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The impact of a systematic and explicit vocabulary intervention in Spanish with Spanish-speaking English learners in first grade

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Abstract This study examined the impact of a 15-min daily explicit vocabulary intervention in Spanish on expressive and receptive vocabulary knowledge and oral reading fluency in Spanish, and on language proficiency in English. Fifty Spanish-speaking English learners who received 90 min of Spanish reading instruction in an early transition model were randomly assigned to a treatment group (Vocabulary Enhanced Systematic and Explicit Teaching Routines [VE-SETR]) or a comparison group that received general vocabulary instruction using the standard reading curriculum with general strategies designed to increase the explicitness of instruction (General Systematic and Explicit Teaching Routines). Results indicated a statistically significant difference in depth of student Spanish vocabulary knowledge favoring the VE-SETR group. Differences on language proficiency in English, general vocabulary knowledge in Spanish, and oral reading fluency in Spanish were not statistically significant. Implications for future research are discussed.

Keywords Vocabulary · Spanish · English learners · Explicit intervention

Introduction

The demographics of schools in the United States (US) have changed dramatically over the last 20 years, and, not surprisingly, so have the educational needs of an

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increasingly diverse student population. According to the National Center for Education Statistics (NCES), the student population of English learners (ELs) increased from 2 million in 1990 to more than 11 million in 2010 (Aud, Hussar, Planty, & Snyder, 2010). For example, in the state of Oregon alone, enrollment of English learners increased 123 % from 1999 to 2009 (Oregon Department of Education, 2009). To address the needs of culturally and linguistically diverse students, districts and schools are challenged to reevaluate their instructional practices for ELs across all subjects, especially reading instruction. For example, given that approximately 80 % of ELs are Spanish-speakers (Capps, Fix, Murray, Ost, & Passel, 2005), it is somewhat surprising that an important but still unanswered question is whether Spanish-speaking ELs should receive Spanish reading instruction before beginning their English reading instruction. Although the evidence suggests that some degree of native language instruction is beneficial compared to an English-only program, it is not entirely clear, however, how that instruction should occur (August & Shanahan, 2006).

A major concern in the education of ELs is their low academic performance in English across the grades. According to the 2003 National Assessment of Educational Progress (NAEP; National Center for Education Sciences, 2003) report, ELs scored almost one standard deviation below non-ELs in reading in fourth grade (Cohen's $d = 0.95$), and more than one standard deviation in eighth grade (Cohen's $d = 1.23$). This gap in NAEP scores has not changed over the years, and actually appears to be increasing. For example, in the 2011 NAEP assessment, ELs scored more than one standard deviation below non-ELs in fourth grade ($d = 1.03$), and in eighth grade ($d = 1.26$; National Center for Education Statistics, 2011).

For ELs, a plausible cause of their low academic achievement in English is limited vocabulary knowledge, both in English and their native language (Carlisle, Beeman, Davis, & Spharim, 1999). For example, it is estimated that by high school graduation students should know the meanings of approximately 75,000 words in English (Snow & Kim, 2007). This degree of knowledge requires learning an average of approximately 10 words a day from ages 2 to 17. For ELs who begin learning English when they enter school, their pace of vocabulary growth would have to be at a greatly accelerated rate if they are going to reach this expectation by the end of high school (Wagner, Muse, & Tannenbaum, 2007).

Given that ELs typically enter kindergarten with substantially less English vocabulary knowledge than their native English-speaking peers, they must, on average, make greater growth than their peers over time. Therefore, it is disconcerting that the vocabulary gap that exists between ELs and their native English-speaking peers when they enter kindergarten does not diminish during the school years (Biemiller, 2004; Biemiller & Slonim, 2001). In other words, there is no evidence that ELs establish vocabulary-learning rates that surpass the rates of their native English-speaking peers across the years.

Poverty might affect the low vocabulary knowledge of ELs at kindergarten entry, and once ELs are in school, insufficient vocabulary instruction contributes to low EL vocabulary growth during the academic school years. For example, nearly three times as many Latino children (31 %) live in poverty compared to white children

(11 %; Wight, Chau, & Aratani, 2010). The association between poverty and achievement is complex and multidimensional but the correlational data demonstrate a robust association (Hart & Risley, 1995; Kieffer, 2010). For instance, the latest NAEP (NCES, 2011) data report that for reading results in fourth grade, students who qualify for free or reduced lunch (an index of poverty), scored 28 points lower in reading than students who did not qualify for free or reduced lunch. Moreover, in an analysis of extant data on ELs reading performance, Kieffer (2010) found that ELs from lower socioeconomic (SES) backgrounds had substantially lower reading scores in grades 3, 5, and 8 than ELs from higher SES backgrounds.

Another possible cause for the lack of growth on vocabulary knowledge of ELs in school is the limited amount of time devoted to systematic and explicit vocabulary instruction in schools. This lack of instruction is particularly important because it is more amenable to change than other factors. For example, research evidence provides clear guidance on how to teach vocabulary effectively, and time spent on direct, systematic, and explicit vocabulary instruction can be increased (Apthorp et al., 2012; Biemiller, 2004; Coyne et al., 2010; Kame'enui & Baumann, 2012; Shanahan & Beck, 2006).

This type of vocabulary instruction is in contrast to embedded vocabulary instruction using practices associated with reading aloud to students. The evidence suggests that students do learn new word meanings during read aloud instruction when they are provided with a student friendly definition or simpler synonyms of target words within a sentence (Silverman, 2007). However, to increase depth of vocabulary knowledge, additional activities that provide students with more explicit and systematic opportunities to use the vocabulary words in a variety of contexts are necessary (Coyne et al., 2010). In the next section, we review research on explicit and direct vocabulary instruction focusing specifically on the depth and breath of vocabulary knowledge for ELs.

Direct vocabulary instruction for ELs

Systematic and explicit vocabulary instruction typically include the following components: (a) teacher demonstrations and modeling of vocabulary skills, (b) clear explanations and examples of the words being taught, (c) extensive teacher feedback and support during instruction, and (d) multiple opportunities for students to practice and apply newly learned skills (Carnine, Silbert, Kame'enui, Tarver, & Jungjohann, 2006; National Center for Reading First Technical Assistance, 2005). These principles have also been addressed when the recipients of vocabulary instruction are ELs specifically (Gersten et al., 2007; Silverman, 2007; Simmons, Kame'enui, Stoolmiller, Coyne, & Harn, 2003; Torgesen et al., 1999). However, research on vocabulary development for ELs is meager compared to research on native English speakers, and generally weaker in design and methodology. For example, the National Literacy Panel (August & Shanahan, 2006) identified only three studies that evaluated the effectiveness of explicit vocabulary instruction for ELs (Carlo et al., 2004; Perez, 1981; Vaughn-Shavuo, 1990). All three of these studies demonstrated that explicit vocabulary instruction increased student vocabulary knowledge, and also had a positive impact on their reading comprehension.

We describe more closely the Carlo et al. study and a more recent kindergarten study by Silverman, because both studies were conducted in the last decade, and both were implemented for an extended period of time (i.e., more than 4 weeks).

The Carlo et al. (2004) study evaluated the effectiveness of a daily vocabulary teaching intervention with Spanish speaking fourth and fifth grade students. Participants were 142 ELs and 112 English-only students (EOs) who were randomly assigned to either a treatment or a comparison group. The treatment group received a daily 30–45 min vocabulary intervention for 15 weeks. Classroom teachers employed explicit instructional routines using a variety of strategies to teach 10–12 target English words per week for a total of 180 new vocabulary words. In the comparison classrooms, students received instruction normally included in the school curriculum. Findings indicated that a focus on academic words, awareness of multiple word meanings, and morphological analysis not only improved the performance of ELs but it also lead to improvements for the EO students. Gains on the Peabody Picture Vocabulary Test (PPVT; Dunn & Dunn, 1981) were not statistically significant but students in the experimental group did demonstrate larger gains on a researcher-developed test of polysemy, an adaptation of Carlisle's (1988) English morphology assessment called the Extract the Base task, and a Word Association Task (Schoonen & Verhallen, 1998).

Silverman (2007) examined the effectiveness of a vocabulary intervention that included storybook read-alouds. The intervention was implemented over 14 weeks, 3 days per week for 30–45 min each day in mainstream classrooms with ELs and EOs. ELs were in either a two-way bilingual classroom, or a structured immersion classroom in which instruction was only in English. A total of 72 students participated in the study, 44 EOs and 28 ELs. Findings indicated that both EOs and ELs showed significant improvement in knowledge of target words from pretest to posttest. However, EOs learned an average of 14 target words, whereas ELs learned an average of 20 words. Linear growth modeling demonstrated that ELs had faster rates of growth than EOs as measured by the Test of Language Development (TOLD; Newcomer & Hammill, 1997), suggesting that ELs, when taught explicitly with appropriate strategies, can learn vocabulary words as fast or faster than their EO peers. Both of these studies focused specifically on improving EL's vocabulary knowledge in English. Next we consider the theoretical and empirical evidence of the relation between Spanish vocabulary knowledge and English language proficiency.

Relation between Spanish vocabulary knowledge and English language proficiency

The vocabulary studies previously mentioned were conducted all in English or in English and Spanish. No studies that we are aware of, have examined the relation of vocabulary instruction in Spanish only to outcomes measuring Spanish vocabulary knowledge or English language proficiency. A reason to examine the effect of language of vocabulary instruction derives from Cummins' (1979) language interdependence hypothesis, which suggests that common mental processes underlie both first-and second-language learning. These processes overlap across languages and are evidenced by the significant correlations between skills in the first language

and skills in the second language. Although Cummins did not specifically address reading skills that appear to use a similar underlying metalinguistic process (e.g., understanding words from text), correlational studies (Carlisle et al., 1999; Ordóñez, Carlo, Snow, & McLaughlin, 2002; Proctor, August, Carlo, & Snow, 2006) suggest that a metalinguistic process is occurring, particularly when languages have similar orthographic systems like English and Spanish (i.e., both languages are based on the alphabetic writing system).

For example, Carlisle et al. (1999) examined whether vocabulary in Spanish and English and phonological awareness in English had an effect on vocabulary and reading comprehension in English. Participants were 67 children in first, second, and third grades in an urban city. Results indicated that 19 % of the unique variance explained in the quality of English formal definitions was accounted for by the quality of Spanish formal definition. Similarly, 18 % of the unique variance explained in the quality of Spanish formal definitions was accounted for by the quality of English formal definitions. Moreover, a significant portion of the variance in reading comprehension as measured by the California Reading Comprehension Subtest was explained by the extensiveness of student vocabulary in both languages (i.e., Spanish and English) and by English phonological awareness. These results suggest a cross-language transfer of formal definitional structures.

Another study by Ordóñez et al. (2002) explored the predictive validity of EL lexical skills in Spanish on EL lexical skills in English. Eighty-eight bilingual fourth and fifth graders participated in this study and were tested on their ability to provide super ordinates (e.g., relate a specific word to a more general word, such as a boat is a "means of transportation"), adequate definitions, and rich object descriptions when administered familiar concrete nouns in Spanish and English selected from the PPVT (Dunn & Dunn, 1981), and the Test de Vocabulario en Imágenes Peabody (TVIP; Dunn, Lugo, Padilla, & Dunn, 1986). Results indicated that Spanish super ordinate performance was a significant predictor of English super ordinate performance, and rich word descriptions in Spanish reliably predicted rich word descriptions in English, controlling for English and Spanish breadth of vocabulary knowledge.

Similarly, Proctor et al. (2006) explored the role of decoding and vocabulary in Spanish on the reading processes in English. This study involved 135 Spanish-speaking English learners in fourth grade who were learning to read either in Spanish only or in English only. Findings indicate that vocabulary knowledge in Spanish had a statistically significant effect on reading comprehension in English, after accounting for decoding skills and word reading in English. The effect of Spanish vocabulary on English reading comprehension was particularly pronounced for students with strong English word reading skills, indicating a potential interaction between vocabulary in Spanish and word reading fluency in English.

In summary, these studies (i.e., Carlisle et al., 1999; Ordóñez et al., 2002; Proctor et al., 2006) provide evidence supporting Cummins' (1979) interdependence hypothesis, indicating that vocabulary knowledge in Spanish might contribute significantly to ELs vocabulary knowledge and overall reading performance in English. However, the studies also suggest the contribution may occur primarily for those ELs who also receive English vocabulary and word reading instruction, and attain appropriate levels of English reading proficiency.

Purpose of the study

The purpose of this study was to examine the effectiveness of a daily 15-min explicit and systematic vocabulary intervention to teach specific words in Spanish on first grade Spanish-speaking ELs vocabulary knowledge and oral reading fluency in Spanish, and on English language proficiency. This study was part of a 4-year, national longitudinal program of research conducted in 37 schools in Oregon, Washington, and Texas. The purpose of the larger research program was to examine the impact that *Systematic and Explicit Teaching Routines* (SETR), used in Spanish in first grade and in English in second grade, had on Spanish-speaking EL English and Spanish reading outcomes at the end of first, second, and third grades.

In this study, we hypothesized that ELs who received the Vocabulary Enhanced SETR (VE-SETR) intervention would develop more in-depth knowledge of vocabulary words in Spanish, which would have an impact on their oral language skills in English, compared to students who received vocabulary instruction using the adopted core reading program and general strategies to improve the quality of instruction. This approach was labeled the General Systematic and Explicit Teaching Routines (G-SETR) because teachers were asked to teach the words in the core reading program using a generic vocabulary routine (i.e., routine 17, see Appendix 1 for an example of Routine 17 used in the G-SETR group).

Although teachers in the VE-SETR and the G-SETR groups followed the same routines using an *I Do It, We Do It, You Do It* instructional approach (Archer & Hughes, 2011; Carnine et al., 2006), teachers in the VE-SETR group followed a scripted lesson plan on how to teach specific vocabulary words for 15 min of the 90 min reading block. In contrast, teachers in the G-SETR group taught vocabulary using the activities in the core reading program and Routine 17, the routine to teach vocabulary. The allocation of time to vocabulary instruction (i.e., when vocabulary instruction should take place within the 90 min block) and the type of vocabulary activities teachers used to teach the target words in the G-SETR group was left to the teacher's discretion.

Method

Participants and setting

Participants were 50 first-grade students, 23 boys and 27 girls, who spoke Spanish as their first language according to a home survey filled out by their parents. All students were classified as English learners (ELs) based on the LAS Links Language Proficiency Assessment (McGrawHill) given by the school to all students who speak a language other than English at home. In addition to receiving English as a second language instruction, all participants were receiving Spanish reading instruction in an early transition model (i.e., a bilingual program where they learned to read first in Spanish, and then transitioned to English reading instruction in second grade). Both schools participated in the larger SETR study, and both schools used the Macmillan-McGraw Hill Tesoros (Duran et al., 2008) core reading program to teach reading in

Spanish. The percentage of ELs in each school ranged between 46 and 58 %, and approximately 51 % of the total number of students in the two schools participated in the free and reduced lunch program.

Differences between schools were not statistically significant in terms of socioeconomic status, percent of English learners, or Title I status. In addition, at the onset of the study, ELs did not significantly differ in their English language proficiency as measured by the Oregon English Language Proficiency Assessment (ELPA; ODE, n.d.). ELs within each school were randomly assigned to either the VE-SETR (i.e., the treatment group), or the G-SETR (i.e., the comparison group).

Students received reading instruction from nine teachers (i.e., in nine groups), four were certified teachers, and five were instructional assistants. All teachers and instructional assistants were native Spanish speakers. To reduce teacher effects, every 2 weeks teachers and instructional assistants moved from one small group to another within their assigned condition. Group size in the VE-SETR and the G-SETR group varied between four and six students.

Description of the VE-SETR intervention

The VE-SETR intervention focused on teaching 32 vocabulary words during an 8-week period, approximately four words per week consistent with previous studies designed to teach words in-depth (see Beck & McKeown, 2006; Coyne et al., 2010). Words were selected from vocabulary highlighted in the core reading curriculum program using criteria that Biemiller and Slonim (2001) and Beck, McKeown and Kucan (2002) specified for the selection and definition of Tier 2 vocabulary words (i.e., the underlying concept of the target word is understandable to students, the words can be defined in relatively simple language, and there are possibilities for extended use of the word across themes and subjects). These criteria resulted in the selection of words that (a) would likely be unfamiliar or unknown to students, (b) were critical to comprehending the text, and (c) would be encountered in other content areas. Once words were selected, the first author reviewed the selected words with first grade teachers to determine the most appropriate vocabulary words to highlight in the lesson. A list of 32 words was selected and a series of scripted activities were developed for each word (see Appendix 2 for a specific example of the activities for the word *instrucciones* and Appendix 3 for the list of words selected to be taught explicitly in the VE-SETR).

All VE-SETR activities included six steps that are characteristic of effective direct vocabulary instruction (Beck et al., 2002; Biemiller, 2004; Coyne et al., 2010). The first four steps focused on the definition of the word and student receptive understanding of the word. The four steps included: (a) introduction of the word, (b) student oral repetition of the word, (c) a teacher explanation of the word using examples and non-examples, and (d) comprehension verification or student practice in receptive understanding of the word meaning using a visual cue (e.g., "thumbs up or thumbs down"). Steps five and six focused on student expressive use of the word by sharing a sentence with a partner, and using a graphic organizer.

The VE-SETR graphic organizer was an adaptation of the "Four Square" activity that Eeds and Cockrum (1985 as cited in Stahl & Nagy, 2006) originally developed.

To use this graphic organizer, students would write the target word in the middle of four squares. On the top left square students would write a student friendly definition of the word, then they would write two examples of the word in full sentences on the top right and the bottom left squares. Finally, students could do a drawing that represented the use of the word (see an example of a graphic organizer of the word: *necesitar* [need] in Appendix 4). Given that the same graphic organizer was used for all the words taught, students were able to follow teacher directions and complete this activity within the 15 min of vocabulary instruction.

The VE-SETR teacher training

Teachers participating in the VE-SETR group received the same training as teachers in the G-SETR group with an additional 3-h training for the VE-SETR intervention. This additional training focused specifically on the implementation of VE-SETR activities, and provided teachers with detailed practice on each of the steps of the VE-SETR. Within each step, teachers asked clarifying questions, practiced teaching the step, and received feedback from the trainer and peers. Teachers also received coaching support from the researcher/trainer four times (once every 2 weeks) for approximately 30 min each time during the course of the 8-week study.

Description of the G-SETR intervention

The G-SETR vocabulary intervention was imbedded within the 90-min reading block using the *Tesoros* reading curriculum (Duran et al., 2008) and the systematic and explicit routines (i.e., the SETR). Teachers taught the reading program following the specified scope, sequence, and instructional guidance of the *Tesoros* reading program.

The G-SETR teacher training

All teachers received three full days of training in the summer, two additional half-day trainings in October and December, and a 3-h training in February of the following year on how to use all the SETR to teach the five core components of beginning reading. This included how to use Routine 17 to build student vocabulary knowledge. The training also included a theoretical component to help teachers understand the differences and similarities between the Spanish and English orthographic systems, and a hands-on component for teachers to practice the routines and to help them map the routines onto activities in their core program. Between 2 and 3 h of the G-SETR summer training were devoted specifically to teaching effective vocabulary instruction following the six steps suggested by (Beck et al., 2002; Biemiller, 2004; Coyne et al., 2010).

Differences between the VE-SETR and the G-SETR intervention

All 32 words in our study were taught in both conditions. The main difference between the G-SETR and the VE-SETR intervention, however, was that in the VE-SETR intervention the words and activities teachers were to include and follow

were specified and scripted. In addition, 15 min were devoted specifically to direct vocabulary instruction. In the G-SETR group teachers were asked to teach the words in the core reading program that also included the 32 words selected in the VE-SETR, but it was left to the teacher's discretion as to how the vocabulary words would be taught within the 90 min of reading instruction. For example, some teachers made up their own student-friendly definitions and examples, and most of the teachers in the G-SETR group used the *Tesoros* Practice Book activities to reinforce the taught vocabulary. Teachers in the VE-SETR group did not use any of the vocabulary activities in the practice book. Table 1 summarizes the differences and similarities between both conditions.

Measures

Depth of knowledge (DOK) Spanish vocabulary assessment

In this researcher- developed measure, students in the treatment and the comparison groups were tested before and after the study on all 32-target words (16 nouns and 16 verbs). Examiners provided words one at a time and students were asked to: (a) define the word, and (b) use the word in a sentence. Scoring was adapted from

Table 1 Differences and similarities between the VE-SETR and the G-SETR vocabulary intervention

	VE-SETR	G-SETR
Number of words	32 Words selected by the researchers	32 Words selected by the researchers and other words suggested by the core reading program
Amount of time spent on vocabulary instruction	Teachers provided 15 min of VE-SETR vocabulary instruction daily within the 90 min block either in the beginning or at the end of the reading block	Teachers provided 15 min of G-SETR vocabulary instruction daily within the 90-min reading block but the 15 min were distributed at the teacher's discretion
Activities	All activities for each word were specified and scripted, including the student-friendly vocabulary definitions	Teachers mapped the general SETR routine (i.e., routine 17) to the activities included in the core reading program and in the practice book
	All activities for each word included the 6 components of effective vocabulary instruction	Routine 17 in the G-SETR included the six components of effective vocabulary instruction
Training	Teachers in the VE-SETR group received the same amount of professional development as teachers in the G-SETR group. In addition, they received approximately 3 h of professional development on how to use the VE-SETR prior to the implementation of the intervention	Teachers received approximately 3 h of professional development on how to use the G-SETR as part of their training on how to use the SETR to teach any core component of beginning reading
Observations	Teachers were observed four times during the implementation of the intervention	Teachers were observed four times during the implementation of the intervention

Eller, Pappas, and Brown's (1988) scoring criteria to assess vocabulary development and depth of word knowledge. Students received 0, 1, or 2 points for the definition of the word, and 0, 1, or 2 points for the use of the word in a sentence for a total of up to four points for each word. The total score is comprised of the sum of the scores on the DOK-Definition and the DOK-Usage subtests. We analyzed the results of each of the two subtests of the DOK measure, (i.e., the DOK-Definition, and DOK-Usage), in addition to the total scores (DOK-Total).

To elicit student responses, the evaluator would say "*¿Qué significa _____ ?*" *or* "*¿Qué es_____?*" [What does ____mean?, or What is a _____?]. After the student responded, the evaluator would say, "*Ahora usa la palabra _____ en una oración.*" [Now use the word _____ in a sentence].. Student responses were written and recorded for scoring purposes. Inter-rater reliability based on percent agreement between two testers was .80.

Bilingual verbal ability test (BVAT; Muñoz-Sandoval, Cummins, Alvarado, & Ruef, 1998)

This test measures a child's ability to use two languages to negotiate the meaning of academic content. It consists of three subtests from the Woodcock-Johnson Tests of Achievement-Revised (Woodcock & Johnson, 1989): Picture Vocabulary, Oral Vocabulary, and Verbal Analogies. The test yields an English proficiency score and a score that indicates the language skills the child has in his or her first language. The norming sample included 5,602 subjects from over 100 different US communities. Subsets of the norming sample representing populations with low percentages of occurrence in the United States were oversampled.

The concurrent validity of the BVAT with the Language Assessment Scales (LAS, Duncan & De Avila, 1985, 1986) and the Woodcock Muñoz Language Survey Reading-Writing cluster (Woodcock & Muñoz-Sandoval, 1993) in kindergarten was within the range of .60–.90. The median alternate-form reliability observed across 12 grade levels was .84 in a sample of 542 bilingual participants.

In this study, the BVAT was administered in the fall of first grade, and after the VESETR intervention in April of first grade. We provide descriptive statistics on the BVAT *(W)* scores and the BVAT percentile scores *(P)*. However, we used the BVAT *(W)* scores to conduct the Analysis of Covariance. (*W* scores are a conversion of the raw scores using the Rasch ability scale. The *W* scale has equal-interval measurement characteristics and the interpretation advantages of Rasch-based measurement; Woodcock, 1978, 1982 in Muñoz-Sandoval et al., 1998). Inter-rater reliability on the BVAT in our study based on percent agreement between two testers was .96.

Test de Vocabulario en Imágenes peabody PVT-III (TVIP)

The TVIP is an individually administered norm-referenced measure of receptive vocabulary and a screening test of verbal ability in Spanish (Dunn et al., 1986). The test contains 125 translated items from the Peabody Picture Vocabulary Test-Revised. Students are asked to point to pictures when they hear a word. The test was normed with students from Mexico and Puerto Rico. Students were administered

this test a week before the study began and approximately 1 week after the study was completed. Inter-rater reliability based on percent agreement between two testers was .98.

IDEL Fluidez en la Lectura Oral (FLO)

FLO is a standardized, timed, individually administered test of accuracy and fluency reading connected text in Spanish. It is part of the Indicadores Dinámicos del Exito en la Lectura, IDEL (Baker, Good III, Knutson, & Watson, 2006). The number of words students read correctly on three separate 1-min passages is recorded. Words omitted, substituted, and hesitations of more than three seconds are scored as errors. Words self-corrected within three seconds are scored as read correctly. Alternate-form reliability of different reading passages from the same grade level ranged from .88 to .94 (Baker, 2005). Criterion-related validity with the Woodcock-Muñoz average score was .75 (Watson, 2004).

We assessed students with a fluency measure because of previous findings indicating a statistically significant moderate to strong association with vocabulary in Spanish and in English (Baker, 2008). FLO was given to all students approximately 2 weeks prior to the beginning of the intervention and approximately 2 weeks after the end of the intervention. Interrater reliability based on percent agreement between two testers was .99.

Teacher fidelity of implementation measure

This researcher-developed measure was used to observe instructors in both treatment and comparison conditions over the duration of the study. The observation checklist was an adaptation of the protocol used in the larger SETR project and it focused on the implementation of each component of the vocabulary template, as well as the number of times the vocabulary word was used by the teacher, and by the students (i.e., either in a group or individually). Each component of the template was given one point if it was present in the lesson. Instructors were observed once every 2 weeks or four times over the course of the study to check for fidelity of implementation and to provide coaching feedback.

Data collection procedures

Examiners received a full day of training prior to the administration of the IDEL and the BVAT measures, and a 2-h training on the administration of the TVIP and the DOK measures, as well as a 30-min refresher training the first day of testing on the TVIP and the DOK. A test expert shadowed all testers on at least two tests to ensure reliability of test administration and scoring.

Data analysis

To examine the impact of the intervention, we conducted an analysis of covariance (ANCOVA) with pretest scores as a covariate and group as a between-subjects factor. We analyzed the data for each outcome separately: DOK, BVAT, TVIP, and

IDEL. For DOK, scores from the two subtests (i.e., defining a word and using a word in a sentence) were analyzed separately and in combination to determine student growth in either defining a word, using the word in a sentence, or on both tasks. Our initial examination of the data indicated some differences in pretest scores between the VE-SETR group and in the GE-SETR group. Although the differences at pretest might not be ideal for the use of the ANCOVA (Shadish, Cook, & Campbell, 2002), we used this analytic method because students were randomly assigned to groups and thus the differences at pretest could be attributed to chance only, which validates the application of the method (Maxwell & Delaney, 1990; Miller & Chapman, 2001; Van Breukelen, 2006).

Results

Table 2 presents the means, and standard deviations for pretest and posttest on the Depth of Knowledge (DOK) measures, the Bilingual Verbal Ability Test (BVAT), the Test de Vocabulario en Imágenes Peabody PVT-III (TVIP), and the Indicadores Dinámicos del Éxito en la Lectura (IDEL). ELs in the G-SETR group had higher mean scores at pretest on the DOK, the BVAT, and the TVIP, but lower scores on the IDEL. At posttest, students in the VE-SETR group had higher scores on the DOK and the BVAT, but not higher scores on the TVIP and the IDEL. From these simple comparisons of test scores between two groups, statistically significant differences were observed on the DOK (definition, usages, total), the BVAT (W), and the TVIP only at pretest ($p < .05$).

Fidelity of implementation

Our observation of instruction was recorded using the teacher fidelity of implementation measure. We observed that teachers in the VE-SETR group followed the scripted vocabulary intervention with high fidelity. That is, teachers included each component of the vocabulary routine more than 90 % of the time in each lesson, and they said the target word at least once in each of the steps of the lesson. Results of our observations also indicated that teachers and students in the VE-SETR group said and used the targeted vocabulary words three times more often than teachers and students in the G-SETR group. Next, we report results of the ANCOVA for each outcome using adjusted means (i.e., M_{Adj}). Table 3 presents these results.

Effects of the VE-SETR intervention on student outcomes

DOK-definition

Findings indicate that after controlling for the DOK-Definition pretest scores, students in the G-SETR group ($M_{Adj} = 23.68$) had significantly lower DOK-Definition scores at posttest than students in the VE-SETR group ($M_{Adj} = 32.18$; $F = 12.00$, $p = .001$, $\eta^2 = .20$). This finding suggests that the VE-SETR

Table 2 Means and standard deviations for all measures by group over time

Measures	Pretest		Posttest	
	G-SETR ($N = 26$)	VE-SETR ($N = 24$)	G-SETR ($N = 26$)	VE-SETR ($N = 24$)
DOK-definition				
Mean	17.81	11.38	26.54	29.08
(SD)	(8.91)	(7.87)	(10.85)	(11.49)
DOK-usage				
Mean	25.77	17.54	33.77	35.96
(SD)	(11.99)	(9.71)	(11.84)	(13.37)
DOK-total				
Mean	43.58	28.92	60.31	65.04
(SD)	(20.19)	(17.09)	(21.99)	(22.87)
BVAT (W)				
Mean	450.77	443.83	462.96	465.17
(SD)	(11.60)	(12.18)	(6.74)	(8.71)
BVAT (P)				
Mean	15.58	9.13	19.77	26.13
(SD)	(18.83)	(15.39)	(14.67)	(17.84)
TVIP				
Mean	48.38	42.58	57.85	53.38
(SD)	(7.49)	(10.46)	(9.79)	(11.81)
IDEL FLO				
Mean	34.77	36.96	52.19	49.88
(SD)	(18.17)	(20.44)	(21.26)	(22.11)

G-SETR comparison group, *VE-SETR* treatment group, *DOK* depth of vocabulary knowledge, *BVAT (W)* bilingual verbal ability test, *(W)* raw scores converted, *BVAT (P)* percentile scores, *TVIP* test de Vocabulario en Imágenes, Peabody, *IDEL FLO* indicadores Dinámicos del Exito en la Lectura Fluidez en la Lectura oral

intervention had a positive effect on EL knowledge of vocabulary definitions. Moreover, ANCOVA results indicate that 20 % of the variance on the DOK vocabulary definition measure was accounted for by the VE-SETR intervention. The effect size (Hedges g) was +0.76 favoring the VE-SETR group.

DOK-usage

Similar results were found on the DOK-Usage measure. Students in the G-SETR group ($M_{Adj} = 31.29$) had significantly lower DOK-Usage scores than students in the VE-SETR group ($M_{Adj} = 38.65$) indicating that the treatment had a positive impact on EL vocabulary usage ($F = 5.19$, $p = .027$, $\eta^2 = .10$). After controlling for pretest, 10 % of the variance on the DOK vocabulary usage measure was accounted for by the VE-SETR intervention, suggesting that the change from pretest to posttest on the DOK-Vocabulary Usage measure in the VE-SETR group was

Table 3 Analysis of covariance for all measures at posttest

	MS	*df*	*F*	*Sig.*	η^2
Depth of knowledge—vocabulary definition scores					
Pretest	2915.69	1	44.78	.000	.49
Condition	781.60	1	12.00	.001	.20
Error	65.12	47			
Depth of knowledge—vocabulary usage scores					
Pretest	2,274.72	1	20.03	.000	.30
Condition	589.23	1	5.19	.027	.10
Error	113.59	47			
Depth of knowledge—total posttest scores					
Pretest	10,509.79	1	36.29	.000	.44
Condition	2,859.08	1	9.87	.003	.17
Error	289.59	47			
Bilingual verbal ability (W)					
Pretest	104.77	1	1.77	.189	.04
Condition	107.89	1	1.83	.183	.04
Error	59.05	47			
Test de Vocabulario en Imágenes peabody (TVIP)					
Pretest	1,106.67	1	11.56	.001	.20
Condition	21.71	1	0.23	.636	.01
Error	99.71	47			
IDEL Fluidez en la Lectura oral (FLO)					
Pretest	18,355.94	1	205.67	.000	.81
Condition	256.02	1	2.87	.097	.06
Error	89.25	47			

significantly higher than the change from pretest to posttest in the G-SETR group ($g = +0.58$).

DOK-total scores

The effect of the VE-SETR treatment on the Depth of Knowledge Vocabulary Definition and Usage subtests combined scores was also statistically significant. After controlling for pretest, students in the VE-SETR group had significantly higher DOK-Total scores ($M_{Adj} = 71.05$) than students in the G-SETR group ($M_{Adj} = 54.76$) indicating that the treatment had a positive effect on the overall expressive vocabulary development of ELs ($F = 9.87$, $p = .003$, $\eta^2 = .17$). Furthermore, after controlling for pretest, 17 % of the variance on the DOK-Total was accounted for by the VE-SETR. Although ELs in the G-SETR group had higher scores on the DOK-Total at pretest, ELs in the VE-SETR group outperformed ELs in the G-SETR group at posttest ($g = +0.73$). Figure 1 summarizes the effects of the VE-SETR intervention on the DOK-Definition, DOK-Usage, and DOK-Total scores.

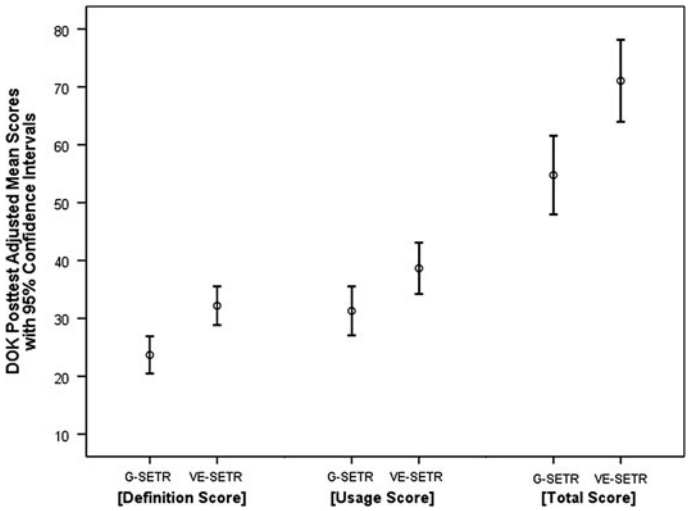

Fig. 1 Adjusted means and 95 % confidence intervals of DOK posttest scores (vocabulary definition, vocabulary usage, and total) for the G-SETR and VE-SETR groups

BVAT

The BVAT assessed student language skills in English and Spanish. Findings indicate that after controlling for BVAT (W) pretest scores, students in the VE-SETR group did not have significantly higher BVAT (W) ($M_{Adj} = 465.17$) scores than students in the G-SETR group ($M_{Adj} = 462.96$; $F = 1.83$, $p = .183$, $\eta^2 = .04$). It appears that the intervention did not have a significant impact on student bilingual verbal ability as measured by the BVAT. The effect size, although small, indicated a positive trend favoring the VE-SETR ($g = +0.28$).

TVIP-III

Findings of the ANCOVA suggest that after controlling for TVIP pretest scores, students in the VE-SETR group ($M_{Adj} = 54.98$) did not have significantly higher TVIP scores than students in the G-SETR group ($M_{Adj} = 56.37$; $F = 0.23$, $p = .636$, $\eta^2 = .01$). Only 1 % of the variance on the TVIP measure could be accounted for by the VE-SETR group. The effect size was negative and trivial ($g = -0.13$).

IDEL FLO

After controlling for IDEL pretest scores, students in the G-SETR group had slightly higher IDEL scores ($M_{Adj} = 56.37$) than students in the VE-SETR group ($M_{Adj} = 54.98$; $F = 2.87$, $p = .097$, $\eta^2 = .06$). Moreover, 81 % of the variance on the IDEL posttest measure could be accounted for by pretest, while a marginally significant 6 % of the variance on the IDEL measure could be accounted for by the VE-SETR group. The effect size was negligible ($g = -0.06$).

In summary, the results indicate that the VE-SETR intervention had a statistically significant effect on EL expressive vocabulary skills in Spanish as measured by the Depth of Knowledge (DOK) assessment, and a small non-significant effect on student English language proficiency. The effect on oral reading fluency, or receptive vocabulary in Spanish as measured by more general outcome measures was also non-significant.

Discussion

The purpose of this study was to examine the impact of a 15-min daily explicit vocabulary intervention in Spanish on Spanish-speaking first grader expressive and receptive vocabulary knowledge, English language proficiency, and Spanish oral reading fluency. All words selected for instruction in the vocabulary intervention (VE-SETR) were taken from the core reading program and followed a similar lesson framework.

Three major findings can be derived from this study. First, a vocabulary intervention that includes the teaching of specific vocabulary words appears to have a larger impact on student depth of vocabulary knowledge than a more general intervention focused on providing teachers with systematic and explicit strategies that enhances the core-reading program, but does not include the specific activities for vocabulary instruction. Second, although students did increase their depth of vocabulary knowledge in the VE-SETR, we did not find a generalization effect of the intervention to a standardized measure of vocabulary (measured by the TVIP), oral reading fluency (measured by IDEL FLO), or English language proficiency (measured by the BVAT). Third, direct and explicit vocabulary instruction in Spanish, a language with a more transparent orthography than English (i.e., grapheme-phoneme correspondence rules are more consistent in Spanish than in English) can increase Spanish-speaking students in-depth vocabulary knowledge in Spanish. In the next section, we elaborate on each of our findings.

Teaching specific vocabulary words

Results of the VE-SETR intervention indicate that providing teachers with specific vocabulary words and activities that teach these words in-depth, increases student opportunities to practice hearing, saying, and using the target words. Although teachers in both groups were trained on how to use systematic and explicit teaching routines when teaching vocabulary, the fact that activities for the 32 words taught in the VE-SETR group were highly specified for instruction (i.e., lessons provided scripted student friendly definitions, specified examples and non-examples, and prepared materials to practice using the word), may have accounted for the positive effects of the VE-SETR intervention on the DOK vocabulary measures. Moreover, the VE-SETR intervention constructed opportunities for students to hear the target word approximately 16 times, say the word aloud at least 6 times, and use or write the word at least four times.

In the G-SETR group, the core program provided a student-friendly definition of the target word, and two or three activities in the practice book. However,

conducting the practice activities was underspecified. That is, for students to have opportunities to hear, say, and use the target words, teachers would have had to prepare the relevant additional examples and non-examples, and develop the graphic organizer to support student deep processing of words. In the observations of the G-SETR classrooms, this level of instruction rarely occurred.

Another important advantage of the VE-SETR was that words were selected and targeted for instruction, increasing the likelihood that the focus on deep processing was on Tier 2 words that are critical to the understanding of written text (Beck et al., 2002). In analyzing the words selected for instruction by the core program, we found that only 50 % of these words would be considered Tier 2 words. As mentioned previously, some of the words selected for deeper learning by the core program would be considered Tier 1 or Tier 3 words, based on the work of Biemiller (2004) and Beck et al. (2002). For example, the core program selected *abuela* (i.e., grandmother) as a word worth teaching in-depth, and *Año Nuevo Chino* (i.e., Chinese New Year). Based on Beck et al.'s definition of Tier 1, Tier 2, and Tier 3 words, we would consider the word grandmother a Tier 1 word, and Chinese New Year a Tier 3 word.

Finally, the VE-SETR intervention used a consistent graphic organizer format to practice taught words. The advantage of a consistent format is that it is arguably easier for students to follow teacher directions and complete the graphic organizer in a timely manner. At least in the early grades, this type of consistent activity may have facilitated student learning of the target words. Coyne et al. (2010) and Silverman (2007) also used consistent activities in their effective vocabulary interventions with kindergarten students.

For example, in the Coyne et al. (2010) study the majority of activities to develop deeper processing targeted open-ended questions designed to extend student responses (e.g., "Why do you think walking upside down is peculiar?"). Silverman (2007) used three main activities for deep word processing: (a) actions or gestures, (b) comparing and contrasting two words, and (c) answering questions prompted by the teacher. In contrast, the Carlo et al. (2004) vocabulary intervention with fifth-grade ELs and non-ELs, used a variety of activities for deep processing including using words in context, completing cloze sentences, playing Charades, Word bee, word sorting, completing synonym/antonym tasks, word guess, crossword puzzles, answering questions, and finding and explaining Spanish cognates.

Impact on general reading and language measures

Our intervention did not have an impact on the TVIP, the BVAT, and the Spanish oral reading fluency measure. Although these results did not confirm our prediction that vocabulary instruction in Spanish would increase general vocabulary knowledge, oral reading fluency in Spanish, and language proficiency in English, they are perhaps not surprising. Recent evidence indicates that most vocabulary interventions do not have an impact on general vocabulary measures such as the TVIP, particularly for students with low vocabulary (Coyne et al., 2010).

Elleman, Lindo, Morphy, and Compton (2009) examined the impact of vocabulary instruction on passage-level comprehension, and found that out of the

37 studies included in the meta-analysis, vocabulary instruction had a moderate effect size ($d = 0.79$) on researcher developed measures of vocabulary knowledge, and a smaller effect ($d = 0.29$) on measures of general vocabulary knowledge. Moreover, the impact of vocabulary knowledge on general measures of reading comprehension was minimal, with a non- statistically significant effect size ($d = 0.10$). Our results were very similar. We had a moderate effect size on our research-developed measure ($g = 0.73$), a small effect on the BVAT ($g = 0.28$), and no effect on the general vocabulary measure ($g = -0.13$) and oral reading fluency ($g = -0.06$).

Elleman et al. (2009) also found that experimental vocabulary studies that used more stringent control groups (e.g., control groups provided with the target words or some type of instruction) had smaller effects than those using quasi-experimental designs and no-treatment control groups. Our study was a randomized control trial with a stringent control group. Thus, it is plausible that the reason for the lack of significant effects on general outcome measures may have been influenced by the fact that (a) students in both groups received explicit vocabulary instruction, and (b) the intervention may not have been of sufficient duration to observe significant effects on general outcome measures, a problem that has been also identified in other vocabulary studies (see Pollard-Durodola et al., 2011, for example).

Teaching vocabulary in Spanish

This study provides additional evidence of the importance of explicit and systematic vocabulary instruction on developing student depth of word knowledge in a language other than English. Given that many Spanish-speaking countries are also grappling with the problem of how to increase the reading performance of struggling readers (e.g., Baker, 2009; Jiménez, 2010), the VE-SETR intervention provides evidence of the potential support these readers need in their vocabulary development. To our knowledge, this is the first study to examine the effect of a vocabulary intervention in Spanish focused on building student depth of vocabulary knowledge in Spanish.

Finally, the reason to develop the vocabulary knowledge and language proficiency of ELs in their native language is because it could potentially provide a foundation for their English language and reading development. This hypothesis proposed by Cummins (1979) more than 30 years ago, and empirically tested (Carlisle et al., 1999; Carlo et al., 2004; Proctor et al., 2006) suggests that vocabulary knowledge in Spanish might contribute indirectly to EL English vocabulary and general English reading skills.

Limitations

This study has two major limitations. First, the short duration of the intervention (8 weeks) may have accounted for the lack of statistically significant effects on more general outcome measures such as the TVIP, the BVAT, and a negative effect on oral reading fluency. Second, the sample size was 50 students, which may have reduced power to detect statistically significant differences in the general reading and language measures (Lipsey & Wilson, 2001).

Implications for future research

Vocabulary knowledge in the native language might support vocabulary development in the second language. A follow-up study to determine if students retain the vocabulary learned and the extent to which the specific words are transferred to English reading outcomes (i.e., particularly cognates such as *proteger*, [protect]) would represent a significant and important addition to the effective vocabulary research for ELs. In addition, given that few studies have looked at the effect of a Spanish vocabulary intervention on student general reading outcomes in Spanish, replicating this study in a Spanish-speaking country with a more diverse group of Spanish-speakers, and with different core programs, would advance the field of vocabulary research in languages where theoretically students may learn to read earlier because of the transparency of the orthography (Caravolas, 2005; Genard, Alegría, Leybaert, Mousty & Defior, 2005; Seymour, 2005), but may also struggle with in-depth vocabulary knowledge.

Conclusions

Research indicates that vocabulary is a critical component of reading comprehension and overall reading success (Anderson & Freebody, 1981; August & Shanahan, 2006; Elleman et al., 2009; Kame'enui, Carnine, & Freschi, 1982). On average, ELs are struggling academically in the United States compared to their non EL peers and it is critical for researchers, teachers, and school leaders to better understand how to effectively meet the academic needs of this growing student population. Results from this study indicate that Spanish teachers can improve their delivery of vocabulary instruction if they can access an explicit and systematic vocabulary intervention that identifies appropriate target words for instruction, provides student-friendly definitions of the words, includes examples and non-examples of the correct use of the target words, and incorporates activities to develop deep word processing. Our study indicated that the additional materials and techniques provided to teachers had a significant positive effect on student's depth of vocabulary knowledge compared to providing teachers with strategies only.

Finally, this randomized control study can help advance research on effective vocabulary instruction in Spanish, a language with a more transparent orthography than English, but with similar challenges as English for developing interventions that can effectively promote student vocabulary knowledge, and ultimately increase their overall reading performance.

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Appendix 1: Example of the vocabulary routine used in the general systematic and explicit teaching routines (G-SETR) condition

English version

Routine #17 Procedures for Specific Word Instruction
Use some of the features below to guide your specific word instruction.

1. Direct Definitions
   - If a thing is *fabulous* it means it is *wonderful* or *marvelous*.
2. Multiple Exposures
   - Which word goes with fabulous—*o.k.* or *super*? Why does *super* go with *fabulous*?
   - Is it *fabulous* if you fall and scrape your knee? What would it be?
   - Maria thought her car was *fabulous* because it was hot pink.
   - The boy had a *fabulous* time at the park. Did he have a *great* time or a *terrible* time?
   - How could a family have a *fabulous* time? When have you had a *fabulous* time?
   - Is a diamond necklace *fabulous*? Why?
   - The concert was the best he had ever heard. Every note seemed perfect. Am I talking about *fabulous* or *discover*?
   - If a thing is *fabulous* it means it is *wonderful* or *marvelous*.
3. Use Synonyms and Antonyms
   - Which word is the same as *fabulous—o.k.* or *super*?
   - Is it *fabulous* if you fall and scrape your knee? What would it be?
   - The boy had a *fabulous* time at the park. Did he have a *great* time or a *terrible* time?
   - The concert was the best he had ever heard. Every note seemed perfect. Am I talking about something *fabulous* or a *discovery*?
4. Make Up a Novel Sentence
   Student makes up a novel sentence:
   - How could a family have a *fabulous* time? When have you had a *fabulous* time?
   - Why is a diamond necklace *fabulous*? A diamond necklace is *fabulous* because…
   Teacher repeats what the student said:
   - Maria thought her car was *fabulous* because it was hot pink.
5. Relate the Definition to One's Own Experiences
   - Is it *fabulous* if you fall and scrape your knee? What would it be?
   - The boy had a *fabulous* time at the park. Did he have a *great* time or a *terrible* time?
   - How could a family have a *fabulous* time? When have you had a *fabulous* time?

Spanish version (this was slightly modified from the English version above)

Tarjeta #17 Procedimiento #1 para enseñar palabras específicas Vocabulario

1. Definiciones directas.
   - Escuchen, si algo es fabuloso significa que es estupendo o maravilloso.
2. Ejemplos del uso de la palabra. Use sinónimos y antónimos.
   - Escuchen, ¿Cuál palabra es igual que fabuloso—o.k. o super? ¿Por qué super va con fabuloso?
   - ¿Es *fabuloso* si te caes y raspas tu rodilla? ¿Qué podría ser? ¿Terrible o maravilloso?
   - El muchacho tuvo un día *fabuloso* en el parque. ¿Tuvo él un buen día ó un día terrible?
   - El concierto fue el mejor que yo he escuchado. Cada nota parecía perfecta. ¿Estoy hablando acerca de algo *fabuloso* o de algo terrible?
3. Uso de la palabra en una oración completa. Los estudiantes demuestran su entendimiento clasificando la palabra con otras palabras. Nombre algunas cosas que sean *fabulosas*. Nombre algunas cosas que no sean fabulosas
   Escuchen,
   - El muchacho tuvo un día fabuloso en el parque. ¿Tuvo él un buen día ó un día terrible?
   - El concierto fue el mejor que yo he escuchado. Cada nota parecía perfecta. ¿Estoy hablando acerca de algo *fabuloso* ó de algo terrible?
4. Verificación de la comprensión de la palabra. Componga una oración novedosa. Mi turno,
   - María pensó que su carro de color rojo era fabuloso porque brillaba en el sol, y se podían abrir todas las puertas.

   Ahora ustedes. (Si los estudiantes no responden, ayúdelos a crear oraciones haciendo preguntas.) Por ejemplo:
   ¿Cómo puede tener una familia un día fabuloso?
   ¿Por qué es una bicicleta nueva fabulosa? (Una bicicleta nueva es fabulosa porque es mi primera bicicleta—y es muy rápida.)
5. Examen individual. Relacione la definición con experiencias propias. Voy a dar un ejemplo de un día fabuloso que tuve y por qué fue fabuloso ese día.
   - ¿Es *fabuloso* si te caes y raspas tu rodilla? ¿Qué podría ser? ¿Terrible o maravilloso?
   - Yo fui a la playa la semana pasada. Tuve un día fabuloso porque encontré muchas conchas bonitas.
   - Ahora describan ustedes un día fabuloso.

Appendix 2: Example of a vocabulary routine used in the vocabulary enhanced systematic and explicit teaching routines (VE-SETR) condition

English version

Teacher prompt	Student response
The word we are going to learn is *instructions*. What is the word?	*Instructions*
We are going to divide the word in syllables. **My turn,** ins/truc/tions/ (These directions are repeated twice). **Your turn**	in/struc/tions/
Now we are going to read the word. **My turn** instructions. (Repeat twice) **Your turn**	*Instructions*
Now I am going to tell you the definition of the word instructions. **My turn,** *instructions* are necessary to understand how to make or do something	Instructions are needed to understand how to make or do something
Your turn, what is the definition for the word instructions?	
For example, a teacher gives instructions to her students so they know how to do their assignment. Another word for instructions is directions	
Another example is before you play a new game you have to read the instructions so you know the rules	
When students do not know the instructions or directions, they do not know how to finish their work	
Now I am going to use the word instructions in the following sentences	My father received a _____ and he did not know what to do. So first, he read the instructions. He followed the _____ perfectly
Before you use a new toy, you should read the instructions	
The teacher gives instructions to her students before they start their work	
My dad has to read the instructions before he puts together a new piece of furniture	
Your turn, you are going to complete the following sentence with your partner. You have 1 min to complete the sentence	
Now we are going to create our own sentences using the word instructions. **My turn,** the student had to read the instructions in the book before he started his work or else he would not know what to do. **Your turn,** think of an example of a situation in which a person would need instructions. Please use a complete sentence	I read the instructions before I do my homework My older brother bought a new Nintendo game. He read the instructions before playing the game
After you have said your sentence aloud, write the sentence in your vocabulary journal	(Students write the sentence in their journal)

Teacher prompt	Student response
Now take your vocabulary cards and complete the graphic organizer using your own example of the word instructions in a complete sentence	(Students complete the graphic organizer)

Spanish version

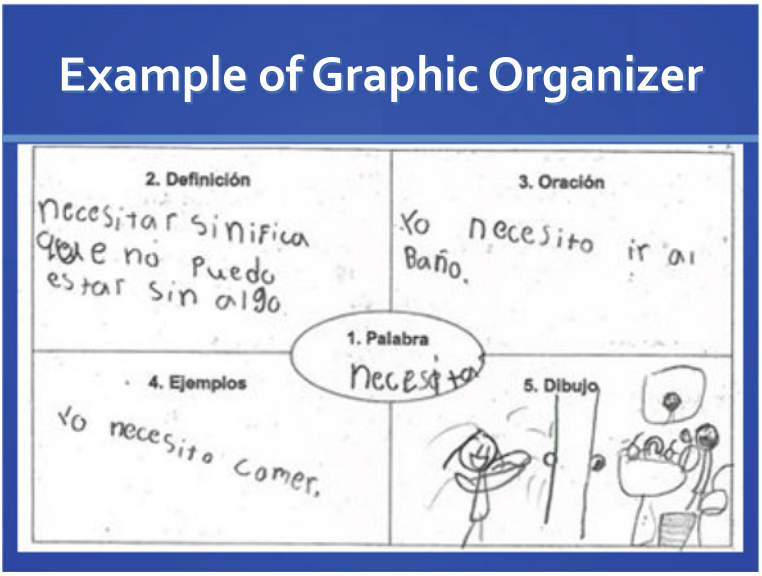
Teacher prompt	Student response
La palabra que vamos a aprender es instrucciones.	*Instrucciones*
¿Qué palabra? Instrucciones	
Vamos a dividir la palabra en sílabas. **Mi turno:**/ins/truc/cio/nes	/ins/truc/cio/nes
Todos:	
Ahora vamos a leer la palabra. Mi turno: Instrucciones ¿Palabra?	*Instrucciones*
Ahora les voy a decir la definición de la palabra instrucciones. **Mi turno:** Instrucciones son pasos para aprender a hacer una actividad o trabajo	Instrucciones son pasos para aprender a hacer una actividad o trabajo
Todos:, ¿Qué significa la palabra instrucciones?	
Por ejemplo. La maestra da instrucciones a sus alumnos para que ellos sepan lo que tienen que hacer	
Voy a usar la palabra en las siguientes oraciones:	
Antes que uses un juguete nuevo, debes leer las instrucciones	
La maestra da instrucciones a sus estudiantes antes que ellos empiecen su trabajo	
(Enseñe la definición de la palabra en su organizador gráfico.)	
Ahora ustedes hagan una oración con "instrucciones". Tienen un minuto para terminar la siguiente oración con su compañero	Mi papa recibió _____, y no sabía qué tenía que hacer, entonces primero él empezó a leer las instrucciones. Luego, él siguió las _____ perfectamente
Mi papá recibió _____	
Vamos a crear oraciones nuevas con "instrucciones"	
Mi turno: El alumno tuvo que leer las instrucciones en el libro antes de empezar su trabajo para saber lo que tenía que hacer. **Todos:** Piensen en un ejemplo o situación en la cual una persona necesita instrucciones. Usen oraciones completas. (Pídales a algunos alumnos que digan su pración. Si los alumnos no responden, ayúdelos a crear oraciones haciendo preguntas.) Por ejemplo: ¿Cuándo necesitaría una persona instrucciones en la escuela?	
Después de decir su oración en voz alta, escríbanla en su diario	Los alumnos escriben la oración en el diario

Teacher prompt	Student response
Ahora tomen su tarjeta de vocabulario y completen el organizador gráfico usando sus propios ejemplos de la palabra instrucciones. Usen oraciones completas	Los alumnos completan el organizador gráfico

Appendix 3: List of words selected for the vocabulary enhanced systematic and explicit teaching routines (VE-SETR) condition

Week	Topic	Words (Spanish/English)	
1	ANIMALES 1	Separar	Separate
		Salvaje	Wild
		Proporcionar	Provide
		Diferente	Different
2	ANIMALES 2	Proteger	Protect
		Parece	Alike
		Dirigir	To direct
		Alimentar	To feed
3	FAMILIAS 1	Desorden	Disorder
		Instrucciones	Directions
		Recoger	To pick up
		Detalles	Details
4	FAMILIAS 2	Repasar	Review
		Colaborar	Collaborate
		Agradecer	To thank
		Responsabilidad	Responsibility
5	AGRICULTURA 1	Plantan	Plant
		Crece	Grow
		Raices	Roots
		Semillas	Seeds
6	AGRICULTURA 2	Necesitar	To need
		Cultivan	Cultivate
		Fábrica	Factory
		Cosecha	Crops
7	VECINDARIOS 1	Vecindarios	Neighbors
		Lugar	Place
		Hallar	To find
		Comparar	Comapre
8	VECINDARIOS 2	Alrededor	Around
		Construir	Construct
		Público	Public
		Celebrar	Celebrate

Appendix 4: Example of the graphic organizers used in the vocabulary enhanced systematic and explicit teaching routines (VE-SETR) condition



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