The Differential Effects of Direct and Embedded-Skill Academic Vocabulary Instruction Among

Community College Students in Developmental Reading Courses

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Table of Contents

List of Tables

Abstract

The purpose of the study was to determine an effective method of teaching academic vocabulary acquisition skills to community college students enrolled in developmental reading courses. The measurement tool for this study was a vocabulary assessment developed by the researcher. This study involved a pre-experimental design. Subjects (n=8) served as their own controls. Dependent variable data was collected during the spring 2014 semester of the 2013-2014 school year. There was no significant difference in the mean direct instruction score (Mean = 15.25, SD = 1.67) and the mean embedded skill instruction score (Mean = 14.25, SD = 3.45) [t (7) = 1.28, p ≥ .05]. Given the continued disagreement over whether direct or embedded-skill instruction is more appropriate, future research should continue to examine these instructional methods both in isolation and combined.

CHAPTER 1

INTRODUCTION

Overview

Currently, students of varying ages are opting for a community college education for many reasons including lower tuition costs, career change, and ease of transition to four-year colleges and universities. Over the past decade, community college students' age range as significantly expanded. While a large number of students entering community colleges have recently graduated from high school, a growing number of community college students are older adults, many forty years of age and older. A large percentage of students across these age ranges enroll in developmental courses – remediated courses that provide college-ready skills for underprepared students. Students must take the Accuplacer assessment to determine placement in developmental courses. Developmental courses often require greater than three billable credit hours for which students earn zero credit.

For the past four years, this researcher has been employed as a developmental reading instructor at a community college in Maryland. Developmental reading courses provide the basic skills and strategies necessary for students to solidly comprehend college-level texts. An integral component to any developmental reading curriculum, perhaps exceeding all other skills, is vocabulary instruction. Students must build an adequate academic vocabulary foundation to secure overall college success. Without knowledge of academic vocabulary coupled with minimal knowledge of strategies to approximate academic vocabulary meanings, students are destined for failure. Researchers Guo, Roehrig, and Williams (2011) reported that academic vocabulary knowledge is probably the most significant factor to increased reading comprehension.

In the past, developmental reading instructors debated best practices for providing academic vocabulary instruction. Some instructors provide direct instruction where students are given a word list and definitions to memorize and then assessed. Some instructors embed vocabulary instruction by giving students a list of words that appear in reading selections required for class, asking students to use context or word-part recognition to approximate word meanings. Some instructors use a combination of the aforementioned while others provide no vocabulary instruction at all.

Over the course of the 2012-2013 and the current 2013-2014 academic years, developmental reading instructors have begun to increase their awareness of academic vocabulary instruction methods. Some instructors currently debate whether direct instruction or embedded instruction is the better and more appropriate method of vocabulary instruction. Many instructors support the notion that embedded skill instruction is a better method to support students' active learning and retention rates of academic vocabulary than that of simply providing a list of words and definitions for students to memorize for an assessment, and then ultimately forget once the assessment has passed.

Statement of the Problem

The purpose of this study was to determine the impact of direct vocabulary instruction or embedded vocabulary instruction on vocabulary knowledge among community college developmental reading students.

Hypothesis

The null hypothesis was that there would be no significant difference in vocabulary scores among community college developmental reading students for words learned through direct instruction or embedded skill instruction.

Operational Definitions

Academic vocabulary is defined as any vocabulary or terminology used in academic texts that students must know or possess strategies to learn in order to support solid comprehension of the text. Academic vocabulary is largely built on Latin and Greek word parts including bases (roots) and affixes. In this study, academic vocabulary was selected from class texts that students read as part of the class curriculum.

Direct instruction of academic vocabulary involves the isolation of specific vocabulary words and the explicit provision of definitions. In this study, the instructor gave students a list of 10 academic vocabulary words and their definitions.

Embedded skill instruction of academic vocabulary involves a less explicit method of instruction. In this study, the instructor provided instruction on the use of context clues and Latin and Greek word parts to build student awareness of these elements. Students were then given a list of 10 academic vocabulary words that they were to define by using their knowledge of strategies for vocabulary approximation including context/usage and/or word parts. Students could check their approximated definitions for accuracy from an authoritative source such as a physical or online dictionary, if they chose.

Vocabulary knowledge was assessed by students' vocabulary scores on an assessment containing all the words learned in both direct and embedded instruction. The assessment sentences contained learned vocabulary, and the students were asked to provide a definition for the words. Scores were generated from a rubric of zero to two points per question: a score of zero being not at all accurate or not attempted, a score of one being somewhat accurate, and a score of two being completely accurate.

CHAPTER II

REVIEW OF THE LITERATURE

Solid reading comprehension is highly dependent upon knowledge of academic vocabulary. This literature review examines the increasing number of students required to enroll in developmental reading courses and the importance of the role of academic vocabulary instruction at the community college level. Section one provides background information regarding the increasing number of students required to enroll in developmental reading courses. The second section examines the direct instructional approach. Section three examines the embedded-skill approach to academic vocabulary. Lastly, section four examines a combination of direct and embedded-skill instruction.

Surge of Enrollment in Developmental Reading Courses

Students entering college in the current era face many difficulties adjusting to differing instructional styles and the learning-independence widely expected of college students. Many students seeking a college education often enroll in community college to help ease the transition. Students entering community college are often placed into developmental courses to develop the necessary skills to be successful in college. Many students lack the basic reading skills necessary to become independent college students who are expected to teach themselves college-level content based upon what they read in their textbooks. More and more community colleges are offering developmental reading classes in response to the ever-increasing demand. Staklis reports that "approximately 44.5% of community college students enroll in at least one developmental course and as many as 60% of incoming students are underprepared," (2010, Table 6, as cited in Perin, 2013). While it may be difficult to discern just how many of these students enrolled in reading courses, a reported 20% of community college students in the year

4

2000 were enrolled in developmental reading and writing courses (Parsad & Lewis, 2003 as cited in Perin, 2013).

The task of reading is often compounded by students' lack of instruction toward appropriate skills and strategies used to approach expository texts and students' lack of interest in reading, whether for instructional or recreational purposes. Long (2009) recognizes that students rarely engage in reading tasks whether reading is assigned or intended to be a recreational experience. Because a large number of students do not read regularly and do not possess necessary skills to increase comprehension, literacy skills are said to be dramatically lower than those students who do read and apply strategies regularly. Community college graduation rates are lower for students with low literacy skills (Bailey, Jeong, & Cho, 2012 as cited in Perin, 2013). Low literacy skills among students lead to levels of unpreparedness in incoming college students. Students are often discouraged when faced with a large amount of academic text from which they are expected to teach themselves. The researcher regularly observes many community college students failing or withdrawing from college courses.

A number of factors impact the decreased literary reading in adults over the past twenty years (Long, 2009). Long reports that approximately 60 percent of American adults reported regular literary reading twenty years ago, while that percentage decreased in 2002 to below fifty percent. Literary reading can be defined as fictional, dramatic, and poetic literature. The National Endowment of the Arts (NEA) found that younger adults, aged eighteen to twenty four, currently possess lower literacy skills than their counterparts of twenty years ago. The NEA discovered three areas that may explain why literacy skills among this age bracket are declining: less time is spent reading, reading comprehension skills are decreasing, and the decreasing reading comprehension skill set is linked to socio-cultural and economic statuses (as cited in

Long, 2009). Bell, Zeigler, and McCallum (2004) report similar findings in their examinations of adults enrolled in basic education reading courses.

One contributor to low reading comprehension skills is the lack of schematic academic vocabulary. Students often do not possess a strong foundation of academic vocabulary words and meanings in their schema, nor do they possess the appropriate strategies to approximate academic vocabulary word meanings. Community college instructors may not have the appropriate training necessary to respond to such lack of vocabulary skills among their adult students. Snow and Strucker (1999) found that many adult education instructors did not receive specific training in reading instruction and that they possibly do not understand how to approach a diverse population of adults (as cited in Bell et al., 2004).

MacArthur, Konold, Glutting, and Alamprese (2010) conducted a study among various Adult Basic Education (ABE) learners of various backgrounds in an effort to determine reading component skills that lead to success in literacy among native and non-native English-speaking adults. While MacArthur et al. recognize that little research exists regarding adults' reading and writing skills and their relationships to literacy, the researchers do acknowledge vocabulary acquisition as an important component among decoding and word recognition skills to achieving successful literacy skills among native and non-native English-speaking adults.

At the college level, students are expected to read large amounts of academic text. From these academic texts, students are expected to teach themselves based upon the text content therefore mastering skills independently. This skill leads to academic success in college. College-level texts contain a large amount of defined and undefined academic and specialized vocabularies. Students with limited schematic vocabulary may be at risk for not achieving college success.

Guo, et al. (2011) examined adult learners' literacy skills in the areas of morphological and syntactic awareness in relation to vocabulary skills. Guo et al. used two theoretical models to determine whether vocabulary knowledge was important to reading comprehension skill development: the first theoretical model offered that vocabulary knowledge was increased by morphological and syntactical awareness; the second theoretical model suggested that vocabulary knowledge indirectly increased reading comprehension skills. Using two vocabulary measures, The Peabody Picture Vocabulary Test and The Expressive Vocabulary subtest of Comprehensive Receptive and Expressive Vocabulary Tests, Guo et al. found that vocabulary is a larger contributor to reading comprehension skills than were morphological and syntactical awarenesses. These results indicate vocabulary knowledge is quite probably the most significant factor in increasing reading comprehension skills in adults.

Before instructional models can be developed and employed in developmental reading courses, it is important to understand the theoretical frameworks that underlie vocabulary acquisition and instruction. As cited in Willingham and Price (2009), Jenkins and Dixon's schema theory (1983) suggests that students with limited schemas and prior knowledge are less likely to be able to learn new words. Thus, Willingham and Price suggest developmental instructors consider the schema theory when selecting appropriate vocabulary instruction for their students. Because vocabulary schema can serve as a scaffold to acquiring new vocabulary and ultimately, enhancing reading comprehension skills, instruction based upon students' background knowledge is important. Vygotsky (1978) proposed the Zone of Proximal Development model which suggests that students' growth in vocabulary depends strongly on the number of word experiences they encounter. The more experiences encountered, the wider the growth (as cited in Willingham & Price, 2009).

Another theoretical model proposed by Stanovich (1986) is the Matthew Effect (as cited in Willingham & Price, 2009). In this model, students' oral and written vocabularies are impacted by low literacy skills. Because students have low literacy skills, they often read less thus impacting occurrences of word experiences. Fewer word experiences lead to limited vocabulary building opportunities.

Word saliency pertains to word-learning and its relationship to word relevance. DeRidder (2002) discovered that students learned words they deemed relevant or important. In order for students to consciously learn new vocabulary within a reading, the students themselves had to consider the words to be important enough to warrant attention (as cited in Willingham & Price 2009).

Vocabulary instruction methods in the developmental reading classroom at the college level are becoming more widely considered as they grow in importance. As vocabulary instruction with the adult population is still an area that is continually growing and being increasingly researched, some traditional methods of vocabulary instruction are still being explored.

Direct Instruction of Academic Vocabulary

Robson (2009) reports that direct vocabulary instruction where vocabulary is isolated by the instructor and students use dictionaries to look up and define the words, is a method that is still currently in use. This method can also be employed using a pre/posttest format. For example, at the beginning of a given week, students are given a test on isolated vocabulary words selected by the instructor. The instructor then determines which words from the list will be practiced throughout the week based upon the results of the pretest. Students look up the words' definitions in a dictionary and basically memorize their definitions for the posttest at the end of

the week. Willingham (2009) cites a debate regarding whether direct instruction in vocabulary acquisition is effective. Those who support direct vocabulary instruction contend that increased reading experiences are necessary for actual word learning to take place. However, Herman, Anderson, Pearson, and Nagy (1987) report that only a few word experiences are necessary for word learning (as cited in Willingham & Price, 2009). While the debate on direct instruction's effectiveness in word learning continues, most researchers seem to agree that increased exposure to words is a substantial factor in increased word learning.

Embedded-Skill Instruction of Academic Vocabulary

Another growing method of vocabulary instruction is indirect vocabulary instruction. In this case, vocabulary is not predetermined by an instructor, nor is it isolated from text. In indirect instruction, students learn new vocabulary as they encounter it in text. For indirect vocabulary instruction to be successful, students must learn appropriate strategies to teach themselves vocabulary embedded in academic texts.

Since a large portion of community college students enrolled in developmental reading courses are second-language learners, Newton (2013) suggests incidental vocabulary acquisition helpful for the second-language learner population. Although Newton's research deals primarily with incidental vocabulary's impact on conversational language acquisition, he acknowledges its importance to increased reading comprehension.

Indirect vocabulary instruction occurs in two major modalities: (1) contextually, where students use context clues to approximate word meanings, and (2) using word parts, as academic vocabulary is often derived from Greek and Latin roots. Eeds & Cockrum (1985, as cited in Willingham & Price, 2009) suggest combining these two methods to better suit students' vocabulary acquisition, and in order for indirect vocabulary instruction to be successful, multiple

word exposures are necessary. Nagy and Stahl (2000) concur with this conclusion. Because sometimes context clues alone do not provide enough information that is helpful for approximating word meanings, readers must have other strategies in place to approximate word meanings (as cited in Robson, 2009).

To incorporate contextual clue-instruction to enhance vocabulary acquisition, McKnight (2010) developed a "Context Journal" for community college students to record newly encountered academic vocabulary. In this task, students were asked to identify a small number of unfamiliar vocabulary words within an academic text, and they were assigned to interact with the words in a number of different ways. In their journals, students recorded the unfamiliar words, guessed at their meanings based upon contextual usage, and provided a rationale to support their assumptions. Students then looked up their words to determine if their guesses were correct. McKnight found this technique helpful to students' understanding of newly learned words, and she also found students' use of newly learned vocabulary, both written and orally, increased. This procedure allowed students to learn words using their own preferred learning style, and allowed the instructor some insight into students' thought processes. It also gave students more confidence in their own learning and usage of newly acquired vocabulary.

Robson (2009) reports that word-part instruction, another component of indirect vocabulary acquisition, helps to increase students' word knowledge. While Greek and Latin roots and affixes should be directly instructed, students can apply this skill to contextual approximation of word meanings. White, Sowell, and Yangihara (1989) assert that 97% of prefixed words contained printed academic text in the English language consisting of 20 common prefixes (as cited in Robson, 2009). Knowledge of prefixes and how they alter word meanings are invaluable skills for students to be able to draw upon from their schemata to

approximate word meanings in text. Nagy and Scott (2000) also support the word-part instruction theory by stating that the similarities in meanings, pronunciations, and spellings of English words derived from Greek and Latin word-parts can help to approximate meanings of unfamiliar words (as cited in Robson, 2009). Using a combination of contextual clues and word-parts knowledge can help students make meaning from a whole text using the academic vocabulary of the text to enhance reading comprehension. Again, it is necessary to provide direct instruction for students to utilize these strategies, but doing so promotes students' self-awareness of unfamiliar vocabulary and how to derive meaning from such vocabulary, providing uninterrupted reading of the academic text.

Combination of Direct Instruction and Embedded-Skill Instructional Approaches

Finally, many researchers and instructors suggest combining direct and indirect vocabulary instruction to aid in increasing students' academic vocabulary schemata and ultimately, increase reading comprehension skills. Because there are benefits to both direct and indirect instruction, a healthy combination of the two where students engage in authentic word experiences is necessary. Literature discussion groups are one way to implement both instructional styles utilizing vocabulary instruction (Daniels, 1994, as cited in Willingham & Price, 2009). One way to implement literature discussion groups is to have students meet with each other to discuss texts previously read and the vocabulary encountered within them. These authentic word experiences promote word-consciousness of unfamiliar vocabulary. Together, students gain understanding of unknown academic vocabulary. Similarly, Dixon-Krauss (2001) used a "mediational model design" format which utilizes experiential discussion groups and found this model to be quite beneficial particularly for adult learners (as cited in Willingham & Price 2009).

Similar to McKnight's (2010) use of a contextual journal, another use of literature discussion groups is to have students independently read a literary work, note unfamiliar vocabulary, approximate the definition, and then look up the word to find the dictionary definition. Students then meet in small groups to discuss and share their identified vocabulary. This experience promotes the word saliency theoretical framework previously mentioned which is important to the promotion of word acquisition (Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006; and Dixon-Krauss, 2001, as cited in Willingham & Price 2009).

Summary

Vocabulary instruction involves many components, with one instructional style not precluding another. Rather, a combination of techniques and components should be applied to vocabulary instruction in the developmental reading classroom at the community college level. Researchers concur that rote design is not beneficial and that students benefit from diverse instructional methods (Willingham, 2009). Experiential word learning is key to unlocking meaning in text and motivating students to engage and interact with academic text.

CHAPTER III

METHODS

Design

The purpose of this study was to determine the impact of direct vocabulary instruction or embedded vocabulary instruction on vocabulary knowledge among community college developmental reading students. This study used a pre-experimental design. Students served as their own controls. The dependent variable was the direct and embedded instruction vocabulary scores on an assessment designed by the researcher. The independent variable was the type of vocabulary instruction by which the words were learned: embedded skill (indirect) instruction or traditional direct instruction.

Subjects

The subjects in this study were students enrolled in the researcher's Academic Literacy class during the Spring 2014 semester at a community college in the suburbs in the mid-Atlantic region. Students are required to take this course (or a similar developmental course) based on their performance on the Accuplacer test indicating that their literacy skills need to be further developed before starting college level coursework in English. This class met twice a week, Tuesday and Thursday, for a duration of ninety minutes per day. Among students required to take this development class, students are heterogeneously placed in the developmental classes as a result of a registration process. Students choose from a list of available days and times the course will be offered according to how the course fits within their schedules. Students served as their own controls for this study.

This class occurred during the spring 2014 semester. Fifteen students were registered for the course, and twelve students regularly attended class. During data collection, eight students were present, and all eight students participated in the study. Participants consisted of two

African-American male students, two Caucasian female students, three African-American females, and one Asian female. The researcher gave students an informed consent form which provided them with an overview and rationale for the study, and allowed them to indicate permission for their data to be included in the study. Students signed and dated the form indicating their consent to participate.

Students' grades were only positively affected by participating in this exercise. Scores above zero on the rubric were applied to students' overall grades as an extra-credit exercise. Low-performance scores did not count toward the students' final grade, but high-performance scores could be averaged in to the students' final grade as an extra credit device. No student's grade was penalized as a result of low performance on the assessment.

Instrument

The instrument used for this study was a vocabulary test developed by this researcher. The vocabulary test consisted of sentences using all 20 vocabulary words students learned through the embedded and traditional vocabulary instruction methods. Students were asked to define the vocabulary words based upon their usage in the sentence. Scores were determined according to a rubric. The rubric was designed using a zero to two-point scale. Zero points were awarded for inaccurate response or no attempt, one point for partial accuracy, and two points for complete accuracy. Students were provided the rubric criteria prior to being given the assessment, so they were aware of the scoring procedure. There is no reliability or validity data for this test.

Procedure

As a class, students were instructed on the embedded method for defining vocabulary. The embedded method of instruction consisted of direct instruction regarding different types of

context clues including definition, example, contrast, and logic clues as well as some instruction on Greek and Latin word parts that make up a large portion of academic vocabulary words. Instruction on the embedded vocabulary method took place over two consecutive class periods. The researcher provided direct instruction on the embedded method through a lecture which consisted of PowerPoint slides that defined each context clue type and an overview of common Greek and Latin word parts. Students then participated in various guided practice and independent practice assignments to reinforce this skill. Additionally, students participated in various independent assignments throughout the course of the semester that required them to revisit and apply the embedded method of vocabulary acquisition.

Students were randomly assigned to two groups. All students were given a list of 20 vocabulary words lifted from an assigned course reading titled "Are close friends the enemy? Online social networks, self-esteem, and self-control" (Wilcox and Stephen, 2013). Vocabulary words were selected based upon the researcher's opinion that the students would be unlikely to know the meaning of the words and that the understanding of those words were important for comprehending the whole text.

Participants were randomly assigned to two groups based upon the seating arrangement of the classroom. Classroom tables were arranged in rows of four with an aisle separating them in the middle. Students seated on the left-hand side of the room made up group 1, and students seated on the right-hand side of the room made up group 2. Participants were not assigned to this seating arrangement, but they seated themselves in such a way that half of them sat on the left side of the room and half sat on the right side of the room. Participants in group 1 received a list of 20 vocabulary words divided into two lists of ten words. Words were listed in the order in which they were encountered in the reading; thus, the first ten words encountered were placed on

List A and the second ten words encountered were placed on list B. Vocabulary word difficulty was comparable between both word lists.

Students were required to use the embedded method to define the first ten words on the list (Word List A). The last ten words (Word List B) were provided in the traditional format which consisted of words and their definitions according to the Merriam-Webster online dictionary. Group 2 received the same list of 20 words as Group 1, but Word List A (first ten words) consisted of traditional format words with definitions provided from the Merriam-Webster online dictionary and Word List B (last 10 words) was to be defined using the embedded method . Please see Appendix A for word lists.

Students were given time in class to use the embedded method, and they were asked to review the traditional word list while in class. Students were not asked to memorize the words; however, the students were notified of an upcoming classwork assignment that would assess their knowledge of the definitions of the assigned vocabulary words. Students were also provided a rubric listing criteria for scoring the assignment.

 On a Tuesday, students were given the reading and their respective vocabulary word lists. They were given the entire class period to read the text, and define their assigned vocabulary words. At the end of this class period, students submitted their vocabulary words and definitions to control for student studying. Students were given an assessment containing all 20 vocabulary words on Thursday, the next class period. The vocabulary words were used in sentences and the students were asked to provide definitions based upon the words' usage in the sentences.

The mean scores obtained on the words from the traditional method and the mean scores obtained from the embedded method were compared with non-independent sample t-tests.

CHAPTER IV

RESULTS

The purpose of this study was to determine the effectiveness of direct and embedded-skill methods of vocabulary instruction and their impact on vocabulary knowledge for students enrolled in developmental reading courses at the community college level. Direct and embedded instruction methods were assessed to determine whether or not an embedded method of instruction was more effective than a traditional method. An embedded method consisted of using context clues and knowledge of Greek and Latin word parts to approximate academic vocabulary word meanings through the reading process. The traditional method consisted of providing a list of academic vocabulary words and definitions that students learned in order to pass a vocabulary test.

The results of the data failed to reject the null hypothesis that there would be no significant difference in vocabulary scores among community college developmental reading students for words learned through direct instruction or embedded skill instruction. There was no significant difference in the mean direct instruction score (Mean = 15.25, SD = 1.67) and the mean embedded skill instruction score (Mean = 14.25, SD = 3.45) [t (7) = 1.28, $p \geq .05$].

Table 1: Means, Standard Deviations and t test Results for Vocabulary Scores from Direct Instruction and Embedded Skill Instruction

Instruction Method	Mean		Std. Deviation	t
Direct	15.25		1.67	1.28*
Embedded skill	14.25		3.45	

*non-significant at $p < .05$

17

CHAPTER V

DISCUSSION

The purpose of this study was to examine vocabulary acquisition among community college students enrolled in developmental reading courses. Direct instruction and embedded vocabulary instructional approaches were studied to determine their effectiveness toward increased vocabulary acquisition at the college level. The null hypothesis stated that no significant difference would be exhibited in vocabulary scores among community college developmental reading students learning vocabulary words through direct instruction or embedded skill instruction. The results of this study failed to reject the null hypothesis, and there was no significant difference in the mean scores for the direct instruction and embedded skill instructional approaches.

Implications of Results

One major implication of this study was that each vocabulary instructional method did not appear to be superior to the other suggesting that one method was not necessarily a better alternative. While current and past research typically criticized the direct instructional approach, the results of this study failed to indicate a need to eliminate this type of vocabulary instruction especially if this approach has been found to be successful in some cases. Likewise, the embedded method, although widely supported by current research, did not appear to provide a sounder approach to academic vocabulary learning. Since this approach is widely accepted and supported by research literature, perhaps a combination of the direct instruction and embedded methods would be sensible.

Because a strong academic vocabulary foundation is vital to the development of college-level reading comprehension skills, some community colleges offer specific courses that

18

concentrate solely on vocabulary development. In these courses, students are introduced to the embedded method of academic vocabulary development. Students are exposed to Greek and Latin roots that make up much of the academic vocabulary they will encounter as well as context clues that assist with approximating word meanings. These courses are often optional and are run as independent study opportunities for students who feel the need to develop stronger academic vocabulary skills.

Since developmental reading courses require instructors to cover a wide range of skills in a minimal amount of time, a required vocabulary course might be beneficial for students to take concurrently with their developmental reading courses. In this way, students can apply the vocabulary skills they are learning to authentic college-level texts encountered in their developmental reading courses.

Theoretical Implications

The results of the current study are consistent with the notion that a combination of direct and embedded instruction in academic vocabulary is necessary for students to acquire important skills toward increasing their academic vocabulary acquisition (Willingham, 2009). In theory, students who are given the tools to approximate word meanings encountered in academic texts through direct instruction of specific vocabulary words and embedded skill instruction of context clue usage and word-part application are more likely to maintain the ability to understand the whole text without interrupting the reading process by having to look up difficult words in an authoritative source. Since students did not have high vocabulary scores under either condition in the current study, the results suggest that direct or embedded instruction in isolation is not sufficient for vocabulary development among community college students in developmental reading courses.

19

Connections to Previous Research

Appropriate methods of vocabulary instruction have been widely debated by many researchers and instructors, but the two prevalent instructional methodologies – direct and embedded instruction - are considered to be beneficial when used in conjunction. Because of the rote design of direct vocabulary instruction, actual word learning via this method is considered to be enhanced only by multiple encounters with isolated vocabulary (Willingham, 2009). Embedded instruction provides readers with strategies to interact with difficult vocabulary within a particular text and uses a number of strategies to decipher word meaning, thus increasing word learning experiences.

The results of this study present a contrast with McKnight's study (2010) in which students kept a "context journal". In this journal, community college students recorded unfamiliar words they encountered in a text along with their inferred definitions based upon context, and a rationale for their approximations. McKnight found that this procedure helped students to learn, apply, and use newly acquired vocabulary more effectively. Because students were given ownership of their word learning, they were more likely to use and apply newly learned vocabulary both orally and in written assignments. McKnight's study implies that students are more motivated to take control of their word learning if they are asked to monitor comprehension based upon their background knowledge. In the current study, vocabulary words were assigned to students by the researcher. Because students were not given the opportunity to access their own background knowledge and isolate new vocabulary words for themselves, there was less motivation to actually learn and interact with the vocabulary words assigned because students were not given ownership of the text. This limitation may have contributed to the differing results of the study.

Another contrast presented by the current study is the assertion made by Robson (2009) that specific word-part instruction is an integral component to effective academic vocabulary acquisition. According to Nagy and Scott (2000, as cited in Robson, 2009), knowledge of word parts, including roots and affixes, assists with academic vocabulary acquisition because much of the academic vocabulary encountered in the English language is derived from Greek and Latin roots. Direct instruction in meanings of Greek and Latin roots and affixes was deemed helpful to increasing vocabulary acquisition. In the current study, students were given instruction regarding Greek and Latin word-part meanings, but the results of this study did not provide evidence that this type of instruction was beneficial toward students' acquisition of newly encountered academic vocabulary.

Threats to Validity

One predominant limitation to the validity of this study was the small sample of students in the study. This fact reduced the statistical power of the study. In addition, the students from the class that essentially participated were those with good attendance. As a result, these students are likely not representative of all community college developmental reading students, thus reducing the external validity.

There were multiple threats to internal validity in the study. One limitation was word saliency. The words selected by the researcher were very difficult with low-frequency making it less likely for the students to define using the embedded method.

Another threat to internal validity was that students did not look up the definitions to verify their approximations using the embedded method. Students may have been learning an incorrect meaning of the word.

Another threat to internal validity was word-encounters. Students did not experience multiple word encounters with the words selected. Due to time constraints, students only had one class period to interact with the text from which the words were isolated. As students were assigned to read the whole text and approximate word definitions in one class period with the assessment being given the next class period, there was not enough time to encounter the vocabulary words much more than once .

One final threat to internal validity was that students did not have enough experience using the embedded method of vocabulary. Although they were instructed in both the direct instruction and embedded method, students may have needed more experience using these methods, particularly the embedded method in which they evaluate context clues, and learn and apply Greek and Latin word parts.

Implications for Future Research

Implications for future research would be to address the limitations set forth from this study. More students are needed to participate in the study in order to gain a more accuracy in determining the better method of vocabulary instruction. Future research might use students from multiple developmental reading sections to determine a more effective approach to improving academic vocabulary skills. Future research should also provide repeated exposures to vocabulary words and should span a longer time frame, possibly allowing students the course of a week or even a month to encounter and interact with vocabulary words. Allowing students the opportunity to look up definitions to verify their approximated definitions on a regular basis would also be beneficial. Future research should also more closely examine direct instruction and the embedded method in isolation as well as a combination of both.

Summary

This study provided evidence that neither the embedded method nor the direct instruction vocabulary instructional method was superior to the other when working with community college developmental reading students. In isolation, neither strategy was highly effective. Practical implications include the need for multiple exposures to academic vocabulary words and repeated practice in applying embedded method skills to approximate word meanings. Future research should examine direct instructional and embedded methods in isolation and compare them with results of a combination of the two methods. Hopefully, the identification of an effective academic vocabulary instructional method would boost developmental reading students' reading comprehension skills and promote college and career success.

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Appendix A

Action Research Project: Informed Consent

As a final requirement for Master's degree completion, I am conducting a study that examines vocabulary acquisition at the college level. I am asking for your help to make this possible. Data collected will help me as well as my colleagues provide the best method of vocabulary instruction at the college level.

Data will be collected from students over two class periods. When results are reported, students will NOT be identifiable. If you choose to participate, your scores will be entered in the gradebook as "extra credit" points and will not negatively impact your grade. If you choose not to participate, your grade will NOT be negatively impacted either. If you choose not to participate in the study, you will still participate in the activity, but your data will not be reported. Place a check mark indicating your choice to participate, and verify that you are currently over the age of 18. Then, sign and date below to secure your permission. If you are under 18, your data will not be reported.

_____ I wish to participate in this study conducted by Ms. Lindsay Lassen.

_____ I do not wish to participate in this study.

_____ I am currently 18 years of age or older.

_____ I am under the age of 18.

_____
PRINT NAME

_____
SIGNATURE

_____
DATE

Appendix B

Are Close Friends the Enemy? Online Social Networks, Self-Esteem, and Self-Control

Wilcox, K. & Stephen, A. T. (2012)

Vocabulary List: Group A

Below are 20 words lifted from the text whose meanings are necessary to promote understanding of the reading. The first 10 words are defined for you. You will memorize these definitions. The second 10 words, you will need to define using the context from the reading. Record the definitions for words 11 through 20 on a separate sheet of paper. Page numbers and/or the section of the reading from which the words were lifted are provided. AFTER you have recorded approximated definitions for words 11-20, you may look them up on your electronic device or in a dictionary for verification purposes.

1. fundamental (1) - forming or relating to the most important part of something

2. elusive (1) – hard to understand, define, or remember

3. implications (2) – possible future effects or results

4. ubiquity (2) – presence everywhere or in many places especially simultaneously

5. affiliation (2) – a close connection as a member or branch; association

6. idealized (2) – represented as one believes they should be rather than as they are

7. prestigious (2) – honored by people in the general community

8. boastful (3) - a statement in which you express too much pride in yourself or in something you have, have done, or are connected to in some way

9. inherently (3) – naturally a part of a person or thing

10. norm (3) - something (such as a behavior or way of doing something) that is usual or expected

11. contextual (3)

12. static (3)

13. impulsive (3)

14. virtuous (3)

15. subsequent (General Discussion)

16. mediated (General Discussion)

17. prominent (General Discussion)

18. domains (General Discussion)

19. bolster (General Discussion)

20. manifest (General Discussion)

Appendix C

Are Close Friends the Enemy? Online Social Networks, Self-Esteem, and Self-Control

Wilcox, K. & Stephen, A. T. (2012)

Vocabulary List: Group B

Below are 20 words lifted from the text whose meanings are necessary to promote understanding of the reading. Words 11-20 are defined for you. You will memorize these definitions. You will use the context to help you define words 1-10. Record the definitions for words 1-10 on a separate sheet of paper. Page numbers and/or the section of the reading from which the words were lifted are provided. AFTER you have recorded approximated definitions for words 1-10, you may look them up on your electronic device or in a dictionary for verification purposes.

1. fundamental (1)

2. elusive (1)

3. implications (2)

4. ubiquity (2)

5. affiliation (2)

6. idealized (2)

7. prestigious (2)

8. boastful (3)

9. inherently (3)

10. norm (3)

11. contextual (3) – relating to the situation in which something happens : the group of conditions that exist where and when something happens

12. static (3) – showing little or no change, action, or progress

13. impulsive (3) - done suddenly and without planning : resulting from a sudden impulse

14. virtuous (3) – morally excellent or righteous

15. subsequent (General Discussion) – following in time, order, or place

16. mediated (General Discussion) – had influence in causing something

17. prominent (General Discussion) – important and well-known

18. domains (General Discussion) – areas of knowledge or activity

19. bolster (General Discussion) – to make something stronger or better; boost

20. manifest (General Discussion) – able to be seen; clearly shown or visible

Appendix D

Are Close Friends the Enemy?
Vocabulary Assessment

Below are 20 sentences containing the vocabulary words lifted from the scientific study. Based upon how each word is used contextually, provide a definition for each underlined word.

1. Preheating the oven is a <u>fundamental</u> step in any recipe.
   Fundamental _____

   _____

2. I find math to be an <u>elusive</u> subject, for I cannot understand how to make sense of numbers.

   Elusive _____

   _____

3. If students do not complete their coursework, one major <u>implication</u> is they may not earn their degree on time.
   Implication _____

   _____

4. The <u>ubiquity</u> of smart phones has led to people's ability to stay connected to friends and family across the globe with the touch of a button.

   Ubiquity _____

   _____

5. Physicians' <u>affiliation</u> to the American Medical Association is based upon their good standing with their colleagues and patients.
   Affiliation _____

   _____

6. Jason <u>idealized</u> his wealth by posting a picture of himself beside a showroom Ferrari along with the caption, "My new ride."

   Idealized _____

   _____

7. Michelle was accepted to two <u>prestigious</u> colleges: Harvard and Yale. She is lucky to be going to one of two very honorable schools.

Prestigious _____

_____

8. It sure is unnerving when <u>boastful</u> people brag about all the vacations they take. I am lucky to take one vacation a year.
Boastful _____

_____

9. Some think that serial criminals are <u>inherently</u> bad people while others think criminal behavior is learned from violent television shows or involvement with negative influences.
Inherently _____

_____

10. Nowadays, using a smart phone or tablet to check email has become the <u>norm</u>.
Norm _____

_____

11. How one behaves in different environments is <u>contextual</u>. For example, one might appear quiet and reserved in the workplace, but may be loud and gregarious when out with friends.
Contextual _____

_____

12. Karen's maturity level has been <u>static</u> over the past twenty years. Her behavior is still inappropriate in certain settings.
Static _____

_____

13. Being <u>impulsive</u>, John purchased a plane ticket to Las Vegas to surprise his wife for their anniversary. His wife was not happy that he failed to ask her if she even wanted to go.
Impulsive _____

_____

14. When one wins the lottery, perhaps the most <u>virtuous</u> way to spend it is to invest some of the money or donate some to charity rather than splurge on expensive items one does not need.
Virtuous _____

_____

15. MySpace was a popular social media network in 2004. In <u>subsequent</u> years, Facebook, Twitter, and Instagram have replaced MySpace in popularity.
Subsequent _____

_____

16. The rise in popularity of social media networks and live chats has <u>mediated</u> change in the way people communicate.
Mediated _____

_____

17. One of the most <u>prominent</u> current hip-hop artists is perhaps Jay-Z. His tracks have been some of the most well-known over the last fifteen years.
Prominent _____

_____

18. Having a psychology degree, one might think my <u>domain</u> is social science. Conversely, my domain has become liberal arts.
Domain _____

_____

19. Winning the award for "Most Likely to Succeed" definitely <u>bolstered</u> Carey's confidence.
Bolster _____

_____

20. Sleep deprivation symptoms are often <u>manifested</u> as irritability, lack of appetite, and sleepiness during the day.
Manifest _____

Appendix E

Vocabulary Rubric

Points Possible	Criteria
0	Incorrect Response or not attempted
1	Exhibits partial understanding of the word's definition, but does not supply the correct definition in context
2	Exhibits full understanding of the word's definition in context and supplies the correct definition