

Word Learning Strategies Supplementary Curriculum: Preliminary Findings Related to Research and Practice

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Background/Context. Given the link between vocabulary and reading development, learning to effectively and efficiently use word learning strategies is important for all students (e.g., Graves, 2016; Snow & Kim, 2007; Stahl & Nagy, 2006). This is particularly crucial for many English learners (ELs) (August & Shanahan, 2006; Goldenberg, 2013) and large numbers of students from low income families (Hart & Risley, 1995; Wright & Neuman, 2014). Consequently, teachers need ways to effectively help students learn how to use word learning strategies.

Purpose: This study is designed to determine the efficacy of the Word Learning Strategies (WLS) supplementary curriculum for developing upper-elementary students' vocabulary acquisition skills and reading comprehension. Additionally, the study addresses how WLS is implemented in elementary schools with high numbers of ELs and students from low-income backgrounds. Classroom observation and teacher interview data will allow the study to highlight implications for vocabulary instructional practices within local educational contexts.

Design/Setting. The study used a true, group-randomized, experimental design with two cohorts. This presentation will report on the first cohort where 50 4th grade classrooms from 12 diverse districts throughout the state of CA were randomized to a treatment (n=25) or control (n=25) condition. The analytic sample includes 24 treatment teachers (n=589 students) and 21 control teachers (n=522 students). The treatment classes implemented the WLS curriculum, while the control classrooms implemented their usual English Language Arts practices. On average, approximately 82% of students in participating districts received free-and-reduced lunch and 43% were ELs.

Intervention. The WLS program provides 15 weeks of whole-class instruction for typical 4th or 5th grade classes, an additional 22 remedial, web-based lessons for students who need more practice, three web-based lessons on Spanish cognates for Spanish-speaking EL students, and three web-based lessons on idioms for all students. The whole-class instruction is delivered three days a week for about 30 minutes per day. The program includes four main instructional sections to teach students how to derive the meaning of unknown words they encounter as they read independently: Word Parts (seven weeks); Context (five weeks); Dictionary (one week); and Combined Strategy (two weeks) on combining word parts, context, and dictionary strategies.

To prepare teachers to teach the WLS program effectively and with fidelity, the research team provided a series of online trainings. The online trainings focused on: 1) background information about vocabulary development, instruction, and the use of WLS; 2) a demonstration of useful classroom practices associated with the curriculum; and 3) key components of curriculum implementation (e.g., following the teacher manual, dosage, pacing).

Data Collection and Analysis

Measures of implementation fidelity

(1) **Teacher Logs:** These logs were designed to measure the extent to which participating teachers covered WLS concepts and used WLS instructional strategies. The logs were aligned with the WLS curriculum to provide a measure of fidelity of implementation. General reporting categories on the teacher log included: (a) amount of teaching time devoted to WLS; (b) use of various WLS teaching strategies; (c) teachers' perceptions related to student understanding; and (d) questions related to any problems or issues that teachers encountered during implementation, including questions on pacing of the lessons and use of supplementary materials for EL students.

(2) **Classroom Observations and Teacher Interviews:** Classroom observations and teacher interviews were conducted with 6 pilot teachers and 5 treatment teachers. The observations were designed to allow documentation of: (a) the WLS components covered; (b) resources and equipment used; (c) classroom set-up; and (d) a snapshot of student activities. Teacher interviews focused on: (a) teachers' use of the WLS curriculum; (b) student engagement and learning; and (c) feedback on the WLS training.

Student measures

(1) **The WLS Test** is a 34-item test created by the developer of the intervention. It includes closed and open-ended items, and assesses student knowledge of prefixes, suffixes, context cues, as well as the Word Parts Strategy, the Dictionary Strategy, and the Combined Strategy. Thirty-five percent of the assessment tests knowledge, and 65% tests application. In an earlier pilot study, Cronbach's alpha for the entire instrument ranged from 0.875 at pre-test to 0.921 at post-test.

(2) **The GMRT** (MacGinitie, MacGinitie, Maria, & Dreyer, 2002) for grades 3-12 includes two subtests—vocabulary and comprehension. Kuder-Richardson Formula 20 (KR-20) was utilized to assess the reliability index for the subtests. Internal reliability coefficients were .80 and .90 for the vocabulary and comprehension subtests respectively.

To analyze the impact of the program, two-level hierarchical linear modeling (HLM) was applied to analyze student outcomes. Qualitative data collected from open-ended survey questions, teacher logs, and interviews were analyzed using grounded theory (Strauss and Corbin, 1998). Initially, respondents' comments were reviewed and assigned categories of meaning (open coding). Then, these categories, along with quantitative data results, were reviewed for causal linkages and non-causal relationships related to the central phenomenon (axial coding), which allowed the researcher to develop a "story" connecting the categories (selective coding) and, finally, posit hypotheses or theoretical propositions. These qualitative analyses described implementation and how teachers can sustain these instructional practices.

Findings. Preliminary results indicate that the program was significantly and positively associated with gains in students' vocabulary learning as measured by Word Learning Strategies Test, after accounting for differences in baseline test scores. The impact of the program was also positively associated with gains in students' reading comprehension as measured by the Gates-MacGinitie Reading Test, after accounting for differences in baseline test scores, although the difference is not statistically significant.

The use of the WLS program also led to increases in teachers' awareness of strategies to support vocabulary and reading comprehension. Most teachers were able to teach all of the WLS lesson components, use the appropriate materials, display adequate subject-matter knowledge, and keep students engaged. They felt the curriculum was easy to learn and to implement, and was beneficial to students. This study shines new light on how WLS instructional practices can be sustained by teachers to improve student outcomes. Further, by providing teachers with tools and strategies to integrate vocabulary learning into their existing curricula, teachers were better able to support their students' vocabulary learning.

References

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