

# WWC EVIDENCE REVIEW PROTOCOL FOR INTERVENTIONS FOR ENGLISH LANGUAGE LEARNERS, VERSION 1

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## Topic Area Focus

The What Works Clearinghouse (WWC) review focuses on interventions designed to improve the English language literacy and/or academic achievement of elementary school students who are English language learners.

Systematic reviews of evidence in this topic area will address the following questions:

- *Which programs for elementary school English Language Learners (ELLs) increase the English language and academic outcomes of these students?*
- *Are some programs more effective for certain types of students?*

## Key Definitions

**English Language Learners (ELLs).** ELLs are students with a primary language other than English who have a limited range of speaking, reading, writing, and listening skills in English. ELLs also include students identified and determined by their school as having limited English proficiency (LEP) and a language other than English spoken in the home.

**English Language Skills.** These skills include speaking and listening fluency, in addition to the academic outcomes of reading and writing.

**Academic Outcomes.** Achievement in reading, mathematics, and English language development are of interest. Reading outcomes include measures of word reading, fluency and/or accuracy in reading connected text, vocabulary, and reading comprehension. Math outcomes include measures of content knowledge (number sense, properties, and operations; measurement; geometry and spatial sense; data analysis, statistics, and probability; and algebra and functions) as well as an understanding of mathematical concepts, procedures, and problem solving. English language development includes measures of oral or written proficiency including measures of listening comprehension, receptive vocabulary, grammar, syntax and other linguistic features of the English language. Both standardized tests and researcher developed measures are considered eligible in any of these three domains.

## General Inclusion Criteria

### Populations to be Included

This WWC review focuses on ELL elementary school students, meaning the intervention is offered to students in K-6 classrooms. In addition, curricula are being characterized based on whether they target special subpopulations of children (e.g., learning disabled, language impaired, ESL). The review will also include studies in which students may no longer be considered limited English proficient by the school, but where students still possess limited English language skills. Students who no longer are considered limited English proficient, but

who were considered ELL in the preceding two school years, often possess limited English language proficiency. Therefore, findings about such students are of high value for teachers and administrators.

## **Types of Interventions that May be Included**

Only research on interventions that are replicable will be reviewed (i.e., documented well enough that they can be reproduced, which are generally materials-based and designed for a specific sub-population of ELLs). Studies that compare differing languages of instruction (e.g., teaching first graders in Spanish vs. English) will be excluded. Furthermore, the team will exclude studies where all instruction is conducted in a students' native language. The purpose of this review is to determine which approaches for teaching academics in English to second language learners are effective. A study of teaching reading or mathematics in a students' native language is a legitimate mathematics or reading study, but does not provide information on how to deal with the challenging task of teaching academic material to students using a language that they have not yet mastered. Programs and interventions to be included will be determined after an exhaustive search of the published and unpublished literature by the Evidence Report Team and a review of the websites of the 50 states to identify programs in use and/or recommended.

Should a study provide evidence about the merits of a broad theory for language acquisition and not offer information on a curriculum that can be used in today's schools, the study will be considered as outside the scope of the review.

**1 – Programs.** For purposes of this review, a program is thought of as a curriculum-based intervention. That is, a replicable, materials-based instructional program for which:

- the population of learners is well specified (e.g., linguistic background, academic skills)
- learning goals are well delineated
- assessments provide clear information about progress toward those learning goals

Programs considered for this study will *typically* consist of educational content that extend over the course of a semester or more of instruction. Programs may be based on text materials, computer software, videotapes, professional development packages for teachers or any other materials base.

**2 – Practices.** Shorter interventions that focus on instructional strategies (i.e., educational practices such as pre-teaching vocabulary words; cooperative learning strategies) will be considered as long as they yield data that will inform the review. These will be labeled instructional practices.

The review team does not anticipate reviewing interventions that fall outside our definitions of program (i.e., materials-based curricula) or practices.

## Types of Studies That Will Be Included

The review focuses on well-conducted randomized control trials (RCTs); well-controlled quasi-experimental designs (QEDs), including matched groups; regression discontinuity and single subject design evaluations.<sup>1</sup>

This review is limited to empirical studies published in 1983 or later that focus on interventions for English Language Learners. The studies must also include children attending grades K-6 in the U.S., its territories, or tribal entities. The focus of the outcome measures needs to be the children, not the teachers, and at least one of the outcome measures needs to be academic in nature and demonstrate sufficient reliability or face validity. Much of the academic ELL literature focuses on the point when it is best for ELLs to be fully immersed in English instruction in lieu of teaching them in their native language (August & Hakuta, 1997; Gersten & Baker, 2000). The report of the National Research Council (August & Hakuta, 1997) concluded that these evaluations are problematic and do not provide an empirical basis for determining Federal or local policy. We concur with this appraisal. Therefore, studies that use a different language (or mix of) in treatment and comparison conditions are ineligible for the review; some allowance will be made for investigations that had minor degrees of differing language use across conditions if this resulted from implementation problems only<sup>2</sup> (i.e., not purposeful manipulation). The review team will include studies where the majority of instruction is in English, but where up to 20% of instruction is in a students' native language. Many educators advocate that when ELLs receive academic instruction in English, some level of strategic native language support is advisable. We therefore included such studies. The majority of the instruction is conducted in English but teachers might occasionally provide some native language support. We chose 20% as a reasonable estimate of the differences between occasional native language and an approach with a substantial native language or bilingual component.

For example, a study that compares the effects of transitional bilingual educational (TBE) approaches versus structured immersion fall outside the scope of this review. Studies that compare different forms of TBE are, however, of interest.

## II. Specific Topic Parameters

### 1. Commonly-shared or theoretically derived characteristics of the intervention that should be reflected in its definition and implementation.

The interventions, practices, policies and programs of interest focus on the academic needs of elementary ELL students and are carried out in a school setting. Recall that ELL students have a primary language other than English and have a limited range of speaking, reading, writing and listening skills in English. To clarify, students are only considered ELL if they show limited English proficiency and a language other than English is spoken at home.

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<sup>1</sup> Well conducted single-subject design (also referred to as single-case) studies may be included. At this time, the WWC has not developed standards for reviewing or reporting on single-case design studies. Consequently, studies with a single-case design are not currently addressed in this review.

<sup>2</sup> Implementation problems will be noted in WWC reports.

Variations in the intervention in components and ELL subpopulations for which an intervention has been designed may be examined, depending on whether there is enough data to report on common themes for intervention effectiveness (e.g., X intervention appears to work well for Mexican-American ELL children, but not Vietnamese children). For studies that pass all standards, coders describe the information provided regarding intervention implementation. In the topic report, the review may consider:

- Student native language proficiency
- Student English language proficiency at pretest
- Other academic pretest measures
- Length of intervention
- Intensity of intervention (i.e., number of hours of instruction).
- Teacher training in intervention strategy
- Degree of program implementation/fidelity
- Context of instruction (e.g., special education, ESL class, etc.)
- Curricula such as texts, videotapes, software or other classroom materials

**2. Important characteristics of the intervention that must be known in order to reliably replicate it with different participants, in other settings, at other times. An intervention is replicable if:**

- The intervention is “branded”
- The intervention is not “branded” but meets the following conditions:
  - The intervention is described in general terms
  - The duration of the intervention is described
  - The characteristics of the intervention is described
  - The target population is identified
  - The curriculum and/or instructional practices used are described

If available, other important characteristics include:

- Required training needed to carry out the intervention
- Use of support materials and prescribed classroom structures;
- Reference for widely available curricula (e.g., a commercially available supplement for ELLs from a core reading program, a commercially available ESL or English Language Development curriculum)
- Descriptions of guiding principles informing the interventions, practices, and programs will also be considered.

**3. Important classes of outcomes.**

Any academic outcome in reading, mathematics or English-language development will be included.

**4. Evidence sufficient for an outcome measure to demonstrate each type of reliability (internal consistency, temporal stability/test/-retest, and inter-rater).**

Standard WWC values will be applied to these reliability considerations as follows:

- Internal consistency: .60
- Temporal stability/test-retest: .40
- Inter-rater reliability: .50

**5. Interval of time that studies should have been conducted in to be appropriate for the Evidence Report.**

Studies must have been conducted or published since 1983 (i.e., with a publication date of 1983 or later). This is the default time interval for all WWC reviews. The decision to maintain the 1983 cutoff was made after consulting with a number of experts in the ELL field.

**6. Necessary characteristics that define the target population.**

ELL children attending school between grades K-6. (This also includes students no longer classified as limited English proficient, but still demonstrating weakness in English language skills). Children must also reside and attend a school within the United States (including U.S. Territories and Tribal Entities).

**7. Important characteristics of participants that might be related to the intervention's effect that must be equated if a study does not employ random assignment.**

- Pretest scores for at least one outcome measure or a reasonable predictor of posttest performance (e.g., a phoneme awareness measure for reading)
- Grade level
- Level of English language skills

**8. Relevant subgroups of interest for this review, in addition to age or grade, gender, disability status, and race/ethnicity.**

- Native Language
- Socioeconomic status

**9. Relevant settings of interest for this review.**

- Schools in urban, suburban, or rural locations
- Public, private, and special-purpose schools

**10. Appropriate interval for measuring the intervention's effect relative to the end of the intervention.**

The benefits of ELL interventions are expected to appear by the end of the intervention and to be retained past that point. Thus measures at the end of an intervention and any time thereafter are appropriate.

**11. Amount of differential attrition from the intervention and control groups assumed to be problematic.**

The WWC default value will be used: Differential attrition from the intervention and control groups is defined as being greater than 7% differential loss. If differential attrition is less than or equal to 7%, we assume that the bias associated with it is minimal. If it is greater than 7%, the study must show that differential attrition did not bias the effect size estimate. A post-attrition demonstration of group equivalence on the pretest is required. Post-attrition demonstration of group equivalence is defined as either a well-powered (.80) test of equivalence that is nonsignificant or a standardized mean difference between groups of less than  $d = .10$  or less.

**12. Amount of overall attrition from the study sample assumed to be severe.**

The WWC default value will be used: Severe overall attrition is defined as greater than 20% loss. If overall attrition is less than or equal to 20%, we assume that the bias associated with it is minimal. If it is greater than 20%, the study must show that overall attrition did not bias the effect size estimate. A post-attrition demonstration of group equivalence on the pretest is required. Post-attrition demonstration of group equivalence is defined as either a well-powered (.80) test of equivalence that is nonsignificant or a standardized mean difference between groups of less than  $d = .10$  or less.

### III. METHODOLOGY

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#### Literature Search Strategies

The WWC Evidence Report Team employs comprehensive and systematic literature search strategies to identify the population of published and unpublished relevant studies. This section contains topic specific elements of the literature search (e.g., search terms, additional journals, and associations).

#### Key Word List Revised

Bilingual Education  
Second Language Education  
Second Language Acquisition  
Targeted English  
English Language Learners  
English learners  
ESL students  
Limited English proficient students  
Immersion Programs  
Structured immersion  
Sheltered immersion  
English as a Second Language  
Dual Language  
Dual Immersion  
High Intensive Language Training  
Sheltered Instruction  
Sheltered English  
Pull Out ESL Programs  
Success for All (Studies with outcomes pertaining to ELL students)  
Bilingual Cooperative Integrated Reading and Composition (BCIRC)  
SRA Reading Mastery  
CALLA  
Into English

#### Supplementary List of Journals to be Hand Searched

- TESOL Quarterly
- Bilingual Research Journal
- Journal of Educational Issues for Language Minority Students
- Journal of Multilingual and Multicultural Development
- Evaluation and Research in Education

- Language, Culture, and Curriculum
- Elementary School Journal
- Exceptional Children
- Journal of Special Education
- Journal of Learning Disabilities
- Learning Disabilities Research and Practice
- Remedial and Special Education

### **Supplementary List of Organizations**

- National Association for Bilingual Education (NABE)
- Teachers of English to Speakers of Other Languages (TESOL)
- Linguistic Society of America (LSA)

### **Personal Contacts**

The ELL team will solicit studies directly from experts, identified by the Principle Investigator, in the field of education who work on ELL interventions. Another source of contacts will be those identified using list serves dedicated to ELL, whose members are scholars working in this area.

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### References

- August, D., & Hakuta, K. (Eds.). (1997). *Improving schooling for language-minority children: A research agenda*. Washington, DC: National Academy Press.
- Gersten, R., & Baker, S. (2000). What we know about effective instructional practices for English-language learners. *Exceptional Children*, 66(4), 454-470.