

The promise of supplemental instruction to support academic language
for upper elementary ELs

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Background: English Learners (ELs) are students whose home language is not English and whose English language proficiency hinders their ability to meet expectations for students at their grade level. Currently, estimates suggest that 10% of all U.S. students and nearly 25% of U.S. students in urban areas are ELs (McFarland et al., 2017). ELs often experience difficulty with academic language and reading comprehension in U.S. schools in which the language of instruction is English (August & Shanahan, 2006). For example, in a study of students in grades 2-5, ELs scored below English monolingual (EM) students on three measures of English reading comprehension and as well as on measures of English vocabulary breadth and depth and syntactical and morphological awareness (Silverman, et al., 2015). Yet, ELs have many resources that could allow them to excel and possibly even surpass EMs in both areas. Specifically, as a result of having to manage two or more languages across contexts, ELs may have greater metacognitive awareness, which could be harnessed in the development of academic language and reading comprehension (Bialystok, 1986; Grosjean & Li, 2013). Supplemental instruction targeting academic language and reading comprehension for ELs and capitalizing on the strengths of these students has the potential to make significant differences in the academic success of ELs. Thus, we developed and evaluated a supplemental program targeting these skills and this population (i.e., 4th and 5th grade ELs). We call the supplemental program CLAVES, which stands for *Comprehension, Language Awareness, and Vocabulary for EL Students* in English and *keys or clues* in Spanish. We propose to share findings from our work at SREE.

Research Questions: The research questions that guided our work were as follows, “What are the effects of a supplemental program for upper elementary school ELs on academic language and reading comprehension? Do effects differ for ELs with higher or lower levels of entering English language proficiency?”

Setting: We implemented CLAVES in two studies. Study 1 was implemented in 4 schools from 2 districts in Massachusetts (MA). Study 2 was implemented in 4 schools in 1 district in Maryland. In both studies, districts were semi-urban.

Subjects:

Teachers: Teachers (either specialists or regular classroom teachers) in the participating schools implemented the program. Study 1 included 13 teachers, and Study 2 included 10 teachers.

Students: Study 1 included 111 4th and 5th grade ELs, and Study 2 included 131 4th grade ELs. In Study 1, students spoke Spanish (n = 76) or Portuguese (n = 27) in the home (n of other languages = 8). In Study 2, all students spoke Spanish in the home. In both studies, all students were bilingual and identified as ELs or former ELs. Former ELs in the sample had been reclassified from EL status in the previous academic year. Students were assigned to intervention or control. Intervention students participated in the small-group CLAVES program, and control students received Business as Usual instruction from their teachers.

Intervention: The CLAVES program includes 40 lessons. The CLAVES program is broken down into 3 thematic units with 2 cycles per unit. Each cycle is grounded in a text, which is paired with multimedia content, and lessons include attention to comprehension, semantics, morphology, and syntax. Each cycle ends with a dialogic reasoning conversation in which students debate a central question related to the text, and each unit ends with a writing activity that encourages students to articulate their stance on unit topics for authentic purposes (e.g., writing a persuasive letter). In the studies reported herein, most teachers only implemented 2 of the 3 units due to time constraints (i.e., implementation began late in the year and teachers ran out of time at the end of the year).

Research Design: Study 1 included a randomized control trial in which students were randomly assigned to intervention or control. Study 2 included a quasi-experimental design in which students were assigned to intervention or control. While random assignment was used when possible in Study 2, logistical challenges in MD schools (e.g., schedules) prohibited truly random assignment in this site.

Data Collection and Analysis: We assessed students on proximal and distal measures of language skills and comprehension. Proximal measures included research-aligned (RA) semantics (pre- and post-test) and writing (post-test only). Distal measures included measures of semantics, syntax, and morphology at pre-test, the Core Academic Language Skills Instrument (CALIS), Strategic Education Research Partnership, 2013) at post-test, and the Gates MacGinitie Reading Test (GMRT) at pre- and post-test. The Test of Silent Word Reading Fluency (TOSWRF) was also administered at post-test. Hierarchical Linear Modeling was used to account for clustering of students within classrooms. (We did not account for clustering at the school level due to the limited number of schools in the samples.) Covariates in analyses included pre-test for RA semantics; pre-test semantics, syntax, and morphology for CALS; and pre-test and TOSWRF for GMRT.

Results/Findings: Across studies, there were no pre-test differences by group (intervention or control). In Study 1, there were significant differences on RA semantics ($\beta = 1.62, t = 2.05, p = 0.04, ES = .43$) and RA writing ($\beta = 16.23, t = 2.30, p = 0.02, ES = .32$) in favor of the intervention group. In Study 2, there were significant differences on RA semantics ($\beta = .94, t = 2.06, p = 0.04$) and CALS ($\beta = 7.74, t = 3.00, p = 0.0012, ES = .36$). (We are still scoring writing data from Study 2 so that analysis is not yet in.) There were no significant differences between conditions on GMRT in either study. However, in Study 2, the effect size on the GMRT was .22 ($\beta = 2.99, t = .59, p = 0.55$) suggesting an effect of condition that we were underpowered to detect. There were no differences by initial levels of English.

Conclusions: The CLAVES program holds promise for supporting upper elementary ELs in academic language and, perhaps, comprehension. Further research is needed on the CLAVES intervention and on how principles underlying the program can inform practice.

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