REGIONAL *EDUCATIONAL* LABORATORY
SOUTHEAST ~ SERVECenter

EVIDENCE BASED EDUCATION REQUEST DESK

OUR GOAL

To assist educators and policymakers in their efforts to apply the evidence base to decisions about policies, programs, and practices they encounter.

Greensboro
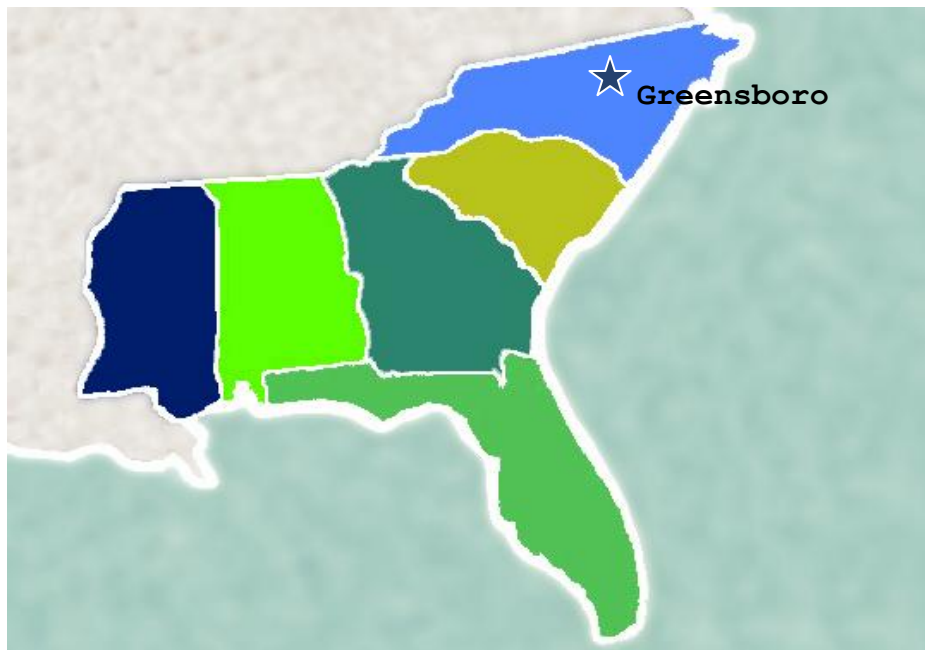
REQUEST:

- **What effective vocabulary enhancing programs are available for struggling readers in grades 2–5?**

RESPONSE

This EBE request focused on research-supported vocabulary interventions for middle elementary students. Limited vocabulary is an important factor in underachievement of children in disadvantaged homes. Children with larger vocabularies find reading easier, read more widely, and do better in school (Lubliner & Smetana, 2005). Research indicates that children from low-SES families enter school with half the vocabulary of children from professional homes and 2/3 of the vocabulary of children from working class homes (Hart & Risley, 1995). Consensus among researchers is that disadvantaged children need to learn more vocabulary (Lubliner, 2005). However, an extensive search for effective vocabulary interventions revealed that limited research exists that points toward such programs. As a result, this response includes not only the available research on effective vocabulary interventions but also some research focused on reading comprehension, as vocabulary is highly correlated with and supports reading comprehension (Lubliner, 2005).

Apthorp, H. (November/December 2006). Effects of a supplemental vocabulary program in third grade reading/language arts. *The Journal of Educational Research, 100*(2), 67-79.

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This experimental study examined the effectiveness of a supplemental vocabulary program--Elements of Reading Vocabulary. The study addressed three questions:

- What is the effect of EOR on reading and language arts classroom practices?
- What is the effect of EOR on children's oral and sight vocabulary?
- What is the effect of EOR on reading achievement?

Third grade classes in three districts, one in Alabama and two in New York, participated in the study; 15 classrooms participated in all. Teachers were randomly assigned to treatment or control within site and school. Teacher surveys and activity logs, classroom observations, and standardized assessments were used to gather data. The supplemental program was used in 24 weekly lessons focusing on seven words per week. Results of the study indicated that EOR had a significant positive effect on oral vocabulary and reading achievement at site A, but did not show this positive effect at site B. The study authors theorize that this may be consistent with the context in which the study took place. At site A, 78% of children were at risk for not meeting grade-level expectations; 90% of children at site A were on free or reduced-price lunches. At site B, in contrast, over 70% of children were at least at grade level, and only 24% to 35% received subsidized lunches. The researchers conclude that this intervention could be appropriate under conditions similar to those at site A where poverty is high, language experiences in and out of school are dissimilar, and language and literacy abilities are low. Additional research is suggested. (PDF file attached.)

Block, C., Whitely, C., Parris, S., Reed, K. & Cleveland, M. (2009). Instructional approaches that significantly increase reading comprehension. *Journal of Educational Psychology, 101*(2), 262-281.

The purpose of this study was to analyze the effects of widely used literacy instructional approaches on the reading comprehension of students in grades 2–6. Enrollees in the study comprised 660 participants in four districts in the southwestern United States. These participants were almost evenly divided between male and female; 51% were Caucasian, 23% were African-American, 21% were Hispanic, and 5% were of other ethnic extraction; 62% were from low- to middle-income status. The study was experimental, using treatment and control groups. Second, third, fourth, and sixth graders were randomly assigned to these groups. Differences between teachers in experimental and control groups were nonsignificant. Experimental participants rotated through all treatment situations until every participant had experienced all treatments. Six treatments were administered as part of the study. These were:

- Workbook practice
- Individualized schema-based learning
- Situated practice
- Conceptual learning
- Transactional learning
- Basal readers.

The Texas Assessment of Essential Knowledge and Skills Test Reading Subtest, SAT Reading Subtest, and publisher-created story or book tests were used as pre- and post- test assessments of treatment effects. Analyses of variance were used to determine the differences among literacy scores. Two-level hierarchical linear modeling analyses were used to examine the effects of school variables on academic achievement. The highest comprehension scores for all populations were correlated with three approaches that relied on 15 to 20 minutes of individual reading of student selected books of more than seven pages, with specific teacher actions. When struggling readers received instruction using one of these three approaches, their literacy growth was equal to or greater than that of their peers. This implies that treatments using classroom books result in significantly higher comprehension scores than either workbook practice or extending basal instruction. Implications for practice are discussed. (PDF file attached.)

Boulware-Gooden, R., Carreker, S., Thornhill, A., & Joshi, R. M. (2007). Instruction of metacognitive strategies enhances reading comprehension and vocabulary achievement of third grade students. *The Reading Teacher, 61*(1), 70-77.

This article discusses a study intended to determine the effectiveness of systematic direct instruction of metacognitive strategies on comprehension and vocabulary development. The study took place in six third grade classrooms in two urban elementary schools in the southwest. One school was designated the experimental school and one the control school. Pre- and post-tests used a battery of multiple tests, including subtests of the Woodcock-Johnson III and the 2000 Gray Silent Reading Test, as well as a criterion vocabulary test. Students in both schools received 30 minutes of reading comprehension instruction per day for 25 days; however, format of instruction differed. Analysis showed that students in the experimental group improved both in vocabularies, with an effect size of .161, and in reading comprehension, with an effect size of .041. The researchers conclude that metacognitive reading comprehension instruction significantly improved the academic achievement of participating third grade students. (PDF file attached.)

Brabham, E., & Lynch-Brown, C. (2002). Effects of teachers' reading aloud styles on vocabulary acquisition and comprehension of students in the early elementary grades. *Journal of Educational Psychology, 94*(3), 465-473.

This article begins with some information on read alouds and a brief review of available research on the topic. It provides a theoretical perspective for the study and then details purpose, method, and results. Effects of just reading, performance, and interactive reading aloud styles on learning were assessed on 15 groups of 12 children distributed across 24 schools in a large countywide system in the southeast U.S. There were 117 first graders and 129 third graders in the study. Preservice teachers, trained and guided by scripted procedures, read two informational storybooks to students using one of the styles. Information was collected using a 40-item pre-test based on 20 vocabulary words from each of the two books used in the study; separate post-tests were developed. Comprehension tests had 17 multiple choice items. Prior to the study, tests were field tested with 10 first graders and 10 third graders from schools not involved in the study. Preservice teacher readers received 4 hours of training prior to the study. Adherence to assigned

protocols was monitored using observations and video records. Multivariate analyses of variance and univariate tests showed that reading aloud styles produced statistically significant, consistent effects on vocabulary acquisition and comprehension and similar results at each grade level. Differences in comprehension means for reading style treatments were statistically significant for one of two books used, only. Vocabulary acquisition was facilitated more by interactional reading than performance reading. Both verbally mediated styles resulted in greater vocabulary learning than just reading. Effects were greater for vocabulary acquisition than for comprehension. Results extend previous findings on read aloud styles and are congruent with sociolinguistic and transactional theories. Limitations of the study are discussed. (PDF file attached.)

Carlisle, J. (2002). *Fostering vocabulary development in elementary classrooms*. **Ann Arbor, MI: University of Michigan, Center for the Improvement of Early Reading Achievement**.

This presentation from CIERA is focused on vocabulary acquisition. It offers some background research on the topic and provides information both on incidental learning of vocabulary and on several strategies for teaching vocabulary in the elementary classroom. (PDF file attached.)

Duke, N. (2002). *Improving comprehension of informational text.* **Ann Arbor, MI: University of Michigan, Center for the Improvement of Early Reading Achievement.**

According to this presentation, many students have difficulty with reading and writing informational text; this is particularly true of disadvantaged students. This presentation begins with information related to the issue, pointing out that it is important that students comprehend informational text and offering information on the benefits of informational text. It then offers suggestions for increasing student comprehension of this type of material. The presentation continues with more general information on comprehension instruction, touching on both the research and practical applications of the available research. It offers specific information on useful strategies for teaching comprehension and on models for teaching multiple strategies simultaneously. It offers a particular focus on two models: collaborative strategic reading and instructional conversations and continues with some information on appropriate classroom environments. The presentation closes by pointing out the importance of authentic use of informational text. (PDF file attached.)

http://www.ciera.org/: This is the website of CIERA. It offers access to a number of presentations related to comprehension and vocabulary.

James-Burdumy, S., Mansfield, W., Deke, J., Carey, N., Lugo-Gil, J., Hershey, et al. (2009). *Effectiveness of selected supplemental reading comprehension interventions: Impacts on a first cohort of fifth grade students.* **Washington, DC: National Center for Education Evaluation and Regional Assistance.**

This document begins with a brief review of the problem and then details an experimental study designed to assess the effects of four reading comprehension curricula on groups of fifth grade students from across the country. The study focuses on three research questions:

- What is the impact of the reading comprehension curricula on reading comprehension, and how do the impacts of the curricula compare to each other?
- How are student, teacher, and school characteristics related to the impacts?
- Which instructional practices are related to the impacts?

The report is based on data from the first year of the study. Ten districts, 89 schools, 268 teachers, and 6,350 students participated in the study. Schools were randomly assigned within districts to one of four treatment protocols or to be a control school. The curricula examined were Project CRISS, ReadAbout, Read for Real, and Reading for Knowledge. Data for the study were collected using the following:

- Classroom observations
- Teacher surveys
- School information forms
- Student records
- The Test of Silent Contextual Reading Fluency
- Passage Comprehension Subtest of the Group Reading Assessment and Diagnostic Evaluation
- Science and Reading Comprehension Assessment

The study offers implementation findings as well as impact findings. Impact findings indicate that comprehension test scores were not significantly different for schools using the selected curricula, but instead were significantly lower in treatment schools than in control schools. Some relationships were observed between teacher practices and intervention effects, but these were not judged causal. A second study report, based on a second year of data, is planned. (PDF file attached.)

Lubliner, S., & Smetana, L. (2005). The effects of comprehensive vocabulary instruction on Title 1 students: Metacognitive word learning skills and reading comprehension. *Journal of Literacy Research, 37*(2), 163-200.**

This article begins by examining the research base related to vocabulary and reading comprehension. It then details a study designed to measure the effectiveness of CVD, an approach to vocabulary instruction focused on metacognitive knowledge, in a natural classroom environment. The purpose of this classroom-based research was to determine if CVD would increase the reading comprehension and vocabulary acquisition of fifth grade students and to compare the achievement of Title 1 fifth graders and fifth graders in an above-average school after the intervention. Participants in the study included 77 children from a Title 1 school ranked in the lowest 20 percentile of elementary schools in California. The study group included children with limited English skills, learning disabilities, and erratic attendance. A class of 34 fifth graders from a nearby, above-average school was selected as a comparison group. The

research design involved comparisons of reading comprehension and vocabulary acquisition. The experimental period took place during a 12-week period after winter break. The CVD program included 12 modules of one-to-three lessons based on the district's social studies text. Each lesson was scripted. Data collection included three teacher interviews over the course of the study. Metacognitive tests and tests of reading comprehension and vocabulary acquisition were administered three times over the course of the study as well. Study results indicate significant improvement in students' self-monitoring skills. Students also exhibited substantial gains in reading comprehension and vocabulary acquisition. Results also indicate a significant narrowing of the achievement gap between the study participants and the control group over the course of the study. Limitations and directions for future research are discussed. (PDF file attached.)

Santoro, L., Chard, D., Howard, L., & Baker, S. (2008). Making the very most of classroom read alouds to promote comprehension and vocabulary. *The Reading Teacher, 61*(5), **396-408.**

This article offers a detailed description of a study on the effectiveness of read alouds. It describes the curriculum used in the research and discusses strategies for building comprehension while reading aloud. Results indicate that read alouds, with explicit comprehension instruction and active discussions of text, can promote comprehension and vocabulary learning. (PDF file attached.)

Slavin, R., Lake, C., Cheung, A., & Davis, S. (2009). *Beyond the basics: Effective reading programs for the upper elementary grades.* **Baltimore, MD: Johns Hopkins University, Center for Data Driven Reform in Education**.

This article systematically reviews research on the achievement outcomes of three types of classroom approaches to improving the reading achievement of students in grades 2–5: reading curricula, computer-assisted instruction (CAI), and instructional process programs. Study inclusion criteria were use of randomized or matched control groups, study duration of at least 12 weeks, and use of valid achievement measures that were independent of the experimental treatment. A total of 80 studies met these criteria. The review concludes that programs designed to change daily teaching practices have greater research support than those that focus on curriculum or technology alone. In particular, positive achievement effects were found for cooperative learning programs and for same-age and cross-age tutoring programs. The effective approaches provided extensive professional development intended to significantly affect teaching practices. In contrast, studies of reading textbooks and of computer-assisted instruction found small effects on reading outcomes. (This abstract is quoted from the referenced document; PDF file attached.)

Texas Education Agency. (2002). *Promoting vocabulary development: Components of effective vocabulary instruction.* **(Publication Number GEO1 105 04). Austin, TX: Author.**

This publication, from the Texas Education Agency, is focused on vocabulary acquisition. It is divided into three parts. The first part examines the obstacles that make can vocabulary development challenging. Four of these are discussed. These are:

- The size of the task
- The differences between spoken and written English
- The limitations of the sources of information about words that are accessible to students
- The complexity of words

The second part provides an overview of the components of effective vocabulary instruction and discusses how these components can help students as they overcome the obstacles to vocabulary acquisition and develop strong vocabularies. The document focuses on five strategies that can help students successfully acquire good vocabulary skills. These are:

- Encouraging wide reading
- Exposing students to high-quality oral language
- Promoting word consciousness
- Providing specific instruction on specific words
- Providing modeling and instruction in independent word-learning strategies

The third part of the document provides techniques for teaching vocabulary, particularly in the content areas. Considerable specific information and many examples are included. (PDF file attached.)

Other Resources

- What Works Clearinghouse (http://ies.ed.gov/ncee/wwc/). This website contains information on a number of reading programs, their components, and their effectiveness. Some of these programs include a vocabulary component and/or speak to reading comprehension.
- Issue 25(2-3), 2009 of the *Reading and Writing Quarterly* is focused on direct/explicit instruction in reading for the struggling reader; both vocabulary and comprehension are covered.

Additional References

Hart, T., & Risley, B. (1995). *Meaningful differences in the everyday experiences of young American children*. Baltimore, MD: Paul H. Brookes Publishing.

Methodology

The response to this EBE request was based on a search of resources including

- Google
- Google Scholar
- Education Index

- ERIC
- Academic OneFile
- JSTOR
- The Center for the Improvement of Early Reading Education
- What Works Clearinghouse
- RAND
- The Promising Practices Network
- Mathematica
- American Institutes for Research
- GAO
- The Education Commission of the States database
- The National Center for Education Evaluation
- The National Center for Education Research
- EdRes.org
- The Best Evidence Encyclopedia

Search terms used included
- Vocabulary programs
- Enhancing vocabulary elementary
- Vocabulary interventions
- Reading comprehension
- Reading comprehension elementary
- Vocabulary and comprehension

We provide research based information on educational initiatives happening nationally and regionally. The EBE Request Desk is currently taking requests for:

- **Research on a particular topic**

- **Information on the evidence base for curriculum interventions or professional development programs**

- **Information on large, sponsored research projects**

- **Information on southeastern state policies and programs**

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