Retrieval, Automaticity, Vocabulary, Engagement, and Orthography (RAVE-O)

Why Is This Strategy Useful?

Researchers have argued that knowledge of multiple linguistic components of a word (i.e., phonemes, orthographic patterns, semantic meanings, syntactic uses, and morphological roots and affixes) facilitate speed of retrieval and decoding. The Retrieval, Automaticity, Vocabulary, Engagement, and Orthography (RAVE-O) program builds on this assumption and uses a systematic and simultaneous inclusion of multiple linguistic components over many different exposures. This program is suggested by its developers for use in combination with a systematic phonologically based reading program and is intended to improve students’ accuracy and fluency in reading subskills (e.g., visual and auditory recognition of letters, orthographic pattern recognition), as well as their fluency in word identification, word attack, and comprehension.

Description of Strategy

RAVE-O was designed as a small-group, intensive pullout program for second- and third-grade students that includes 70 1-hour lessons, typically delivered over a 6-month time period. The lessons include comprehensive emphases both on fluency in word attack, word identification, and comprehension and on automaticity in underlying componential processes (e.g., phonological, orthographic, semantic, and lexical retrieval skills). The program emphasizes gamelike activities and incorporates four interventions: repeated readings, listening passage preview, word-list training, and phrase-drill with error correction. In the RAVE-O program, these strategies can be modified to be appropriate with small, heterogeneous groups of four to six children, although they are typically used in a one-on-one or dyadic context.

Each week students learn four or five words at the phonemic, orthographic, semantic, syntactic, and morphological levels. Throughout the week’s lessons, instruction focuses on developing and connecting these linguistic components and building a repertoire of strategies that students can apply to learning new words. The format for each lesson generally follows the same pattern: a warm-up activity to review previously taught words, introduction to new core words, practice for accuracy and speed, and a quick exit assessment to determine whether the students achieved the targeted skill. There is flexibility in structuring the activities in the lesson to meet each student’s level of competence, as determined by class performance and informal assessments.

Research Evidence

At least one case study provides evidence supporting this strategy. This case study followed closely four third-grade students from an urban school district. Of these students, one performed 2 years below grade level, and two other students performed 1 year below grade level. For three of the four students the combination of word-List training, phase-drill with error correction, and repeated reading had the greatest effects on both immediate and retained reading fluency gains, as measured by the number of words per minute that the student read correctly. Each of these strategies was taught in a small-group setting in four sessions delivered by an experienced trainer.
Sample Studies Supporting This Strategy


Reading fluency has been described as one of the essential ingredients for ensuring that students become successful readers. Unfortunately, a large number of elementary-aged students in this country do not fluently read age-appropriate material. Because of this, small-group interventions are practical and more time efficient than individualized intervention programs, but very few small-group interventions have been developed to target students' reading fluency of connected text. The primary purpose of this study was to examine four group-based treatment packages containing two or more of the following reading interventions: repeated reading, listening passage preview, and practicing difficult words in isolation. Effects of each treatment package were evaluated with 4 third graders using an alternating-treatments design, and effects were evaluated for both immediate and retained reading-fluency gains. Findings indicated that the combination of all three intervention components was most effective. Results also suggested some inconsistent relationships between immediate and retained reading gains for 3 of the 4 students.

Additional Resources

The RAVE-O program: A comprehensive, fluency-based reading intervention program.
http://ase.tufts.edu/crlr/raveo.html