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Building Word Knowledge: Opportunities for Direct Vocabulary Instruction in General Education for Students with Reading Difficulties

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Abstract

Direct vocabulary instruction has been recommended as one critical component of reading instruction. Although most students in the elementary grades need to continue building their vocabulary knowledge, students with reading difficulties are at the most risk of falling further behind each year in vocabulary and concept knowledge without effective instruction. This study examined the amount and type of direct vocabulary instruction available for students with reading difficulties during core classroom reading instruction and supplemental reading interventions. Fourteen second-grade classroom and reading intervention teachers serving students with reading difficulties in three elementary schools in three states participated in the study. Results suggested about 8% of core classroom reading instruction was devoted to direct vocabulary instruction with a focus on word definitions and providing examples of word meaning. Minimal amounts of direct vocabulary instruction were noted in supplemental reading interventions. Thus, students with reading difficulties had limited opportunities through core reading instruction and supplemental reading interventions to receive research-based, effective vocabulary instruction.
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Vocabulary knowledge is highly correlated with reading comprehension and future reading achievement (Cunningham & Stanovich, 1997; Senechal, Oulette, & Rodney, 2006). Students with higher vocabulary knowledge in the early grades are more likely to read and comprehend at higher levels in the later grades (Nation & Snowling, 2004). Children enter school with a range of vocabulary knowledge and this range tends to widen through the grade levels, putting students with low vocabulary at significant risk for reading comprehension difficulties later (Biemiller, 2005; Biemiller & Slonim, 2001; Hart & Risley, 1995). Although a child’s vocabulary knowledge begins to develop long before school entry, direct and indirect instruction in vocabulary as part of school reading programs can improve student acquisition of new word meanings as well as improve reading comprehension (Elleman, Lindo, Morphy, & Compton, 2009; National Reading Panel, 2000; Stahl & Fairbanks, 2006). Direct vocabulary instruction provides opportunities for students to learn and develop in-depth knowledge of word meanings specifically targeted by the teacher. Indirect or incidental experiences that serve to increase student vocabularies include opportunities to encounter new words through wide reading, listening to stories, and engaging in oral discussions. In the early grades, direct vocabulary instruction appears to result in higher levels of vocabulary development than indirect or incidental exposure activities alone, particularly for students at-risk for reading difficulties (Justice, Meier, & Walpole, 2005; Penno, Wilkinson, & Moore, 2002). For these reasons, vocabulary has been named as one essential component of reading instruction in the early grades (National Reading Panel, 2000; U.S. Department of Education, 2003). Vocabulary instruction provided in the general education classroom is one avenue for improving student outcomes, but
some students at-risk for reading difficulties may also need supplemental interventions that include vocabulary to improve their word knowledge (Luftus, Coyne, McCoach, Zipoli, & Pullen, 2010; Tuckwiller, Pullen, & Coyne, 2010). The purpose of this study was to examine the direct vocabulary instruction available to students with reading difficulties in general education during second grade, through their core classroom instruction and their supplemental reading interventions.

**Direct Vocabulary Instruction**

Direct vocabulary instruction, wherein the teacher intentionally focuses instruction on developing students’ knowledge of word meanings by targeting specific words, has been recommended as one important means for improving vocabulary knowledge (Biemiller, 2001; Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006; Robbins & Ehri, 1994). In fact, increasing the amount of direct vocabulary instruction results in more word meanings acquired by students (Beck, & McKeown, 2007; Biemiller & Boote, 2006). Direct vocabulary instruction has also been demonstrated to improve comprehension of text (National Reading Panel, 2000; Stahl, 1999). In a meta-analysis of the effects of vocabulary instruction, Stahl and Fairbanks (2006) reported a mean effect size of .97 on measures of reading comprehension with larger effects noted on vocabulary knowledge. In addition, a correlation of .65 was reported between allocated time to vocabulary instruction and student outcomes on reading comprehension measures.

However, a recent meta-analysis noted that while effects of vocabulary instruction on custom comprehension measures may be high, effects on standardized comprehension measures were low (Elleman et al., 2009). It appears that students who make the most gains in vocabulary also demonstrate the highest gains in comprehension (Shany & Biemiller, 2010) and students with reading difficulties may benefit the most in their comprehension after receiving vocabulary
instruction (Elleman et al., 2009). As a result, it is expected that direct vocabulary instruction be included in early reading instruction and in reading interventions for students who demonstrate reading difficulties (Fisher & Blachowicz, 2005).

Even relatively brief vocabulary instruction consisting only of explicit explanations of word meanings has been shown to improve student word knowledge (Biemiller & Boote, 2006; Coyne, McCoach, Loftus, Zipoli, & Kapp, 2009). However, multiple exposures to new words and instruction that includes deeper interactions with words and their meanings has resulted in higher levels of word learning and may be necessary for students to gain a sufficient knowledge of word meaning that can enhance reading comprehension (Beck & McKeown, 2007; Beck, McKeown, & Omanson, 1987; Coyne, McCoach, & Kapp, 2007).

In a series of studies, Beck et al. (1987) examined direct vocabulary instruction and its effect on learning words as well as enhancing reading comprehension of text with the taught words (Beck et al., 1987). Fourth-grade students were provided 30-min, daily sessions in word meanings. Across the studies, experimental variations included the amount of exposure to the words and the type of instruction. The experimental group outperformed the control condition on word learning even when instruction was basic (e.g. definitions and synonyms). In contrast, student comprehension of text containing the taught words was significantly higher for the experimental students only when they participated in the high-exposure, extended/rich instruction condition. The extended/rich condition included instruction and practice with definitions and use of the words in context, word associations, and generating sentence contexts along with a word wizard activity that encouraged students to find the words outside of the vocabulary class and outside of school. Published more than 20 years ago, these studies
challenged the amount of instruction needed to increase student vocabulary and affect reading comprehension as well as the type of instruction required to improve word knowledge.

Baumann (2009) recently examined the question of the intensity of direct vocabulary instruction that may be needed for students to increase both their vocabulary knowledge and reading comprehension. He noted the students in the high-encounter, extended/rich instruction condition in the Beck et al. (1987) studies received an average of 22.5 min of instruction per word. Students receiving instruction with low exposures to new words spent approximately 7.5 min learning each word. This low exposure amount did allow an increase in word learning but did not allow an increase in comprehension of text containing the taught words. Baumann acknowledged that the intensity calculations applied to these vocabulary studies may not provide appropriate guidance for instruction given the complex nature of vocabulary learning and an insufficient theoretical and empirical knowledge base in vocabulary. However, it is clear that shallow, single exposure vocabulary instruction may not be enough for students to enhance reading comprehension.

Reviews of the vocabulary research for students with and without reading difficulties have converged to identify key aspects of direct vocabulary instruction necessary for improving student word learning and comprehension (Baker, Simmons, & Kameenui, 1998; Nagy & Scott, 2000; Stahl & Fairbanks, 2006). These recommendations include:

- Providing definitional and contextual information to teach word meaning
- Connecting new words with known concepts including comparing and contrasting new words with known words
- Providing multiple exposures and practice with the new words
Implementing instructional activities that allow students to use and identify meanings of new words in a variety of ways and in rich contexts

Observations of Direct Vocabulary Instruction

Several early observational studies examined the direct vocabulary instruction provided in the classroom at the intermediate grade levels. In a hallmark study of instruction, Durkin (1978-1979) reported fourth-grade teachers spent .43% of their reading instruction on word meanings with an additional .09% of instructional time on word meaning review, and 2.10% on word meaning application. Blachowicz (1987) also observed fourth grade classroom reading instruction for six teachers who were using guided reading in small groups. In contrast to Durkin’s findings, approximately 14% -19% of the instructional time was spent on vocabulary instruction with the majority of instruction occurring prior to reading. Blachowicz reported that teachers used context in the word meaning instruction about 45% of the vocabulary time, although this consisted largely of using the word in an individual sentence that was not related to the text reading. Twenty-eight percent of the vocabulary time was spent on words in isolation without context (e.g. providing definitions). Continuing the examination of fourth grade, Barr and Sadow (1989) also examined the reading instruction of seven teachers. They reported a range of 0-13 min was spent on word meaning instruction. Five of the seven teachers observed spent less than 5 min on word meanings. These findings were in line with Blachowicz in that the average reading instructional period for these classrooms was 25 min, suggesting about 18% of reading instructional time was spent on word meanings. Barr and Sadow noted that teachers using the basal program containing a greater emphasis on vocabulary spent more time on vocabulary instruction than the teachers using the basal program containing less of a vocabulary emphasis, though the teachers did not necessarily rely on the recommendations in the teacher’s
guide for implementation. An additional study published in 1995 (Watts, 1995) examined six, fifth and sixth grade teachers in one school and also found definitions and use of the word in a sentence were the most common activities. Although many of the characteristics of effective instruction noted in the research literature were not common in the observed lessons, the instruction observed was aligned with the instruction emphasized in the materials used by the teachers.

A more recent observational study of vocabulary instruction also conducted in the middle grades, found that teachers spent about 6% of school time related to vocabulary and that most instruction involved assigning (e.g., write each word three times and then use it in a sentence) rather than teaching word meanings (Scott, Jamieson-Noel, Asselin, 2003). However, 78% of the coded vocabulary instruction provided contextual information and 47% of the instruction assisted students in making semantic connections. Although most of the previous studies suggest vocabulary instruction in the upper elementary, general education curriculum are not implemented with research-based instruction, the Scott et al. (2003) study does suggest there may be some improvements in the implementation of direct vocabulary instruction.

None of the reviewed studies were conducted in the early elementary grades, and all, but one of the studies was published prior to the time that vocabulary was highlighted as one of the five essential reading components critical to beginning reading instruction. Following the National Reading Panel report (2001) and the No Child Left Behind and Reading First legislation (No Child Left Behind, 2002), the need to address the five critical components of phonological awareness, phonics, fluency, vocabulary, and comprehension, during reading instruction and intervention was emphasized, particularly for K-3 reading instruction. In fact, the Reading First impact study noted the legislation led to increased instructional time spent on the five essential
components of reading, and a significant impact on student vocabulary outcomes was reported at second grade (Gamse, Bloom, Kemple, & Jacob, 2008). Since the emphasis on vocabulary as one of five essential components of kindergarten through third grade reading instruction, no study has examined the opportunities for direct vocabulary instruction typically provided in practice by general education classroom or reading intervention teachers in the elementary grades. Understanding the vocabulary instruction available as part of early reading instruction is particularly relevant for students with low vocabulary who grow slower in vocabulary acquisition than their counterparts with high vocabulary knowledge (Coyne et al., 2009; Penno et al., 2002). Although most students in the elementary grades need to continue building their vocabulary knowledge, students with reading difficulties who have low vocabulary are at the most risk of falling further behind in vocabulary and concept knowledge each year without effective instruction. Thus, this study sought to examine the direct vocabulary instruction available during the designated reading instructional block in the early elementary grades as well as the additional direct vocabulary instruction available to students with reading difficulties in supplemental reading interventions in order to fully explain the opportunities for direct vocabulary instruction these students have available in their reading instruction (classroom and intervention).

Study Purpose

Specifically, the purpose of this study was to examine the amount and type of direct vocabulary instruction occurring in core classroom reading instruction and in supplemental reading interventions in second grade, two settings where students with reading difficulties receive their reading instruction. Second grade was examined because it is the first grade level where students are expected to move out of fully decodable text and reading vocabulary often
becomes an integral part of instructional programs along with ongoing oral/listening vocabulary from the earlier grades. The total direct vocabulary instruction available to students with reading difficulties in their reading instruction (classroom and intervention) was of interest as well as differences in the vocabulary instruction available to these students through core classroom instruction and supplemental reading intervention.

**Method**

**Participants and Setting**

In order to meet the purpose of this study and collect data on typical direct vocabulary instruction, three elementary schools in three districts (urban, rural, and near urban) in three states (Midwest, South, and Southeast) using three different core reading programs participated in the study. In addition, we set criteria for school selection to ensure struggling schools were not included in the sample. Schools were selected for the study if they met the following criteria: (a) Title I school (i.e. the school serves a population of students at-risk for reading difficulties), (b) at least 60% of students met minimum passing standards on the state reading accountability measure the previous year, (c) at least 60% of African American, Hispanic, White, and economically disadvantaged students met minimum passing standards on the state reading accountability measure the previous year, and (d) the student population is representative of the district’s ethnic diversity. Commercial program materials utilized for core and/or supplemental instruction at the schools included Harcourt Collections, Harcourt Trophies, The Daily Five, and Reading Mastery.

A total of 46 students were identified by the schools as reading below grade level. The schools indicated they determined grade level performance based on oral reading fluency and/or comprehension screening measures. All of the second grade classroom teachers in each school
had one or more students reading below grade level in their class during the core reading instruction and were, therefore, included in the study. In addition, any reading interventionist serving one of these students was included in the study. Thus, all general education core reading instruction and supplemental interventions available in second grade to students with reading difficulties was examined. Data were collected on a total of 10 second grade classroom teachers and four intervention teachers across the three schools. One of the core classroom teachers also provided supplemental reading intervention to the students in her class with reading difficulties and data were collected on both her classroom instruction and intervention.

Table 1 provides demographic data on the participating teachers and their classes. All of the teachers were female and certified in elementary education. Their teaching experience ranged from 2-32 years ($M = 9.79$). A total of 193 students were receiving instruction in their classes with an average class size of 19.3 students (72% White, 9% Black, 19% Hispanic). Core classroom teachers were serving an average of five students (range = 1-11 students) with reading difficulties during the core classroom reading instruction. Twenty of these students were also receiving supplemental reading intervention with instructional group sizes that ranged from two to six students.

**Procedures**

**Observational Data.** Data were collected on each teacher for three consecutive days in the fall semester of the school year. The three-day span is often used in observational studies to lessen “observer” effects whereby the presence of an observer (or in this case a recorder) changes the behavior of the participant (e.g., Durkin, 1978-1979; Scott et al., 2003). In addition, this procedure allows for continuity of lessons and reduces the likelihood of capturing only an atypical day of instruction. The three-day block of dates was assigned to the teachers randomly.
across three months (Sept. to Nov.) to capture several different months of instruction. In addition, the dates were assigned such that all five days of the week were included with equal frequency by the time the data collection was complete in order to capture equal amounts of data collected across the week because the type of instruction may vary systematically on different days of the week.

At the beginning of the study the teachers were told about the researcher’s interest in the reading instruction of the second-grade teachers. Teachers provided their daily schedule and were interviewed for identification of all the times allocated for core reading instruction (classroom teachers) or second-grade supplemental interventions (intervention teachers). Teachers were provided with an audio recorder the day prior to their assigned recording dates. As with previous studies using this technique (e.g., Hairrell et al., 2011), the teachers wore the recorders so that all teacher and student voices were clearly recorded during direct vocabulary instruction in an authentic lesson without the addition of an observer in the room.

Each teacher recorded their entire reading instruction block or intervention period(s) on the assigned dates. The audio recorders kept track of the date and time of recording and the date and time were checked when the recorder was returned. All but one of the teachers recorded the instruction on the correct dates. The teacher who did not record on the assigned dates was given a new set of randomly selected dates. She then recorded instruction on the new dates and these recordings were coded. Following each recording the teachers completed a rating of the lesson indicating whether the lesson was “typical”. Finally, teachers completed an informational questionnaire regarding their class and demographics.

Each of the audio recordings was coded for the direct vocabulary instruction provided during the reading session (audio recordings were not transcribed). The coding indicators were
adapted from the vocabulary instruction section of the Instructional Content Emphasis-Revised observation measure (Edmonds & Briggs, 2003). The codes identified the type of vocabulary instruction (e.g., definitions, use examples, etc.) and the amount of time spent in each type of instruction. A second coder established reliability with the main coder and also coded 10% of the audio-recordings to ensure continued high reliability of the data (see description of observation instrument). The data from the instructional coding sheet were summarized for each teacher and across classrooms to provide information on the amount and type of direct vocabulary instruction during reading instruction in classrooms and supplemental reading interventions.

Focus Group Data. Following collection of the instructional data, focus groups were conducted to provide a cross-checking of data on direct vocabulary instruction using an additional method of data collection. The focus group questions were designed to elicit information about teachers’ backgrounds and perceptions in implementing reading instruction, the factors that contributed to their decision to use particular practices, and their perceptions about effective materials and practices. The focus groups were audiotaped and transcribed. The transcripts were shared with participants to check for accuracy prior to coding.

Measures and Data Coding

Data were collected in four ways: (a) direct vocabulary instruction observations, (b) teacher ratings of “typical” instruction, (c) demographic questionnaire, and (d) focus group coding. Each of these data collection instruments or coding procedures is described below.

Direct Vocabulary Instruction Observation. The coding indicators for direct vocabulary instruction were adapted from the vocabulary instruction section of the Instructional Content Emphasis-Revised observation measure (ICE-R; Edmonds & Briggs, 2003). Direct
vocabulary instruction was defined as explicit opportunities provided by the teacher to increase student print or oral vocabulary. The vocabulary section was expanded to include each of the types of vocabulary instruction identified in previous literature on vocabulary. These codes were: (1) providing a definition of the word, (2) using a dictionary, (3) providing examples or non-examples of the word meaning without context, (4) providing examples or non-examples of the word meaning in context, (5) discussion to promote deep understanding of words including questions, comments, or arguments around word meaning, (6) use of context clues to determine word meaning, (7) identifying morphemes or use of morphemes in determining word meaning, (8) semantic knowledge including categorizing words by meaning, synonyms, antonyms, and word meaning analogies, and (9) mnemonic strategies for learning word meanings. A code of other was also included to capture any instruction focused on word meaning that may not fall in the designated code areas. Whether the vocabulary instruction was teacher or student initiated (e.g., a student asking “What does gargle mean?”) was also noted. Codes were exhaustive to allow for continuous coding throughout the reading block/session. As per ICE-R procedures, coders noted the start and end time for each code and summarized the activities occurring during the timeframe.

Two coders were trained on the instrument and established inter-rater reliability of at least 95% in each category using recordings of reading instruction from previous studies. Each coder was a faculty researcher in reading instruction with a Ph.D. in education. The training consisted of four parts: (a) instruction on the meaning of each code and indicator with several examples provided, (b) modeling by the trainer of the coding process with a short recording (10-15 minutes) while thinking aloud about the coding categories, (c) practice coding with discussion using recordings from previous studies, and (d) a reliability test with the two coders coding two
recordings independently. During data collection, 10% of the audio-recordings for the study were coded independently by the second coder. Agreement of codes between the two observers ranged from 91-100% reliability.

**Teacher Rating.** Teachers were asked to rate the extent to which the reading lesson was “typical” at the end of each recording. The rating consisted of a scale from 1-3 with a 3 indicating the lesson was a typical day. All teachers rated each of their lessons with a 3.

**Teacher Questionnaire.** All teachers completed an informational questionnaire regarding class size, demographic information about the second-grade students they serve (ethnicity, reading intervention services), and demographic information about themselves (e.g., highest degree, number of years teaching, etc.).

**Teacher Focus Group Coding.** Data from the focus groups were examined qualitatively to identify key categories to guide the summarization of data and provide information on teacher perceptions regarding implementing vocabulary instruction. Transcripts of the focus groups were analyzed in a three-step process, (a) open coding, (b) axial coding, and (c) selective coding (Strauss & Corbin, 1998). In open coding, categories and their properties are generated. Each idea or event is given a code. In this way, open coding examines the details of the data. In contrast, axial coding begins to put together the details into broader concepts. During axial coding categories and subcategories are linked based on similarities and differences among their properties and dimensions. Selective coding is a process of integrating and refining categories. Relationships among categories are explored and used to generate theory. Using this process, the focus group transcript data were read and ideas or events that emerged were coded line by line. These codes were then compared and themes that emerged from each data set were noted.
Several processes were used to ensure reliability and validity of the data. First, prior to coding, a participant check of the transcripts was conducted. Second, the coding process was conducted independently by two researchers to serve as a reliability check. The two researchers met to negotiate the core themes that emerged, integrating and refining categories into a framework of teacher perceptions regarding implementation of vocabulary instruction. Finally, the core themes were compared with the observational data collected.

**Results**

Table 2 summarizes the reading sessions coded. The average length of the core classroom reading block in the participating schools was 1 hr 29 min with a range across observations of 35 min to 2 hr 7 min. The average length of the supplemental reading interventions in the participating schools was 30 min with a minimum session length of 11 min and a maximum session length of 43 min.

**Amount of Vocabulary Instruction**

**Core classroom reading instruction.** Students with reading difficulties who participated in core classroom reading instruction in the current study had the opportunity to receive approximately 7 min of direct vocabulary instruction per session. On average, 8% of the core reading block was spent in direct vocabulary instruction. Direct vocabulary instruction in a single reading session ranged from 0 s to 22 min and 39 s with an average of 1 min 23 s spent on each vocabulary word taught. All core classroom teachers had at least one reading instruction session in the three consecutive day block with 5 min or more of direct vocabulary instruction. Figure 1 displays the average minutes of direct vocabulary instruction for each of the core classroom teachers individually. The variation in total time occurred at the teacher level and not at the school/program level. In other words, a particular school/program did not consistently
lead to the highest or lowest average time spent in direct vocabulary instruction, and within each school/program there was variation in the amount of time teachers allocated to direct vocabulary instruction. Three teachers (30%) incorporated 5 min or more of direct vocabulary instruction on each of the observed days. Five (50%) of the teachers in the study had at least one session with 10 min or more of direct vocabulary instruction. Only one teacher had 10 min or more of direct vocabulary instruction for more than one of the recorded sessions.

**Supplemental reading interventions.** In supplemental reading intervention sessions a mean of 25 s (1.4% of a session) of direct vocabulary instruction occurred. The supplemental reading intervention sessions ranged from 0 s of direct vocabulary instruction to 1 min and 53 s of direct vocabulary instruction. One intervention teacher did not include direct vocabulary instruction for any of the recorded sessions. Figure 2 presents the total amount of direct vocabulary instruction available to students with reading difficulties on average through core instruction and supplemental reading intervention.

**Types of Direct Vocabulary Instruction**

**Core classroom reading instruction.** Table 3 presents the type of direct vocabulary instruction coded during the reading sessions. Instruction and practice with student friendly word definitions (e.g., “Impossible means can’t be done.”; “What does dwelling mean?”) and examples of word meaning (“A whale walking into school is an example of something that is impossible.”; “Name one kind of dwelling.”; pictures or demonstrations of words were also used as examples) were the most common types of direct vocabulary instruction in the core reading block. Time spent providing or practicing word definitions in the core classroom instruction averaged 2 min and 32 s or 35.34% of the direct vocabulary instruction. Similarly, work in examples or non-examples of word meaning averaged 2 min 59 s or 41.83% of the direct
vocabulary instruction in the core reading block. Approximately 76% of the examples were provided contextually (e.g., use of word in the context of a sentence or scenario).

Small amounts of time (less than 1 min per session) were spent on morphology, context clues, semantic knowledge, and discussion in core classroom instruction. As can be seen in Figure 1, only one core classroom teacher incorporated morphology in the instruction, while two classroom teachers incorporated context clues. Although the average time was minimal for most core classroom teachers, all but two teachers used semantic knowledge in their direct vocabulary instruction (e.g., “What is another word that means the same as grin?”) and six classroom teachers engaged students in a short discussion of word meaning (“Do you think there is anything impossible for you to do? Why is it impossible?). Mnemonics and dictionary use were not coded for any of the instruction for any teacher.

**Supplemental reading interventions.** Definitions and examples of words meanings were also the most common types of direct vocabulary instruction in the supplemental reading interventions. Work with definitions averaged 13 s or 52.12% of the direct vocabulary time. In contrast to the core classroom reading instruction, an average of 10 s of time was spent on examples in supplemental reading intervention (40.44% of direct vocabulary instruction) and 73% of the examples were provided without context (e.g., “A cabin is an example of a dwelling.”).

Thus, overall, 77.17% of the direct vocabulary instruction in second grade core classroom instruction and 92.59% of the direct vocabulary instruction in second grade supplemental reading interventions was spent on definitions and examples of word meaning.

**Teacher Perceptions of Vocabulary Instruction**
We sought to examine how the second grade core classroom and supplemental intervention teachers perceived instruction in vocabulary for students with reading difficulties. The teachers’ discussions revolved around four themes: (a) vocabulary as an essential component of the instructional program, (b) vocabulary instruction that works, (c) alignment of vocabulary instruction with the core reading program, and (d) assessment.

**Vocabulary as an essential component of instruction.** When the second-grade core classroom teachers discussed their reading instruction, all of the teachers mentioned vocabulary as a component of instruction, “We do fluency, word work, vocabulary, and comprehension”. When questioned about the vocabulary instruction they employed, a few teachers described word recognition activities and using books with words grouped by phonics elements rather than discussing word meaning activities, “To improve their vocabulary, I teach them to figure out the words they don’t know by spelling them or tapping out the sounds”. The teachers who did discuss word meaning activities mentioned the importance of teaching the meanings of words from a weekly list of words identified by the core reading program and/or introducing word meanings prior to reading a book.

In contrast, when the supplemental reading intervention teachers were asked about their reading instruction none of them mentioned vocabulary as a component, “We focus on sight word development, reading decoding, long vowels, short vowels, and overall reading fluency”. Across all teachers and schools the description of supplemental reading interventions focused on word recognition and building fluency with basic comprehension checks after reading. When asked specifically about vocabulary and word meaning instruction, the intervention teachers indicated they do not focus on vocabulary. However, they did note that the students they served have low vocabulary knowledge. As one teacher noted, “They really struggle with language and
understanding the meanings of words beyond the basics”. A few teachers mentioned providing
the meaning of a word when an intervention student asks about a word or when the “challenge”
words in phonics require explanation of meaning. This description of supplemental reading
intervention is consistent with the limited direct vocabulary instruction that was observed in
supplemental reading intervention sessions, whereby vocabulary was generally taught when
students asked about a word.

**Vocabulary instruction that works.** Definitions and describing word meanings through
examples were the most common techniques mentioned for teaching vocabulary by core
classroom teachers at two of the schools. “When I teach a story there is always vocabulary
beforehand. I go into the definition of the word, what it might mean.” One teacher mentioned
having students use context clues, “One of our strategies is to use context to confirm meaning. I
just have them look at the text and say what they think it means.” Core classroom teachers from
the third school discussed their vocabulary instruction more in depth, mentioning several types of
instruction they try to incorporate, their goals at second grade for vocabulary, and how these
goals match with the way students are assessed in vocabulary. The second-grade classroom
teachers at this school had developed their own set of vocabulary activities to expand the
instruction of the list of words provided in their core reading program.

The students are expected to reach a pretty high level of vocabulary by the end of third
grade. We try to acclimate them to this type of language so it’s not such a shock in third
grade. We made some activities that incorporate our vocabulary words with sentences
instead of just the picture identification part. The activities are interactive and have a
bunch of different elements the kids can engage in to identify examples….They love it so
much and they ask to play again. I’ve been preparing lessons for next week and one of
the words is ‘thrilled’ so we’ll have a discussion about whether your sister would be thrilled if you woke her up from her nap, and they have to explain why.

These core classroom teachers’ discussion of vocabulary as an essential part of their instruction matched their observational data in that each of these teachers had an average of 5 min or more of direct vocabulary instruction with two of the teachers incorporating 5 min or more every day of the observations. Two of the teachers at this school also incorporated substantial amounts of direct vocabulary instruction that went beyond definitions and examples.

The supplemental reading intervention teachers did not discuss effective ways to teach vocabulary, probably due to not identifying vocabulary as an essential component of their instruction. The only mention of instructional strategies related to vocabulary was when the intervention teachers were specifically asked about vocabulary instruction, and two of the teachers noted occasionally explaining some words that students were asked to read during decoding instruction, “There are some multi-syllabic words. They do ask (what the word means).”

Alignment of vocabulary instruction with the core reading program. Each of the schools participating in this study used a different core reading program. The classroom teachers perceived that they were providing the reading instruction suggested with their core reading program, but also making their own decisions and extending the program if they felt their students required more or different instruction. The classroom teachers from one of the participating schools noted they were unhappy with the vocabulary instruction in their core reading program, and thus, had taken time in the past year to develop daily vocabulary activities to teach the vocabulary words from their core reading program. These teachers used the word selections from the core reading program but implemented their own activities. “The book did
come with the words and the kid-friendly definitions. But, I wish there was more practice available. Now, we use the activities we created from websites and Isabel Beck’s book.”

Teachers from another school indicated they used the vocabulary instruction from their core reading program, “Our basal focuses on five or six vocabulary words in the story for the week. We use those activities and try to get the kids to use those words.” They noted instruction was only provided in the core reading program three days a week. The observation data from these teachers indicated at least some direct vocabulary instruction occurring each day suggesting the teachers were providing additional instruction or review beyond the core reading program. However, there was at least one observation for each of these teachers with substantially more direct vocabulary instruction provided relative to the other days which would match their description of the core reading program providing specific vocabulary activities on selected days only. Additionally, one of the teachers at this school indicated there wasn’t time to do all the activities, “I teach those words (from the basal), but it’s not always possible to do all of the activities they suggest. I pick and choose.”. Her description of her use of the core reading program matched the amount of time and the variety of activities seen in her instruction. She had an average of 5 min less time dedicated to direct vocabulary instruction than the other teachers at this school and fewer types of direct vocabulary instruction than the other teachers.

The classroom teachers from the third school described the vocabulary instruction provided in their core reading program as less structured than the others, with a framework of general principles for expanding vocabulary rather than specific activities for introducing and reviewing words:
The vocabulary is provided at the beginning of each story within the book. I normally don’t go through every word and explain what they mean. I ask them (students) what words they don’t know, what they don’t understand. Then we just talk about those. These teachers also incorporated read alouds more frequently than the other schools. The teachers indicated they identified vocabulary to highlight in the read alouds when necessary, “I am reading books with them and then I am kind of stopping and asking them to figure out a word if I think they do not know it”.

The supplemental intervention teachers did not feel the intervention programs they were implementing emphasized vocabulary. Only one school used a commercial reading intervention program. The program did include a brief vocabulary component in many of the lessons, focusing on definitions and examples, but the teachers indicated they did not have time to implement that part of the program. The other supplemental intervention teachers developed their own lessons around what they described as guided reading with leveled books that they had identified or that came as a part of intervention materials with the core reading program. These teachers indicated they emphasized phonics and word recognition and fluency, “I do not think that our intervention material really lends itself to teaching a ton of vocabulary”.

Assessment of vocabulary. In terms of assessment and planning instruction, both core and supplemental intervention teachers indicated students were monitored on fluency and comprehension throughout the year, but most indicated students were not monitored on vocabulary development. Only teachers from one school mentioned student vocabulary assessment and making instructional decisions based on this assessment. Specifically, the state outcome measure for third grade, and a second, standardized outcome measure that is administered at the end of the year in second grade by that school were noted as influential to
their vocabulary instruction. The teachers from this school are the same teachers who had developed their own vocabulary instruction activities to implement daily.

Our instruction is to try and get the children used to heightened language for the standardized testing. We start early. The robust vocabulary is actually started in kindergarten. And, generally, we teach examples like on the test. It asks for an example of the words. They don’t so much need to know the exact definition, but they need to be able to pair it with something familiar. And, the synonyms are on there, so we tried to think of synonyms to go with the robust vocabulary instruction.

Teachers from the other two schools did not describe vocabulary instruction as being driven by formal or informal assessment or student needs.

**Discussion**

The purpose of this study was to examine the amount and type of direct vocabulary instruction available to second grade students with reading difficulties through their core classroom reading instruction and supplemental reading interventions. Findings revealed about 8% of core classroom time and about 1% of time in supplemental reading interventions was spent on direct vocabulary instruction. Therefore, a student with reading difficulties who is receiving reading instruction in the classroom and in a supplemental reading intervention from these teachers would receive an average of 7 min of vocabulary work during the core classroom reading instruction and an additional average of 25 s of vocabulary instruction in the supplemental reading intervention. These findings suggest that a student with reading difficulties will essentially receive no additional direct vocabulary instruction by attending supplemental reading intervention. Thus, in this study the core classroom teacher was largely responsible for the direct vocabulary instruction the students with reading difficulties received.
Multiple studies have noted students with higher levels of vocabulary knowledge acquire more vocabulary than students with lower levels of vocabulary knowledge when they receive the same vocabulary instruction, even when the instruction is extensive (Coyne et al., 2007; Coyne et al., 2009; Penno et al., 2002). The current findings suggest there is little opportunity available for the students who may have lower levels of vocabulary to receive additional instruction to close the gap in vocabulary knowledge.

The amount of direct vocabulary instruction observed was consistent with the teachers’ perceptions of vocabulary instruction. Core classroom teachers considered vocabulary one of the components of reading instruction they needed to teach while the supplemental intervention teachers seemed to focus on the basic skills of word recognition and building fluency despite acknowledging the low vocabulary knowledge of their students. Emphasizing these basic word recognition skills without intervention in language and vocabulary may be insufficient for improving student reading achievement (Storch & Whitehurst, 2002). Moreover, students identified as at-risk for reading disability who have low vocabulary knowledge could benefit from intervention aimed at vocabulary instruction (Pullen, Tuckwiller, Konold, Maynard, & Coyne, 2010).

Fisher and Blachowicz (2005) recommended vocabulary be addressed as a distinct area in remedial reading interventions. Additionally, purposeful selection of words, active exploration and investigation of words along with an emphasis on the connectedness of words, categories, and topics is recommended for remedial instruction. The observations conducted here as well as the intervention teachers’ perceptions of vocabulary instruction suggest that vocabulary is not yet considered a distinct area of instruction for supplemental reading interventions. When vocabulary instruction did occur during an intervention session it appeared somewhat incidental.
in that a student asked about a word meaning or the teacher would ask if students knew the meaning of a word during text reading or word recognition instruction. There did not appear to be any systematic instruction with purposeful selection of words for developing vocabulary knowledge in the supplemental reading interventions. The core classroom instruction did indicate distinct vocabulary instruction and some of that instruction included words that teachers had selected or planned specifically for improving word meaning knowledge.

Although this study indicates little direct vocabulary instruction occurring in general education supplemental reading interventions at the second grade level, previous research has suggested that special education teachers providing instruction in resource rooms do consider vocabulary an important part of remedial reading instruction (Swanson & Vaughn, 2010). In fact, Swanson and Vaughn reported approximately 10% of instructional time was devoted to vocabulary in resource rooms for second through fifth grade. It may be that special education teachers see themselves as the students’ primary reading instructor, and, thus, take on a similar role as the core classroom teachers in considering all components of reading in their instruction. However, the study did not disaggregate data by grade level so it is unknown whether 10% of time is representative of the time that special education teachers spend on vocabulary with students in the early grades.

The most common types of direct vocabulary instruction utilized by teachers were providing definitions and examples of new words. Previous research has indicated that these basic levels of teaching word meanings do allow students to learn the word meanings, but may not enhance comprehension of texts with the words (Stahl & Fairbanks, 1986; Stahl & Fairbanks, 2006). However, core classroom teachers did consistently provide definitional and contextual information for students in their instruction, one key recommendation for effective vocabulary
Instruction (Nelson & Stage, 2007; Stahl & Fairbanks, 2006). Instructional activities generally lacked the depth or higher levels of processing recommended in previous research such as making connections between words, determining how word meanings fit with known categories or topics, or discussing word meanings within multiple, rich contexts; instruction that may be needed in order for students to learn and retain words well enough to also improve comprehension (Stahl & Fairbanks, 2006). Only a few core classroom teachers in this study included these types of deep processing activities such as semantic knowledge or discussions revolving around word meaning and use demonstrating a gap between research and practice.

Although all core classroom teachers incorporated direct vocabulary instruction during the observations, a few teachers did not describe this instruction when asked about their vocabulary instruction. Instead, these teachers defined vocabulary instruction as the phonics and word recognition activities they incorporated in their instruction. It may be that these teachers lacked depth in their direct vocabulary instruction because they perceived other activities, such as phonics instruction, as effective vocabulary instruction. In some commercial programs, word recognition activities are labeled “vocabulary” which may add to the confusion. However, most of the teachers defined vocabulary instruction accurately and described the types of activities that were coded in the observations. The findings of this study suggest that basic levels of teaching new word meanings appear to dominate current vocabulary instruction, but similar to Scott et al. (2003) higher levels of contextual instruction were noted in this study than in the previous research done in the 1980s.

All of the classroom teachers reported using their core reading program to plan for vocabulary instruction, although one school developed their own vocabulary program to supplement the basal. However, the teachers discussed making individual adaptations to the core
reading program activities in their delivery of the instruction based on student need or time constraints. This description of core reading program use correlated with the observational, classroom data showing variation in the amount and type of instruction by teacher within each of the core reading programs. Thus, it did not appear the core reading program fully drove the vocabulary instruction observed in the classroom. However, most teachers did indicate selecting words for vocabulary instruction based on the core reading program recommendations.

**Summary**

The major findings of this observational study of the direct vocabulary instruction in second grade core classroom instruction and supplemental interventions are listed below.

1. Very little direct vocabulary instruction was found in supplemental reading interventions for students with reading difficulties. All direct vocabulary instruction that was coded in supplemental reading interventions was incidental and consisted of mere seconds of instruction. Nearly all the direct vocabulary instruction coded in this study occurred during the core classroom reading instruction.

2. Supplemental intervention teachers did not note vocabulary instruction as a distinct area of their intervention sessions. The intervention teachers discussed phonics, word recognition, and building fluency as their primary goals for instruction. The core classroom teachers did perceive vocabulary instruction as one element of their required reading instruction.

3. The preponderance of direct vocabulary instruction observed consisted of basic levels of vocabulary instruction, definitions and examples of word meaning. Very little instruction that required higher levels of processing word meanings was noted. However, most of
the core classroom teachers included both definitional and contextual information when teaching word meaning.

Each of these findings suggests that the research on direct vocabulary instruction, specifically the benefits for providing direct vocabulary instruction that includes deep levels of processing word meanings and addressing vocabulary instruction in supplemental reading interventions, is not currently being carried out consistently in practice.

**Limitations and Future Research**

The findings from this study represent only a small group of teachers at one grade level. Therefore, it is possible that these findings may not generalize to other second grade teachers. However, the study was purposefully designed to include teachers in three different states and districts using three different core reading programs to increase the representativeness of the sample.

This study sought to identify the direct vocabulary instruction provided during the core reading and supplemental reading intervention blocks. Data were not collected on direct vocabulary instruction provided as part of other content areas during the school day. Thus, different amounts or other types of direct vocabulary instruction may occur outside of reading instruction. In addition, three days of instruction were collected for each teacher and all data were collected in the fall of the school year. It is possible that data collection in the spring of the school year may produce a different picture of the direct vocabulary instruction in either the classroom or the supplemental interventions. During the focus groups none of the teachers indicated differences in their vocabulary instruction that were dictated by the time of the year. Only future research can confirm whether there are differences in the fall and spring semesters related to the amounts and types of direct vocabulary instruction implemented.
This study provides information on the current implementation of direct vocabulary instruction in classrooms and supplemental reading interventions at the second grade level. The findings from this study would suggest there is work to be done in the implementation of research-based vocabulary instruction, particularly in supplemental reading interventions for students with reading difficulties. Despite the research on vocabulary intervention for students with reading difficulties, the supplemental reading interventions for students with reading difficulties rarely included a vocabulary component. Further examination of influences on teacher practice in vocabulary instruction, specifically the links between vocabulary research, current practice, and the materials used and/or available for supplemental intervention teachers in the area of vocabulary could provide valuable information regarding the implementation of vocabulary instruction. In addition, further research is needed to examine whether providing additional time in vocabulary instruction (and under what conditions) in either the classroom or supplemental intervention can increase student outcomes in vocabulary and/or comprehension particularly for students with reading difficulties.
References


classroom: Systems for observation of teaching and learning (pp. 31-52). Baltimore, MD: Brookes.


Table 1

Demographic Information for Teacher Participants and Their Students

<table>
<thead>
<tr>
<th>Teacher</th>
<th>Highest Degree</th>
<th>Years of Experience</th>
<th>Type of Class</th>
<th>Class/Group Size</th>
<th>Number of Caucasian Students</th>
<th>Number of African American Students</th>
<th>Number of Hispanic Students</th>
<th>Number of Asian Students</th>
<th>Number of Students Identified as Below Grade Level in Reading</th>
</tr>
</thead>
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<tr>
<td>1</td>
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<td>9</td>
<td>C</td>
<td>21</td>
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<td>7</td>
</tr>
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<td>C</td>
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<td>1</td>
<td>18</td>
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<td>6</td>
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<td>C</td>
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<td>0</td>
<td>11</td>
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<td>C</td>
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<td>0</td>
<td>4</td>
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<td>5</td>
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<td>1</td>
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<td>I</td>
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<td>I</td>
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<td>0</td>
<td>2</td>
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<td>na</td>
</tr>
</tbody>
</table>

Note. C = classroom; I = intervention; na = not applicable.
Table 2

*Summary of Instruction*

<table>
<thead>
<tr>
<th>Teacher Type</th>
<th>Number of Teachers</th>
<th>Total Minutes of Reading Instruction Coded</th>
<th>Total Minutes of Direct Vocabulary Instruction Coded</th>
<th>Percent of Total Reading Instruction Time Spent on Direct Vocabulary Instruction</th>
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</thead>
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<tr>
<td>Core</td>
<td>10</td>
<td>2,657.17</td>
<td>214.48</td>
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<td>Intervention</td>
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<td>478.62</td>
<td>6.75</td>
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<tr>
<td>Total</td>
<td>15</td>
<td>3,135.79</td>
<td>221.23</td>
<td>7.06%</td>
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</table>
### Table 3

**Summary of Vocabulary Instruction Across Teachers**

<table>
<thead>
<tr>
<th>Vocabulary Activity</th>
<th>Total Minutes in Core</th>
<th># of Core Teachers Implementing</th>
<th>% of Core Vocabulary Time</th>
<th>Total Minutes in Intervention</th>
<th># of Intervention Teachers Implementing</th>
<th>% of Intervention Vocabulary Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Definitions</td>
<td>75.80</td>
<td>10</td>
<td>35.34%</td>
<td>3.52</td>
<td>4</td>
<td>52.15%</td>
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<tr>
<td>Examples/Nonexamples</td>
<td>89.72</td>
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<td>41.83%</td>
<td>2.73</td>
<td>3</td>
<td>40.44%</td>
</tr>
<tr>
<td>Examples/Nonexamples without Context</td>
<td>21.34</td>
<td>7</td>
<td>9.95%</td>
<td>2.00</td>
<td>3</td>
<td>29.63%</td>
</tr>
<tr>
<td>Examples/Nonexamples in Context</td>
<td>68.38</td>
<td>9</td>
<td>31.88%</td>
<td>.73</td>
<td>1</td>
<td>10.81%</td>
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<tr>
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<tr>
<td>Morphology</td>
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<td>0%</td>
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<tr>
<td>Context Clues</td>
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<tr>
<td>Semantic Knowledge</td>
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<td>8</td>
<td>7.60%</td>
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<tr>
<td>Mnemonics</td>
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<tr>
<td>Discussion</td>
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<td>1</td>
<td>6.22%</td>
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<td>Other</td>
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<td>.08%</td>
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</tbody>
</table>
Figure 1. Average Amount of Direct Vocabulary Instruction for Each Core Classroom Teacher. Each bar in the category represents the data for one teacher in the study.
Figure 2. Average Amount of Direct Vocabulary Instruction in Classroom and Intervention Classrooms.