well as a topic for literacy instruction (Biancarosa & Snow, 2004). The fact that many students in high schools today are fascinated with the ability to communicate via electronic devices, including text messaging and surfing the Internet, cannot be ignored. Teachers can capitalize on this interest by incorporating technology into classroom lessons and using the Internet for publishing or research.

Students spend more time reading in content areas than receiving instruction in literacy skills. Durkin's 1978 study showed that only 19 of the 4,469 minutes, or less than one-half of 1%, of instruction was dedicated to vocabulary

acquisition (as cited in Graves, 2006). A later study confirmed only 1.4% of time in content-area classes is spent on vocabulary instruction (Scott, Jamieson-Noel & Asselin, 2003). Since students increasingly run across words that are outside of their speaking vocabulary in content-area classes, this lack of instruction is troubling (Kamil et al., 2008). Students are left to learn much of their new knowledge of words through their independent reading (Blanchowicz et al., 2006).

After third grade, wide reading accounts for the largest source of vocabulary growth (Nagy, 1988). Time spent reading increases students' knowledge of the world and increases vocabulary through exposure to new words (Moore et al., 1999). This, in turn, leads to better comprehension (Nagy, 1988; Nagy & Anderson, 1984; Stanovich, 1986). Students who reported reading more achieved higher test scores and more academic success (Donahue, Voelkl, Campbell, & Mazzeo, 1999).

Yet, wide reading should not only address how much students read but also what they read. Students should encounter a variety of text types and topics to increase their proficiency with words (Biancarosa & Snow, 2004; Kamil et al., 2008). Readers increase word knowledge by 10% each time they encounter it (Buehl, 2007). If students encounter new words in multiple contexts, they will gain a deeper understanding of the meaning. Vocabulary instruction should focus on the depth of students' word knowledge (Beck et al., 2002). Discussion of their reading also allows students multiple exposures to words (Kamil et al., 2008) and

provides practice in multiple strands of literacy: reading, writing, speaking and listening, all of which serve to further vocabulary development (NCTE, 2006).

Wide reading also offers students an opportunity to meet words in context more frequently. Readers need multiple exposures and quick and meaningful feedback when working with new words (Blanchowicz et al., 2006; Curtis & Longo, 1999; Kamil et al., 2008). Repetition and rich support are necessary to increase vocabulary knowledge (Nagy, 1988; NICHD, 2000). It takes 17 exposures, on average, to learn a new word (Kamil et al., 2008), and increased frequency of appearance will assist students in learning new words (Manzo et al., 2006).

Semantic Maps

When working with struggling readers, it is important to relate new learning to preexisting knowledge; vocabulary development links to students' background knowledge (Anderson & Freebody, 1981; Blanchowicz & Fisher, 2000; Bromley, 2007; McKeown & Curtis, 1987; NCTE, 2004; NICHD, 2000). Using graphic organizers to explore relationships is useful in learning new words (Moore & Readance, 1984). Tools such as these allow students to visually and conceptually explore the relationships between words and concepts, providing a higher level of engagement than simple worksheets or activities (Blanchowicz et al., 2006). Semantic mapping (Heimlich & Pittleman, 1986) and Semantic Feature Analysis (SFA) (Pittelman, Heimlich, Berglund, & French, 1991) activities also help students retain information by using visual cues, repetition of ideas, and strong cognitive connections.

Semantic mapping (Heimlich & Pittleman, 1986) asks students to explore words related to key vocabulary and the nature of the relationship between them. This leads students to learn the meanings of new words but also supports their general thinking about words and how concepts relate to one another. This is particularly useful when students are struggling with words that have multiple meanings in different content areas.

With SFA, (Pittelman et al., 1991) students analyze characteristics of words or concepts and note the similarities and differences of the qualities inherent in each. Knowledge of the interrelationship between words is necessary for understanding words (Harmon et al., 2005). Students must understand the relationship between words to understand fully the meaning of each (Stahl & Nagy, 2006). Using associations such as synonyms and antonyms to learn word meanings is more useful than dictionary use (Blanchowicz & Fisher, 2000). Strategies such as dictionary use offer limited exposure and do not help students' comprehension (NICHD, 2000; Stahl & Fairbanks, 1986). Students, in using SFAs, are required to use higher order thinking skills to learn the meanings of new words and compare them with others, building vocabulary and cognitive processing.

Technology

Using multiple media will encourage engagement and help students with vocabulary acquisition (Manzo et al., 2006. Simple novelty may lead to greater engagement when students use technology to learn new vocabulary, but concepts of new literacies support the use of new technologies. The Internet has

allowed classroom activities to transcend the school walls (Knobel & Lankshear, 2006). Technology has created a wealth of new opportunities for learning and influenced how teachers implement instruction. Through the use of broadcasting, instruction can occur at multiple sites simultaneously. Students can submit work electronically through e-mail and word processing (NICHD, 2000). Yet, teachers must go beyond incorporating technology into lessons; students must be taught how to navigate their own learning and think critically while interacting with these resources. (Alvermann, 2001; Leu, Kinzer, Coiro, & Cammack, 2004).

Technology can be used as a tool for learning new words instead of a simple teaching aid and is most effective when supported by a teacher's guidance (Blanchowicz et al., 2006; NICHD, 2000). Use of computers and other programmed machines can be both a facilitator of knowledge and medium for literacy (Biancarosa & Snow, 2004). Voice recognition software allows students to record their own reading and commentary. All of these advances can be used to help assess the progress of students while offering them an opportunity to build both literacy and computer skills. These resources are useful in providing students with multiple interactions with words and offering independent practice (Biancarosa & Snow, 2004; Kamil et al., 2008; NICHD, 2000). Programs such as these allow for differentiation for individual students and allow teachers time to meet with students individually as others engage with meaningful activities.

Self-Collection

One way of ensuring that students are interacting with materials that are suitable for them is by allowing some element of choice in reading (Balfanz et al.,

2002; Harmon et al., 2008; Moore et al., 1999; NCTE, 2006). Students can be permitted to choose from a range of age- and ability-appropriate materials related to class content, allowing instruction to make use of students' interests and strengths (Ivey & Broaddus, 2001). This choice should also include access to informational texts that supports students' growth and development in areas that seem relevant to them (Duke, 2000). Alvermann (2001) found when programs offer students choices that are appealing and pertain to their pursuits in other areas, students were more engaged in remediation activities. Allowing students choice in what they are reading—letting them choose works that are appealing or meaningful to them—gives them a sense of control over their own education. According to Allen (1995), students become connected to their reading, and can set appropriate purposes, allowing teachers to build on this motivation.

Students have a better and longer-lasting knowledge of vocabulary when they learn how to self-select challenging and relevant words for study (Alvermann et al, 1996; Carr, 1985). In addition, allowing students to self-select words to learn increases motivation (Biancarosa & Snow, 2004). In fact, becoming strategic independent readers is a goal of literacy instruction, and so students should be taught to use skills to identify when gaps occur in their comprehension and use specific strategies to remediate their understanding. Several approaches to vocabulary instruction implement this ideal.

Vocabulary Self-Selection Strategy (Haggard, 1986) has students work in small groups to discuss word knowledge. Each individual identifies several words encountered in reading they have yet to master. These words are shared in

groups, whose members then choose from the pool to determine which words they will incorporate into their word work for the week. The teacher must support their choice of words and refine their understanding of meanings. Students record word choices in their logs and use the words in various activities throughout the unit.

The Personal Vocabulary Journal (Wood, 2001) is effective for students who are struggling with independent reading that is self-selected. Students create personalized vocabulary journals by selecting words for further study as they read. Students share their word lists with group mates, but ultimately the selection and word work is individualized.

Content-Area Support

Students who struggle with reading and writing need intensive remediation that directly linked to specific skills and content being covered. *Reading Next* states that literacy programs should include instruction and practice in reading and writing in all content areas (Biancarosa & Snow, 2004). According to Alvermann (2001), effective instruction must be embedded in multiple curricula and address the differences in students' abilities to read and write. Research has shown that learning discrete skills without the use of higher order thinking is ineffective at providing lasting reading improvement (Knott, 1986). This dynamic makes it important for students receive instruction on engaging with texts of different formats and content-specific to content-area curricula (Manzo & Manzo, 1990).

Assessment

Teachers need resources that will help them identify which students are at-risk for failure, offer profiles of students' abilities, pinpoint specific areas of strength and weakness, and offer insight into the effectiveness of instructional strategies (Berman & Biancarosa, 2005). Students, especially those who have become conditioned to failure, need ongoing input as to their strengths as well as their weaknesses in order to maintain a positive understanding of their abilities and progress (Curtis & Longo, 1999; Moore et al., 1999). When students begin to experience success, they can see how their efforts are rewarded, and they can more willingly engage in other classroom activities. Students begin to see how literacy skills can help them find success in and out of school.

As with any instruction, teachers and students want feedback on the success of both students and lessons. By using assessments to plan appropriate instruction, student motivation and achievement can increase (Blair et al., 2007; NCTE, 2006). These measures do not need to be formal tests, which usually offer information on performance trends for groups of students (Berman & Biancarosa, 2005); data can be collected on individual students' performance through conversations with or observations of students during instruction. Students' performance on daily activities and assignments can also be useful tools for finding appropriate placement and noting progress (NCTE, 2006; National School Boards Association, 2006; Torgesen et al., 2007).

While formative assessments provide ongoing sources of information about students' progress and the effectiveness of instructional strategies, summative assessments provide more formal benchmarks on students' abilities;

these can provide information about the success of the program (NCTE, 2006). This information can be shared with teams of teachers, administrators, and community members and are useful in making decisions about future instruction and materials.

There are several effective methods of assessing students' vocabulary knowledge and development. Students can offer definitions for words through choice options such as matching or multiple-choice tests. While these are efficient measures, they do not offer any latitude in students' responses. Multiple-choice tests must provide answers that are the same part of speech and syntactic context to the correct answer (Blanchowicz & Fisher, 2000). This kind of assessment also limits students' ability to show their true understanding of words and texts. CLOZE procedures are often used to display knowledge of new words; "reading a CLOZE passage requires readers to use their knowledge of context to supply appropriate words and concepts to create a meaningful passage" (Blanchowicz & Fisher, 2000). While CLOZE passages offer more flexibility than purely objective texts, students must still supply higher structured responses.

A more subjective method of assessment asks students to create written responses. Students may be asked to generate definitions or create passages to show their understanding of word meanings. Writing reinforces skills and knowledge of vocabulary and reading (Biancarosa & Snow, 2004). Writing-to-learn in different content areas may require different structures for writing, so this is a skill that needs to be practiced within each discipline (T. Shanahan, 2004). Even though writing is usually ignored in content-area classrooms because the

process of writing can be complex, writing-to-learn is a valuable strategy to reinforce students' knowledge of material (Knipper & Duggan, 2006). Many of the skills students practice while writing, such as grammar and mechanics, can also influence reading skills that students will use in high school and beyond (Biancarosa & Snow, 2004; Knipper & Duggan, 2006) Students need to understand the relationship between reading and writing—that developing skills in one area will strengthen those in another (Knipper & Duggan, 2006; Knuth & Jones, 1991). Helping students build reading and writing abilities will also improve critical proficiency in thinking and learning (Curtis & Longo, 1999).

Summary. Vocabulary knowledge is a reliable predictor for academic success in all content areas (Nagy, 1988; Slavin et al., 2008). In order to support students' growth in all classes, teachers must incorporate explicit and embedded vocabulary instruction within each curriculum. There are many research-based strategies proven effective with struggling adolescent readers. Teachers are encouraged to use a variety of strategies to scaffold students' word learning and employ appropriate assessments to determine the effectiveness of strategies and student performance.

Commercial Programmatic Interventions Affecting Student Performance

Despite this body of knowledge, many high schools have yet to embrace the idea that all teachers should share responsibility for literacy instruction. Few teachers are receiving appropriate professional development for supporting students' remediation of basic skills and growing content-area reading strategies (Wood, Vintinner, Hill-Miller, Harmon, & Hedrick, in press). So how are teachers

learning to teach reading? Many are resorting to commercial programs as a "magic-bullet" solution by providing a remedial approach to reading instruction that involves little critical thinking (Ivey & Fisher, 2006). In this context, instruction is based on textbooks and supplemental materials (Knott, 1986). In this sense, most of the decisions about adolescent literacy instruction are coming from teachers' manuals. Accepting the previous research claiming that the most prominent factor on determining student success involves the qualities of the teacher, the influence of the directives within a teacher's manual is alarming.

Over the last two decades, several commercial reading programs have been created for high school students. In 1991, Greene created a program that addressed a need for literacy remediation as well as professional development for teachers who lacked any real preparation to teach literacy. By the 1994-1995 school year, *Language!* was piloted in several school systems. This program has evolved to include some technological resources for both students and teachers (Green, 2001).

On a similar timeline is *READ 180* by Scholastic. This program has evolved as a result of research in adolescent literacy. While originally created in 1997 from the research and trials of Hasselbring and Allen, *READ 180*'s most recent version, *READ 180* Enterprise edition (Hasselbring, Kinsella, & Feldman, 2005), reported to align itself with effective practices determined by research in reading instruction for adolescents. Unlike many reading programs, *READ 180* had materials that meet the specific needs of high school students, including high interest-low ability materials created for enjoyment as well as cross-curricular

support that aimed to improve vocabulary, writing, and comprehension skills (Alvermann & Rush, 2004; Fleishman, 2005; Taylor, 2006). Technological components were included to provide ongoing and immediate individualized instruction and motivate students by incorporating additional media. To support teachers, Scholastic created an assessment component to align with the classroom materials and provide ongoing professional development to ensure proper implementation. Overall, Scholastic renovated their program to mirror the research results prevalent in today's high school classrooms, but limited research has been done to determine the quality of this alignment.

Summary. In America today, adolescents face increasingly high demands for literacy skills both in and out of classrooms. Schools face the challenge of preparing students for high stakes tests as well as the challenges they will face once they leave school. Yet, too many secondary school classrooms are making dangerous assumptions about the levels of literacy skills possessed by students. Struggling readers and writers are being left behind by instruction that chooses to teach content over skills. Without proper remediation focusing strongly on vocabulary acquisition, these students will most likely fail to succeed academically and subsequently carry these challenges with them into the community and the workforce.

Fortunately, some professional organizations have addressed the struggles of high school students and put forth practices proven successful for remediating reading skills. *Reading Next,* IRA, NCTE, and the NRP have examined research on effective practices and outlined many key elements of

effective adolescent reading programs. Ultimately, it was determined that the strongest need for struggling adolescent readers can be remediated with explicit vocabulary instruction.

There are several commonalities in the practices presented by these organizations. First, skills remediation is ineffective in a vacuum. Instruction must be authentic and must involve higher order thinking skills. Students must not only receive strategy instruction, but they must also learn the application of this knowledge and how to synthesize new learning with what they already know.

Second, most high school students, even those who struggle with reading, have mastered some basic reading skills. The main challenges for adolescent readers are specialized vocabulary related to content-area classes (Smith, 1976) as it relates to multiple-text structures and increased demands (Rasinski et al., 2005). In order to improve reading skills in high school classrooms, special attention must focus on the development of vocabulary instruction.

Some challenges still exist in putting these ideals into practice. Many high schools and content-area teachers are unprepared to support students with the specialized needs of subject-area literacy. Stronger policy governing professional development opportunities are needed to create a stronger workforce to impact struggling readers in the classroom.

In summary, this review of literature determined:

1. The vocabulary development of struggling adolescent readers are affected by characteristics of their abilities, environment, teachers, and instructional materials.

2. The leading professional organizations aimed at improving reading and language skills (IRA, NCTE, NRP, and AEE) have identified strategies of proven efficacy, particularly as they relate to vocabulary development.
3. Several commercial reading programs have been developed and are in wide use, with the goal of helping students in high school who still struggle with vocabulary development and reading skills.

Therefore, a thorough analysis of professional standards will lead to a more-informed basis for creating and evaluating reading programs. By synthesizing the research from leading experts in the field of adolescent literacy, this research will lead to better reading programs and subsequent classroom instruction, and potentially improved student understanding. Given the effect of literacy development on the general public, it is important to recognize the social and economic impact of enhanced remediation for struggling adolescent readers. In addition, evaluating the resources provided to teachers in several programs already in use can lead to a better understanding of the effectiveness of reading programs. The purpose of this study was to address these areas of concern by investigating and analyzing the vocabulary instruction in the leading commercial reading programs.

CHAPTER 3: METHODOLOGY

The purpose of this study was to analyze the teachers' manuals of the leading commercial high school reading programs to determine the extent to which they provide effective vocabulary instruction as advocated by the leading professional organizations in literacy.

Research Questions

The following questions framed and directed this study:

1. Based on the alignment of suggestions and standards identified within position statements from major professional organizations in the field of literacy, the IRA, NRP, NCTE, and *Reading Next*, what practices are identified as effective for supporting struggling adolescent readers' development in vocabulary?
2. To what extent do the lessons of the leading programs in use in high school classrooms uphold the practices and strategies put forth by these professional organizations?
3. To what extent do lessons within these programs offer direct vocabulary instruction or indirect vocabulary instruction where vocabulary learning is embedded within other instruction?

4. To what extent do these lessons prepare students to apply independently vocabulary knowledge and strategies to content-area material?

Table 1

Research Methodology

Phase no.	Description
1	A pilot study e-mail survey was sent to individual(s) heading literacy departments and initiatives within states' department of education to determine which reading programs are recommended by state agencies for use in high school classrooms in each state.
2	Content analysis was performed on professional literature and statements of professional organizations in the field of literacy to determine what strategies and/or practices are identified as effective in addressing vocabulary instruction in high school classes.
3	Based on results of content analysis of professional literature, codebooks were created to conduct a content analysis of lessons within the 3 most recommended adolescent literacy programs to determine the extent to which each upholds the practices and strategies identified by professional organizations. After training, codebooks were used to evaluate each lesson within the 3 most recommended programs to determine which practices

Table 1 (continued)

	and strategies identified as effective by professional literature were used in the lesson.
4	Results of content analysis were analyzed to determine the extent to which recommended programs upheld practices and strategies identified by the professional literature, what percentage of lessons offered direct vocabulary instruction vs. those offering embedded vocabulary learning, and what percentage of lessons supported the transfer of vocabulary skills to content-area class work.

Phase I

Trying to determine the hierarchy of reading programs in place for adolescents in this country is difficult due to the large number of programs available, the variety in the structure and materials within the programs, and the flexible guidelines by which each state makes recommendations. In order to establish which program received the largest share of recommendations, it is important to understand the process by which programs are created and marketed.

To be profitable, publishing companies create products that will meet the needs of the largest portion of the market. While 21 state departments of education make decisions for all school systems under their control (Mathews,

2005; Whitman, 2004), only three states (California, Florida, and Texas) are leaders in the field of textbook adoptions. These states exert a great deal of influence on publishers and other states and account for more than 30% of the $4.3 billion textbook market annually (Apple, 1992; Chen, n.d.; Mathews, 2005; Whitman, 2004). Due to the great expense of creating textbooks and other programs, publishers strive to create materials to meet the requirements of California, Florida, and Texas and then market these resources to other states. This forces instructional decisions for diverse populations across the country to be made by the guidelines established in these three states (Apple, 1992; Mathews, 2005; Whitman, 2004). More than 80% of classrooms across the country use textbooks during classroom instruction (Whitman, 2004), forcing education in all states to conform to the academic objectives determined by outside agencies. Similar occurrences happen with the adoption of intervention programs. The special needs of populations in these states shape programs that will be used throughout the country, despite the diverse needs of students throughout the nation.

As seen in Table 1, in trying to determine which programs will meet the criteria of garnering the most recommendations, a pilot study was conducted via e-mail with all 50 state departments of education. Each was asked (a) how they determine placement of these students into a specialized reading curriculum and (b) which reading and literacy program(s) they use with high school students. The results of this poll were compared to information provided on websites from each state department (if available), providing information on reading programs

available for high schools in each state. In addition, content specialists in California, Florida, and Texas were contacted to determine the programs recommended by each of these state departments, due to their influence on adoption throughout the nation.

Phase 2

To synthesize the effective practices of the professional organizations and determine if an adolescent reading program upholds the effective practices outlined by professional organizations in the fields of literacy and language arts, a descriptive content analysis was performed. A content analysis allows researchers to summarize information by making valid inferences from text rather than report all details, turning large amounts of text into fewer content categories in a scientific method (Krippendorf, 1980; Neuendorf, 2002; Stemler, 2001; Weber, 1985). Because content analysis allows for such a summation of information, it was an ideal methodology for answering the following multifaceted research question.

Phase 3

As previously determined, most high school teachers have little or no professional development to support students' reading instruction. Many will have to rely on directives within the selected program. For this reason, the materials evaluated for this study only included the teachers' manuals for instruction. The manuals that support each of these programs included notes for planning and implementing instruction as well as all pages from the students' texts. Choosing these materials provided access to resources for both students and teachers and

allowed for a full analysis of instructional practices. All materials within the teachers' editions were coded to determine the quantity and quality of methods provided for the instruction impacting adolescent literacy, namely vocabulary.

Coding

Based on a synthesis of recommendations from the organizations mentioned as leaders in the field of literacy, a list of effective practices for teaching vocabulary was created. Additional research was conducted to determine the extent to which these directives were supported within the field. This list and supporting data was used to create the codebook that defined strategies and provided relevant examples of each. Coding forms were created to streamline data collection.

A content analysis methodology permitted the substantial amounts and multiple formats of text to be evaluated both quantitatively and qualitatively (Draper, 2002) for their alignment with the practices identified and did so while meeting standards of the scientific method, such as creating reliable, valid, and replicable results (Neuendorf, 2002). To ensure reliability, multiple coders were used and the intercoder reliability was established through training. These two coders were selected because of their experience as reading teachers and their familiarity with other commercial reading programs, none of which were included in this study. Coder agreement was supported through use of an explicit coding form that included an explanation of all terms; both of these forms also served to improve validity by providing coders with a strict framework for acceptable

responses. Since results were restricted to measuring the three programs identified in this research, generalizability was limited but results were valid.

Coders were asked to identify how many times a strategy was used in each lesson included in the anthologies. *Read 180* included only nine lessons in the only level identified for adolescents; *Fast Track* had 46 lessons over seven units, and *Language!* was the largest with 120 lessons over 12 units. After reliable results were ensured by training coders with materials from a previous edition of *Language!*, a pilot study was conducted with the first lesson in each program to ensure reliability and validity of results. This allowed the two coders experience with the format and material within each program. Based on the results of the initial coding, it was evident that the commercial reading programs were using many specific strategies to support those recommended by the professional organizations. Amendments were made to the codebook to include strategies used within the programs.

With the new coding forms, the two coders each analyzed the remaining 172 lessons within the three programs. Overall, coders were in agreement for 98.8% of the material in *READ 180*, 98.5% of the material in *Fast Track*, and 97.8% of the material in *Language!*.

Phase 4

Analysis

After all programs had been analyzed, totals were calculated and percentages were determined based on simple computation. While this data offered a glimpse into instructional practices for each program, it did not offer any

qualitative responses to materials. For that reason, an interview was conducted with each coder, both teachers of literacy, to gather additional information about lessons and determine their reactions to the teachers' editions and programs overall.

Limitations of the Study

Although this study was constructed to conduct a scientific evaluation of adolescent reading programs, there were some limitations. A consensus of information gathered during this research determined that three programs received the most recommendations from state education agencies; the research focused on these programs exclusively. Because this was a descriptive content analysis, all results were limited to the programs and this study (Neuendorf, 2002). There are other programs identified that address the needs of struggling high school readers; due to the variety of materials within each program, it is likely that there would be a higher level of alignment between programs and standards due to the multitude of materials available.

This research was conducted on the most recent publications of all three programs. Results were only valid for these versions of the programs. Other results could occur with previous or future editions. In addition, this study only reviewed teachers' editions and did not review any ancillary materials not included therein that could influence students' vocabulary knowledge through independent wide reading. The implications of this must reflect the fact that much of the practice within *READ 180* as well as additional resources within *Fast Track* and *Language!* fell outside of the structured lessons, including computer

programming and independent work. The nine lessons in *READ 180* could span over nine class periods or longer based on the implementation within individual classrooms and could affect the overall performance and growth of students' reading skills that could not be measured by this study. While *Fast Track* and *Language!* had fewer ancillary instructional materials, similar impact could happen within the implementation of these programs that was also not quantified by this study.

The use of *Reading Next* and professional organizations' position statements to determine the requirements of effective reading programs may be limited in that they do not include all dissenting opinions on adolescent readers. However, both IRA and NCTE have based their findings on a wealth of research in the field of literacy and learning and should promote reliable findings for this study.

CHAPTER 4: RESULTS

This chapter reports the results for each of the research questions. The first section aligns the effective practices for vocabulary instruction as purported by each of the professional organizations aimed at improving literacy instruction, namely the IRA, NCTE, the *Report of the National Reading* Panel, and *Reading* Next by the Carnegie Corporation. The second portion of this chapter evaluates the alignment between the effective practices identified by the professional organizations and the directives provided in teachers' editions for the commercial reading programs most recommended by state boards of education: *READ 180*, *Fast Track*, and *Language!*. This evaluation looked at the overall alignment between all programs and materials and effective practices and then reviewed each program's independent alignment with these practices.

Table 2

Phase 1

Phase no.	Description
1	A pilot study e-mail survey was sent to individual(s) heading literacy departments and initiatives within states' department of education to determine which reading programs are recommended by state agencies for use in high school classrooms in each state.

While all 50 states were consulted, only 16 states provided any information about guidelines for adolescent literacy instruction. Based on responses given during this poll (see Table 2), no state had standard performance or behavioral requirements for student placement or reported any formal directives as to what commercial adolescent literacy programs high schools in their state should use. Eleven states (22%) created statewide initiatives to address the needs of struggling high school readers, and nine states (18%) offered schools or districts recommendations on appropriate programs for use in these classrooms, but all left the decision to independent schools or districts, (see Table 3).

Results of the poll of the state departments of education (see Table 4), showed 26 programs recommended across the country. Of these, *READ 180* from Scholastic Publishers (Hasselbring et al., 2005) garnered the most attention by receiving recommendations from four states. *Fast Track* Reading (Wright Group, 2001) and *Language!* (J. Greene, 2001) also received nominations from more than one state. In sum, the programs receiving the most recommendations were:

- *READ 180* by Scholastic, Inc. (2005)
- *Fast Track* Reading by the Wright Group (2001)
- *Language!* by Glencoe/McGraw Hill/Sopris West (2005)

Table 3

States with statewide initiatives and suggestions for materials and/or instruction

	State initiative	Program suggestion
ALABAMA		X
ALASKA	X	
ARIZONA		X
ARKANSAS	X	
CALIFORNIA	X	X
COLORADO	X	
FLORIDA	X	X
IOWA	X	
KENTUCKY	X	
MINNESOTA	X	
MISSOURI	X	
NEVADA		X
TEXAS	X	X
UTAH		X
VIRGINIA		X
WASHINGTON	X	X

Table 4

Programs recommended by state board of education personnel and websites

	AL	AZ	CA	FL	NV	TX	UT	VA	WA
Adventures in Reading					X				
Be a Better Reader								X	
Destination Reading						X			
Discover Intensive Phonics	X								
Edge							X		
Fast ForWord						X			
Fast Track Reading			X						X
Great Source								X	
High Point									X
Kaleidoscope									X
Language!	X		X						
Literacy for Life and Work					X				
Multiple Meaning Vocabulary	X								
Odyssey Reading						X			
Passport Journeys						X			
PLATO						X			
6 Minute Solution	X								
SRA Reach			X						
Ramp UP	X								
Read Now! Power Up!						X			

Table 4 (continued)

READ 180	X	X	X		X
READ XL					X
Reading and Writing Sourcebook				X	
Reading Skills for Life				X	
SRA Reach Program				X	

The first content analysis, as seen in Table 5, evaluated the position statements on adolescent literacy of the professional organizations aimed at improving language and literacy instruction: the Alliance for Excellent Education, the NRP, IRA, and NCTE. Because the focus of this study was to determine what the research of professional organizations determined to be the effective practices for vocabulary instruction and the extent to which these organizations agree on these practices, the position statements of IRA and NCTE as well as *Reading Next* and the *Report of the National Reading Panel* were evaluated to determine and align the findings of each. Emergent codes were created due to their frequency in the position statements and were used during the content analysis.

When organizing these codes, as seen in Table 7, the framework outlined in *The Report of the National Reading Panel* and *Reading Next* was used. This report described two modes of teaching, direct explicit instruction and embedded instruction. Direct explicit instruction involves the deliberate and straightforward

use of strategies to teach vocabulary, such as preteaching words from a passage or unit, and teaching students to use word structure to determine the meaning of words. Embedded instruction couches vocabulary learning into or along with other instruction, namely reading and writing in a variety of contexts. This organization framework allowed strategies to be grouped in a way that helped to clearly define the purpose of each and make coding of strategies more reliable.

As seen in Table 6, the results of this content analysis showed that standards for vocabulary instruction were fairly consistent throughout all organizations. While preteaching was not mentioned by *Reading Next*, it could be considered inherent within the parameters for "explicit" and "specific strategy instruction." Morphology was not mentioned by name within all of the position statements, but each did mention the need for word attack strategies and the use of prior knowledge of words to aid understanding. Wide reading was mentioned unanimously, including such ideals as using a variety of text genres and topics, multiple exposures to words in print, and reading for various purposes. Semantic maps received a great deal of attention; all organizations purported the value of allowing students to use graphic organizers to explore the meanings of and relationships between words. While IRA's position statement did not specifically mention the need or value in using technology to teach vocabulary, there was an additional position statement that addressed the need for technology as both a skill to learn and a tool for learning. All four mentioned the need to build motivation and self-efficacy within students and named providing autonomy as a method for accomplishing this goal. Allowing students to self-select vocabulary

provides students with an opportunity to take control and engage in learning. Finally, the value of meaningful and immediate feedback was addressed by all organizations.

Table 5

Phase 2

Phase no.	Description
2	Content analysis was performed on professional literature and statements of professional organizations in the field of literacy to determine what strategies and/or practices are identified as effective in addressing vocabulary instruction in high school classes. • Preteaching • Morphology • Wide reading semantic maps • Use of technology • Self-collection • Content-area support

Table 6

Alignment of standards for vocabulary instruction

	IRA	NCTE	Reading Next	NRP
Direct explicit instruction	X	X	X	X
• Preteaching	X	X		X
• Morphology	X	X	X	X
Embedded instruction	X	X	X	X
• Wide reading	X	X	X	X
• Semantic maps	X	X	X	X
• Use of technology		X	X	X
• Self-collection	X	X	X	
• Content area	X	X	X	X
Assessment	X	X	X	X

Question 1

Based on the alignment of suggestions and standards identified within position statements from major professional organizations in the field of literacy, the International Reading Association, the National Reading Panel, and the National Council of Teachers of English, and Reading Next, what practices are identified as effective for supporting struggling adolescent readers' development in vocabulary?

Table 7

Phase 3

Phase no.	Description
3	Based on results of content analysis of professional literature, codebooks were created to conduct a content analysis of lessons within the three most recommended adolescent literacy programs to determine the extent to which each upholds the practices and strategies identified by professional organizations. After training, codebooks were used to evaluate each lesson within the three most recommended programs to determine which practices and strategies identified as effective by professional literature were used in the lesson.

Summary. The professional organizations agreed there are several practices known to be effective when teaching vocabulary. Some strategies involve direct instruction, including the identification and preteaching of vocabulary and systematic learning of roots and affixes to determine word meanings. Other methods of word acquisition can be embedded in content, including exposure to a wide variety of print and the use of visual and technological aids. Despite the method of instruction, effective practices involve a high level of scaffolding and support in order to remediate difficulties of struggling adolescent readers during vocabulary learning.

Table 8

Phase 4

Phase no.	Description
4	Results of content analysis were analyzed to determine the extent to which recommended programs upheld practices and strategies identified by the professional literature, what percentage of lessons offered direct vocabulary instruction versus those offering embedded vocabulary learning, and what percentage of lessons supported the transfer of vocabulary skills to content-area class work.

Question 2

To what extent do the lessons of the leading programs in use in high school classrooms uphold the practices and strategies put forth by these professional organizations? The teachers' editions within the selected programs were analyzed to determine the extent to which teachers are directed to provide instruction that upholds the effective practices identified by the professional statements and organizations aimed at improving literacy and language arts instruction, namely the International Reading Association, the National Council of Teachers of English, the *Report of the National Reading Panel,* and *Reading Next*, as seen in Table 8. For each program, each lesson was evaluated to determine what percentage of lessons showed evidence of effective practices.

Preteaching

Before each lesson, teachers were directed to preteach a number of relevant vocabulary words. *READ 180* identified five words for each lesson; *Fast Track* averaged 18.9 words, and *Language!* consistently named six words. By far, most lessons (96.0%) utilized classroom discussions to collectively define words based on preexisting knowledge of words or through use of context. Word pronunciation was offered in 87.0% of lessons in an attempt to build students' word knowledge and understanding of proper use. More than three quarters (78.9%) identified the words within the text with bold face as a means to help students recognize the use of the word in context and aid in referring back to other sources, such as the definitions provided by 66.3% of lessons. While prediction was used in 28.6% of lessons, instruction rarely directed students to confirm or deny their predictions at the end of the lesson. This lack of self-checking predictions does not offer students any feedback on their efforts and makes the use of this strategy of little relevance. While dictionaries were utilized in just over one-half of the lessons (54.9%), very few lessons offered students instruction on how to use the tool efficiently: to find the definition that best fits the context or passage. Without explicit instruction on how to properly use a dictionary, students run the risk of aligning new words with improper definitions, which will affect comprehension.

Summary. While all programs identified words to include in instruction before reading the passage, the strategies used to support this instruction did vary, as seen in Table 9. Overall, programs are using methods promoting higher

order thinking skills, such as predictions and discussions. The value of classroom discussion in providing multiple exposure and perspectives on word meanings is recognized; almost all lessons (96.0%) involved some level of discussion, as seen in Table 10. While the provision of the correct definition and pronunciation ensures that students will fully comprehend the word in context, the lack of effort on the part of the student does little to teach students how to find the meaning of an unknown word outside of the packaged program.

Morphology

Despite the fact morphology has been identified as a useful strategy for decoding unknown words, the vast majority of lessons did not direct teachers to provide instruction on using word structure to determine the meaning of words (see Table 11). Of the lessons incorporating morphology, attention to root and affixes was most predominant (26.9% overall). Analyzing word parts to determine patterns in word families and word endings that lead to meaning were in 4.6% and 6.9% of lessons respectively. Comparing multiple meanings of words to gain a deeper understanding and determine which definition is correct was included in only 10.3% of lessons. The ability to prioritize word meanings is necessary when adolescents are dealing with multiple-content area texts, each using terms in specific ways. Without this skill, students will struggle to comprehend texts. Since so few lessons work to build this skill in students, it is unlikely students will master this important skill.

As with preteaching, *READ 180* provided the greatest alignment between lessons and identified effective practices by a margin of 15.9%. *READ 180* also

provided the greatest diversity in their attention to morphology, with almost one quarter (22.2%) of lessons looking at how word families and word endings cue word meanings.

Summary. It was disappointing to see that so few lessons explicitly teach students how to use structural analysis to determine the meaning of unknown words. With such highly specialized vocabulary in content-area classes, students will encounter a high number of unknown words. Without specific strategies to decode these words, such as morphology, students will struggle to comprehend material.

Wide Reading

Of all genres, programs predominantly included general nonfiction passages similar to those in content-area textbooks. As seen in Table 12, this type of text accounted for 62.6% of all selections. Nonfiction articles modeled after or taken directly from magazines and newspapers accounted for an additional 7.4% of passages, with nonfiction texts totaling more than three quarters (80.0%) of all selections and offering practice using real-world and subject-area material. The remaining 20.0% of passages were works of fiction with 12.6% as general narratives, 5.7% as various types of poetry, 1.1% as personal letters from modern and historical perspectives, and 1.1% as plays from Shakespearean to contemporary times.

Fast Track provided the least variety in passages, including only a majority of general nonfiction (89.1%) with a small portion of general narrative passages (10.9%). The moderate numbers of passages (46) were relatively consistent in

length and style, between 6-15 pages, and all were documents created explicitly created for the program. The program is divided into seven levels following a specific sequence, offering little room to differentiate reading levels within individual lessons.

READ 180 offered slightly more diversity in selections; while still focusing on nonfiction (75%), the remaining 25% dedicated a wider range of options in fictional works. General fiction accounted for 12.5%, poems for 8.3% and letters for 4.2%. As with *Fast Track*, *READ 180* offered the lowest number of selections (24), but the reading level of the passage was much more diverse, offering students access to both challenging and independent level texts measured in lexiles. All selections were between 8-12 pages; some were created for the program and others were documents or short stories from trade materials.

The program offering the widest range in selections was *Language!* While the majority of the text was still dedicated to nonfiction (59%), the disparity between this and fiction was much less than with the other programs. *Language!* represented all types of fictional passages, including 15.5% dedicated to general narratives, 7.1% to poetry, 1.0% to letters, and 1.1% to plays. *Language!* offered the largest number of selections (61). Within each unit, *Language!* provided a range of text types and lexile levels to scaffold students' instruction on thematically related materials. Selections varied in length from 5-12 pages and included primary documents created to support themes and original works of well known authors and represent a variety of cultures.

Summary. Publishers recognize the importance of supporting adolescents' struggle with content-area materials. The majority of passages in each program were nonfiction passages that coordinate reading support with other curricula while still providing access to some narratives and more figurative langauge. While *Language!* included passages at a variety of reading levels to aid in differentiation, the passages in other programs remained consistent and limited the teachers' ability to individualize instruction.

Semantic Maps

As shown in Table 13, only slightly less than a one quarter of lessons (22.3%) included semantic maps to support vocabulary instruction. *READ 180* included a graphic organizer to support word learning with each lesson, the most common format being simple concept maps exploring the relationships between words and the main idea of the passage. In 58.7% of the lessons in *Fast Track*, comparison and prediction charts as well as other organizers for vocabulary in relation to the text were provided. *Language!* only included SFA in 2.5% of lessons in order to support students' understanding of roots and affixes.

Summary. Programs addressed the needs of differing learning styles by providing opportunities to exhibit vocabulary knowledge in a variety of ways, including semantic mapping. While many lessons incorporated this type of activity, the lack of variety and simplicity of responses will lower engagement.

Technology

Table 14 shows that less than one third (30.3%) of program lessons incorporated technology. *READ 180* utilized many modes of technology within

each lesson, starting each with a short schema activation video and providing assessments and supplemental materials online. Many lessons also directed teachers to assign research activities that require students to gather information virtually. *Language!* provided overhead resources for teachers. Online skill assessments were available but were not aligned with lessons. *Fast Track* provided overhead materials for teachers, but they were rarely tied to vocabulary lessons.

Summary. While *READ 180* incorporated multiple forms of technology to support and enhance instruction, other programs ignored this opportunity. With the rising challenges of new literacies, programs must provide instruction in the use of technology as well as use these resources to help students learn. Both *Language!* and *Fast Track* offered teachers zero support in the use of technology to support vocabulary instruction/

Self-Collection

No programs offered any lessons or made any references to students' self-selection of vocabulary.

Assessment

While all programs included assessments within their programs, some lessons provided multiple measures and others offered few progress or knowledge checks. Overall, Table 16 shows writing was the most popular method of assessment; writing was represented in 44.0% of lessons. These assessment measures included generating sentences using vocabulary words and including words in longer passages, reflecting comprehension of the text.

Using multiple-choice tests was also included in the lessons (42.9%). CLOZE procedures were used as assessments in 11.4% of lessons and graphic organizers were used in just under one fifth (17.1%).

READ 180 balanced assessments in all lessons. This program provided students opportunities to perform in objective measures such as multiple-choice quizzes and CLOZE procedures while also offering subjective measures by providing writing prompts and activities. While *READ 180* did use graphic organizers for instruction and formative clues, they were not used as formal assessments. *Language!* also offered multiple methods of assessment; multiple choice was the most frequently used method in 55% of lessons. Writing was used to measure students' knowledge in 30% of lessons, CLOZE in 15%, and graphic organizers in only 2.5%. In contrast, *Fast Track* included graphic organizers for assessment in more than one half (58.7%) of lessons and writing even more frequently (70%).

Summary. Programs offering more than one method of assessment allowed for a more accurate measure of students' word knowledge by triangulating data. Both *Language!* and *READ 180* allowed for multiple tools for student performance for each lesson and provided both objective and subjective measures. *Fast Track* also provided multiple methods of assessment but did not include multiple-choice responses.

Question 3

To what extent do lessons within these programs offer direct vocabulary instruction or indirect vocabulary instruction where vocabulary learning is

embedded within other instruction? Overall, the main method of instruction was through the use of direct and explicit use of strategies. One-hundred percent of *READ 180*, *Language!* lessons, and *Fast Track* lessons incorporated such direction, but only in the preteaching of vocabulary words. Less instructional time was devoted to morphology (33.3% of *READ 180*, 17.4% of *Fast Track*, and 30% of *Language!* Lessons). Embedded instruction was much less prevalent. All programs included content-area support but struggled to incorporate other strategies. While *READ 180* rooted vocabulary learning within other applications in 100% of lessons, *Fast Track* only integrated instruction into slightly more than one half of other topics, and *Language!* only did so in just over one third of lessons.

Summary. While strategy instruction varied throughout each of the programs, only *READ 180* provided a balanced approach to strategy instruction. *Fast Track* and *Language!* offered preferential attention to explicit instruction, which could lead to an inability of students to self-select strategies or apply such practices in other classes, due to lack of autonomy during instruction.

Question 4

To what extent do these lessons prepare students to independently apply vocabulary knowledge and strategies to content area material? As shown in Table 15, the largest portion of passages (30.1%) provided general information about contemporary issues, career information, psychology, animal facts, and profiles of modern and historical figures without relation to content-area curriculum. More than one quarter (27.1%) of passages directly related to

science content and investigated such ideas as robots, geographical and geological issues, and healthcare. Social studies curriculum was supported by 10.1% of selections, referencing historical events and political issues. Short stories, poems, and other genres of literature represented content standards in language arts. Selections such as *Golden Mean: How the Universe Adds Up* and an analysis of the structure of teepees connected reading to mathematical concepts (2.3% of passages).

Summary. All programs offered vocabulary instruction in relation to content-area curricula. The passages related to science, social studies, language arts, and math classes, but connections to grade-level goals and objectives were weak. The topics of passages were simplistic and vague; instruction such as this will support students in developing word-learning strategies but will not further knowledge of specialized material.

Summary

By sheer volume, *Language!* provided students the most opportunities to learn. With 120 lessons, it towered over the 46 lessons in *Fast Track* and nine lessons in *READ 180*. *Language!* also had the greatest variety in passages, balancing fiction and nonfiction selections and supporting all content areas. *Language!* varied text difficulty to allow teachers to differentiate instruction. The program also offered multiple methods of assessment and incorporated effective practices, including preteaching relevant vocabulary and using graphic organizers to develop word knowledge.

While *READ 180* was the shortest of all programs, it provided the greatest level of technological support. It allowed students to interact with multiple media, learning both vocabulary and new literacy skills. *READ 180* was the most consistent of all programs, offering patterned and predictable instruction.

Fast Track's leveled instruction provided a moderate number of lessons, but the lessons offered the least amount of variety and content-area support. Passages were formulaic and predictable and did not include examples of authentic literature or content texts. While *Fast Track* lessons identified the highest number of words per passage, little direct instruction was offered to support word attack for texts outside the program.

Table 9

Percentage of lessons exhibiting effective practices

	READ 180	*Fast Track*	*Language!*
Direct explicit instruction			
• Preteaching	100	100	100
• Morphology	33.3	17.4	30
Embedded instruction	0	58.7	7.5
• Wide reading	0	0	0
• Semantic maps	100	58.7	2.5
• Use of technology	100	2.2	35.8

Table 9 (continued)

• Self-collection	0	0	0
• Content area	100	100	100
Assessment	100	100	100

Table 10

Percentage of lessons using specific explicit pre-teaching strategies by program

	READ 180	*Fast Track*	*Language!*	Average
Identified words to teach	100	100	100	100
Discussion	100	91.3	97.5	96.0
Pronunciation offered	100	76.1	85.5	84.0
Bold face	100	50	88.3	78.9
Definition offered	100	19.6	81.7	66.3
Prediction	100	67.4	8.3	28.6
Dictionary use	11.1	67.4	53.3	54.9

Table 11

Percentage of lessons using specific, explicit morphology strategies by program

	READ 180	*Fast Track*	*Language!*	Average
Prefix/Root/Suffix	33.3	17.4	30	26.9
Word Families	22.2	13	0	4.6
Word Endings	22.2	4.3	0.1	6.9
Multiple Meanings	11.1	10.9	0.1	10.3

Table 12

Percentage of passages using wide reading strategies by program

	READ 180	*Fast Track*	*Language!*	Average
General nonfiction	29.2	89.1	55.7	62.6
Articles nonfiction	45.8	0	3.3	7.4
General fiction	12.5	10.9	23	12.6
Poems	8.3	0	13.1	5.7
Letters	4.2	0	1.6	1.1
Plays	0	0	3.3	1.1

Table 13

Percentage of Lessons Using Semantic Maps by Program

	READ 180	*Fast Track*	*Language!*	Average
Semantic maps	100	58.7	2.5	22.3

Table 14

Percentage of lessons using technology by program

	READ 180	*Fast Track*	*Language!*	Average
Technology	100	2.2	35.8	30.3

Table 15

Percentage of passages associated with content-area classes by program

	READ 180	*Fast Track*	*Language!*	Average
General information	25	52.1	29.5	30.1
Science	25	45.7	13.1	27.1
Social studies	37.5	2.2	14.8	10.1
Language arts	12	0	37.7	3.2
Math	0	0	4.9	2.3

Table 16

Percentage of Lessons Using Assessment by Program

	READ 180	*Fast Track*	*Language!*	Average
Writing	100	70	30	44.0
Multiple choice	100	0	55	42.9
CLOZE	100	4.3	15	11.4
Graphic organizers	0	58.7	2.5	17.1

CHAPTER 5: CONCLUSIONS AND IMPLICATIONS

This chapter reflects on the adolescent literacy crisis in American classrooms today and addresses the effective practices for working with these students, as purported by professional organizations aimed at improving literacy instruction with a focus on vocabulary learning. The research questions and methodology are restated and a synthesis of findings is presented.

Summary of the Study

The purposes of this study were to (a) determine which commercial reading programs are most recommended by state boards of education, (b) synthesize the recommendations of professional organizations and professional literature in the field of literacy for practices in adolescent literacy vocabulary instruction, and (c) determine the extent of the alignment between these identified effective practices and the materials and instruction provided by the most widely recommended reading programs in the nation.

An informal poll conducted of boards of education of all 50 states determined *READ 180*, *Fast Track*, and *Language!* received the most acknowledgements from these governing agencies. To determine the extent to which these programs included effective instruction, strategies within teachers' editions were analyzed and aligned with a synthesis of the recommendations by IRA, NCTE, *Reading Next,* and *the Report of the National Reading Panel.*

Interpretation of Results and Conclusions

Three was a high level of agreement in what is considered effective practices when dealing with struggling adolescent readers. The IRA, NCTE, the *Report of the National Reading* Panel, and *Reading* Next each addressed the need for explicit and embedded strategy instruction that supports students' vocabulary acquisition and comprehension of content-area texts.

Preteaching

All programs incorporated the explicit preteaching of vocabulary by identifying key terms in prereading activities or by highlighting them within the text and directing teachers to preview the selection. As research has shown that struggling readers require explicit strategy instruction, preteaching key vocabulary helps students to internalize the need to address unknown words to support comprehension (Moore et al., 1999). Because students can process limited amounts of new information at a time, *Fast Track*'s incorporation of an average of 18.9 words for lessons of approximately 6-15 pages seemed to place passages above an independent or instructional reading level. *READ 180* and *Language!* had more manageable vocabulary management, with a ratio of five words for lessons of 8-12 pages and six words for lessons of 5-12 pages respectively.

Most programs (96.0%) incorporated the use of discussion to build students' word knowledge and provided an opportunity to engage in critical thinking (Kamil et al., 2008). Unfortunately, this was the extent to which lessons

demanded the use of higher order thinking skills when completing word work. The majority of lessons provided definitions (66.3%) and pronunciations (84.0%). While some lessons directed students to use dictionaries (54.9%), no programs offered the recommended explicit instruction to teach students how to use this tool properly. Within these programs, preteaching vocabulary will support students in their comprehension of the passages within the lessons but does little to build skills that will support independent and content area reading. Because vocabulary knowledge has a strong impact on performance in all academic areas (Manzo et al., 2006), students will require additional scaffolding to learn to apply these skills to reading outside of the programs.

Morphology

Despite the fact all professional organizations supported the use of structural analysis as a tool to determine word meaning, few lessons in the reading programs (26.9%) offered explicit instruction in the use of this strategy. As students encounter highly specialized vocabulary in content-area classes (Kamil et al., 2008; Harmon et al., 2005; NICHD, 2000) they require strategic word attack skills in order to comprehend material. *READ 180* included structural analysis within one third (33.3%) of their lessons and *Fast Track* followed suit in 17.4% of lessons, but both programs offered instruction in context of the words identified for the lesson with only minor references to apply the skill in outside reading.

For students to learn useful word attack skills while reading content-area material, they require explicit instruction on how to apply the skill in a wide variety

of texts. When lessons limit their ability to apply strategies to new words, either through lack of exposure to instruction (73.1%) or through narrow access to practice (26.9%), it becomes difficult for students to master method of word attack.

Wide Reading

All professional organizations agree students need access to the reading of a wide variety of materials for a multitude of purposes in order to gain exposure to new vocabulary (Kamil et al., 2008; Nagy, 1988; NICHD, 2000). Extended reading also offers students an opportunity to gain multiple exposures to words to reinforce knowledge (Manzo et al., 2006).

Wide reading also motivates students to read. Students who struggle with reading often feel marginalized, feeling education does not meet their needs (Alvermann, 2001; Grosso de Leon, 2002; Patton & Holmes, 2002). When students engage with materials that reflect their ideas or seem relevant to their lives, they are more motivated to engage in classroom activities (Alvermann, 2001; Guthrie et al., 2007; McCabe & Margolis, 2001; C. Shanahan, 2004; Wilhelm et al., 2001).

Each of the programs in this study included multiple fiction and nonfiction texts, providing students access to different text structures. Only *Language!* and *READ 180* included works in multiple genres; while emphasis was on expository texts to support students' comprehension of subject area materials, each did provide figurative works as well. *Language!* allowed students to interact with the

greatest number of passages and provided the largest number of opportunities for practice.

Accepting that all programs were created for struggling readers, most passages within *READ 180* and *Fast Track* were written at approximately the same reading level for each lesson, becoming increasingly difficult as students progressed through the program. While this does support students' growing abilities, it did not allow for any differentiation or scaffolding. Only *Language!* provided passages of varying ability to allow teachers opportunities to teach students with instructional level texts or provide extension opportunities for students reading above expectations in the reading program.

Semantic Maps

Semantic maps allow students to make connections between new and existing knowledge (Anderson & Freebody, 1981; Blanchowicz & Fisher, 2000; Bromley, 2007; McKeown & Curtis, 1987; NCTE, 2004; NICHD, 2000). This is especially important for students that require additional reading support because it creates a concrete visual reference to concepts attached to and between terms related to content, and then allows them to connect to texts at multiple levels. Each of the professional organization included references to the use of graphic organizers to support learning.

The programs included in this study varied in the level they incorporated semantic maps into lessons. *READ 180* used graphic organizers in each lesson but limited the complexity with which students engaged in the activity, using only simple concept maps. *Fast Track* utilized higher order thinking by incorporating

prediction into semantic mapping but restricted their use in only slightly more than one half (58.7%) of lessons. *Language!* virtually ignored this strategy and only used three graphic organizers out of 120 lessons. None of the programs allowed students to self-select the type of map or material to include within the organizer.

By limiting students' access to types of semantic maps and instruction on the application of this strategy, it is doubtful students will independently make use of this strategy outside the program. Students will require additional explicit instruction on selecting appropriate maps based on text structure or purposes for reading to be successful with mapping.

Technology

The use of technology as a topic and tool for instruction was addressed by all professional organizations as one of the growing demands in literacy. Incorporating multiple media into lessons serves to motivate students (Manzo et al., 2006) and allow teachers to differentiate instruction and provide immediate and meaningful feedback through use of individualized computer programs (Biancarosa & Snow, 2004; Kamil et al., 2008; NICHD, 2000) and repeated exposure to words through wide reading and research (Curtis & Longo, 1999; Kamil et al., 2008).

Only *READ 180* incorporated technology into lessons, including exposure to videos supporting schema and computer programs that provided practice and assessment opportunities. *READ 180* focused on building literacy skills while students practiced technological skills. Unfortunately, *READ 180* did not provide

any instruction on assessing the value or thinking critically about the content of material found through these resources, leaving students struggling to determine how knowledge gained through this exposure related to content knowledge.

Self-Selection (or Self-Collection).

Much has been said about the need to motivate adolescents for engagement in instruction (Alvermann, 2001; Guthrie, et al., 2007; Wood et al., 2006). For struggling readers, much of their motivation is tied to self-perceptions of their reading and writing skills (Wilhelm et al., 2001). Their engagement relates directly to the relevance they see in the material to be studied (NCTE, 2006). Unless students see their skills and perspectives as valued, these students will , at times, disengage completely.

Allowing students to self-select words for study increases motivation to learn (Biancarosa & Snow, 2004; Harmon et al., 2008). All organizations identified in this study except the NRP addressed the value of offering student autonomy within lessons; raises levels of self-efficacy and leads students to see purpose in classroom activities. Regrettably, none of the programs offered students opportunities to prioritize or select words on their own. This restricts their investment in activities associated with lessons and hampers their vocabulary growth overall. Additional research is required to determine the best way to incorporate self-selection into high school reading programs.

Content-Area Support

It is almost impossible to deny that high school students need support in reading in the content areas. Instruction based on strategies outlined as effective

practices from the NRP showed student growth in academic classes (NICHD, 2000). Vocabulary instruction not only improves word knowledge but directly influences students' success in all classes (Blanchowicz & Fisher, 2000).

This ideal is upheld by the programs in this study. Each provided passages supporting literacy skills but also offered students the opportunity to apply strategies to content-area texts. The only caveat was the material does not align directly with curriculum goals for common secondary classes. For example, 27.1% of passages related to the field of science but none related directly to biology or earth science, both of which are typically found in high schools. In 10.1% of passages, there were texts related to social studies but none related to economics, government, or world history, courses typical to any secondary experience. While it is accepted that standards and curriculum vary for each state, there are many commonalities that could be reinforced within these commercial reading programs to support students' literacy skills as well as content from other core classes.

Assessment

In order for students to continue to grow academically, they require immediate and meaningful feedback on their efforts (Blair et al., 2007; NCTE, 2006). Assessments can inform students and teachers of individual's strengths and weaknesses and plan appropriate instruction; evidence of growth over time can motivate students conditioned to long-running challenges (Curtis & Longo, 1999; Moore et al., 1999).

Each of the programs offered assessments associated with each lesson, often incorporating multiple methods of gathering information on students' word knowledge. The most common method of testing (in 44.0% of lessons) was through writing, which incorporated a literal level of word knowledge as well as the use of high order thinking by creating sentences or passages based on a prompt or directive.

Programs also provided a balance for the subjective measure of writing by providing objective tests as well; this offers teachers concrete evidence of word knowledge as well as more qualitative information about students' ability to make connections and perform basic reading and writing skills. Multiple-choice quizzes were included in 42.9% of lessons and CLOZE procedures were incorporated into 11.4% of lessons. As these measures did provide data about student knowledge, they were used as summative measures and offered no real opportunities for remediation if students were unsuccessful. In order for students to truly master these skills, programs need to offer differentiation activities or provide additional resources for students who are unable who were unsuccessful with the assessments.

Recommendations for Future Research

The results of this study revealed much agreement in the professional literature on the most effective vocabulary practices for struggling adolescent readers, yet none of the leading commercial reading programs successfully incorporated all these effective practices in a way that supports growing adolescent literacy skills. Recognizing that many reading remediation classes in

high school are supported by these or similar programs, students' access to the effective practices outlined in the professional literature will be limited. In addition, most high school teachers have little or no training to support reading instruction and will be unable to successfully supplement the instruction provided by these programs.

In order to ensure efficient instruction within commercial programs, publishers need to provide more explicit instruction on the use of research-based effective practices such as morphology (structural analysis), mapping, self-selection, and preteaching—all advocated by the leading professional organizations in literacy; they provide meaningful opportunities for students to apply these strategies with texts relating directly to subject-area classes. There should also be a greater variance in the text structures, genres, and ability levels represented in the passages to provide teachers the resources to meet the needs of diverse populations effectively (Alvermann, 2001; Grosso de Leon, 2002; NCTE, 2004, 2006). In addition, the research suggests that programs must adapt to the changing face of literacy by incorporating more opportunities for students to interact with different types of media and use critical thinking skills to evaluate information encountered in these sources. The implication of this practice with a wide variety of texts stands that students will be better able to apply vocabulary skills and strategies independently within content-area classes.

After an analysis of the strengths and weaknesses of these programs, it is still unknown how teachers actually incorporate commercial materials into classroom instruction. The fidelity of implementation vastly impacts the success

of instruction and it is necessary to know how teachers use these programs within reading remediation classes to determine the overall effectiveness of any program, despite the directives within teachers' editions.

It is also important to consider characteristics of students engaged in the programs. Without knowing the specific learning needs of the individuals in any classroom, it is difficult to plan effective instruction. Because there are no universal guidelines for placing students in programs such as these, it is difficult to choose passages and specific strategies to remediate basic needs.

Another challenge lies in creating a program to support students throughout the nation, regardless of local or state educational guidelines. While publishers try to profit by designing programs with broad applications, it becomes difficult to align materials with specific learning standards or goals to impact content-area performance. If programs were tailored more to specialized curriculums, they would be more effective at supporting subject-area performance.

In order to support the future evolution of commercial reading programs and shape the instruction within high school remedial reading classrooms, further research must occur in several areas. We must evaluate the present level of professional development that secondary school teachers receive in support of students' reading and writing development. With the changing face of high stakes testing requiring students to evaluate material critically in all content-area classes, it is more important than ever that teachers begin to support adolescents as they learn to navigate texts and assignments within each curriculum. Yet, as

shown by this study, few states offer any guidelines for literacy instruction in high school or offer suggestions for the training or implementation required for any high school reading program. Additional research must be done to determine how best to develop or execute such professional development for teachers.

Summary. Programs offering more than one method of assessment are allowing for a more accurate measure of students' word knowledge by triangulating data. Both Langauge! and *READ 180* allowed for multiple tools for student performance for each lesson and provided both objective and subjective measures. *Fast Track* also provided multiple methods of assessment but did not include multiple-choice responses.

Conclusions and Implications

Literacy demands placed on adolescents have changed over time because of the growing body of knowledge from the media and other influences as well as the globalization of our culture and economy (Biancarosa & Snow, 2004). In order to be successful in school and in life, students need more than basic reading and writing skills; they must be able to process text from a variety of sources, comprehend great amounts of specialized content knowledge, and transfer these skills to multiple disciplines and settings. As these requirements evolve, so must methods of instruction in order to meet the ever-changing needs in today's classrooms (Blanchowicz et al., 2006; Harmon et al., 2005).

By synthesizing the standards of instruction from professional organizations, effective practices for teaching vocabulary and improving students' overall performance were determined. To ensure that these practices influence

students' success, classes must include direct and embedded strategy instruction so students can gain word knowledge and learn to apply word attack skills in a variety of contexts; this will support students in class work and real-world reading activities (Biancarosa & Snow, 2004; Moore et al., 1999; NCTE, 2004, 2006; NICHD, 2000).

Although this study focused on the three leading commercial programs for adolescent learners, several commercial reading programs have been developed, offering varying levels of support for teachers and students (Blanchowicz et al., 2006; O'Brien et al., 1995; Slavin et al., 2008). Problems arise when commercial programs are the only means of assisting struggling learners. The tendency of school systems to look to commercial, published programs to solve all the literacy needs in a school is what Blanton & Wood (in press) have termed "commercial literacy." Without adequate training and inservice, many teachers have become overly dependent on such programs, causing vocabulary instruction for struggling adolescents to fall short of meeting students' needs.

The findings of this study revealed that none of the leading commercial reading programs meets all the standards required of effective instruction. While each program embodied several effective methods of vocabulary instruction, none managed to incorporate the essential learning needs of adolescents into its instructional plan. This leaves few, if any, suggestions or support for teachers in the areas of motivation and self-efficacy (Alvermann, 2001, Guthrie et al., 2007; McCabe & Margolis, 2001; C. Shanahan, 2004; Wilhelm et al., 2001; Wood et al.,

2006), environmental context (Blair et al., 2007; Cooper & Jackson, 2005; NCTE, 2006), and methods for engaging learners. Without student engagement, instruction will not translate to student success in transferring knowledge to content-area classes. By incorporating and operationalizing research-based effective practices for vocabulary instruction, publishers will be able to create more effective programs for improving the literacy development of our nation's adolescents.

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APPENDIX A: CODING SHEET

Program:	Level: Lesson:	Coder:
Vocabulary	Instance of strategy	Content Area transfer?
Direct Instructional strategy		
Preteaching		
• Identified words to teach		
• Discussion		
• Pronunciation offered		
• Bold face		
• Definition offered		
• Prediction		
• Dictionary use		
Morphology		
• Prefix/Root/Suffix		
• Word families		
• Word endings		
• Multiple meanings		
Embedded Instructional strategy		
Wide reading		
• General nonfiction		
• Articles nonfiction		
• General fiction		
• Poems		
• Letters		
• Plays		
Semantic maps		
• Concept maps		
• Comparison maps		
• Prediction maps		
• Semantic Feature Analyses		
Technology		
• Videos		
• Online texts		
• Overheads		
Self-collection		
	Subject Area	Text Type
Content area support		
• General information		
• Science		

• Social Studies		
• Language Arts		
• Math		
Assessment		
• Writing		
• Multiple Choice		
• CLOZE		
• Graphic Organizers		

APPENDIX B: DESCRIPTION OF CODES OF EFFECTIVE PRACTICES

Direct explicit instruction	The text prompts or outlines instruction that will directly focus on specified methods of vocabulary instruction or vocabulary strategies.
• Preteaching	The text prompts teachers to identify key vocabulary from the selection and/or introduce students to words identified within the text as key to understanding the passage.
• Morphology	The text prompts students to use word etymology and structural analysis to gain a deeper understanding of the meaning of words identified for the lesson (Manzo & Manzo, 1990).
Embedded instruction	The text prompts or outlines specified methods of vocabulary instruction or vocabulary strategies within the context of other instruction.
• Wide reading	The text prompts students to interact with a wide variety of texts for multiple purposes.
• Semantic maps	The text prompts students to create or complete a graphic organizer that explores the characteristics of identified terms, including such ideas as definition, part of speech, synonyms and antonyms, etc. (Frayer, Frederick, & Klausmeier,

	1969; Marzano & Marzano, 1988; Schwartz & Raphael, 1985).
• Technology	The text prompts students or teachers to use some form of technology to enhance the understanding of the passage, including computer programs and Internet resources, audio-visual equipment, or other classroom resources.
• Self-collection	The text prompts students to identify words that are unfamiliar, unclear, or important within the passage and use them in further study.
• Content area	The text uses passages from content areas to teach or support literacy learning.
Assessment	The text offers opportunities for self-checking or formal assessments to determine students' knowledge of words.