

## The Impact of Word Knowledge Instruction on Literacy Outcomes in Grade 5

District leaders in a large urban school district in central Florida wanted to test the efficacy of a new curriculum designed to enhance the word knowledge of grade 5 students so as to improve reading achievement. The new curriculum, called Word Knowledge Instruction (WKI), consists of 15-minute lessons taught 4 days a week for 20 weeks. The lessons address state standards and cover 20 prefixes and suffixes. Forty-two schools participated in the study, with 92 English language arts (ELA) teachers in high poverty schools randomly assigned within schools either to use WKI or to continue using their regular ELA instructional materials. Classroom observations indicate that WKI was implemented as intended. WKI had a positive effect, equivalent to an increase of 9 percentile points, on one skill explicitly taught by WKI (students' ability to correctly extract and spell a base word from a derived word). WKI had no effects on two other related reading skills not directly taught by WKI (students' ability to select a nonword that best fits the grammatical context of a sentence or to use knowledge of word parts to infer meaning of new words) or on students' scores on district assessments of vocabulary or reading. These findings suggest that students learn what they are explicitly taught but that transferring taught skills to related but not directly taught skills might require more intense or longer duration instruction or additional teacher professional development.

### Key findings

- **WKI had a significant, positive impact on students' ability to correctly extract and spell a base word from a derived word compared with students in the business-as-usual control group.** A central component of WKI was instruction that focused on decomposing words into their word parts (base word, prefix, and suffix). This skill was assessed using a researcher-developed, short-term real-word decomposition measure. The effect size for this measure was 0.23, which is equivalent to a 9 percentile point increase in performance.
- **WKI had no impact on any other short-term or long-term outcome measure.** One short-term measure assessed students' ability to select a nonword that best fits the grammatical context of a sentence and another assessed students' ability to use knowledge of word parts to infer meaning of new words. Differences in scores between students receiving WKI and students in the control group on these two short-term measures were nonsignificant (effect size of 0.05 and  $-0.02$ , respectively). Similarly, differences in i-Ready Vocabulary and Florida State Assessment English Language Arts (FSA–ELA) scores, the two long-term outcome measures, between students receiving WKI and those in the control group were also nonsignificant (effect size of  $-0.01$  and 0.02, respectively).
- **The impact of WKI on short-term and long-term outcome measures was comparable for English learner students and non-English learner students.** WKI had similar effects for English learner students and non-English learner students on the three researcher-developed, short-term measures of morphological awareness and the two long-term measures of vocabulary and reading comprehension (i-Ready Vocabulary and FSA–ELA).
- **The key implication is that transferring taught skills to related but not directly taught skills might require more intense or longer duration instruction.** Also, additional professional development might reduce variability in fidelity of implementation.