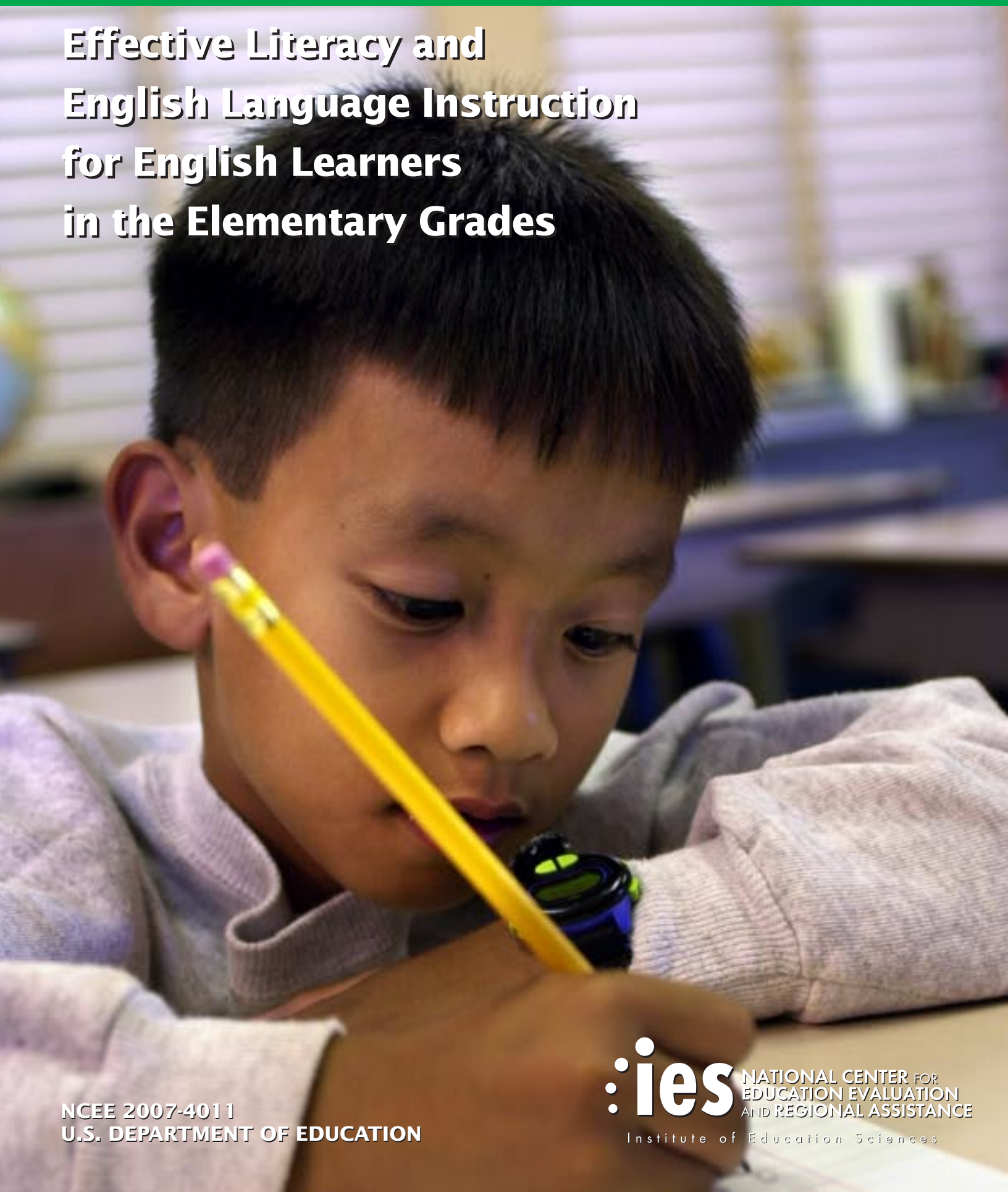
IES PRACTICE GUIDE

Effective Literacy and English Language Instruction for English Learners in the Elementary Grades



NCEE 2007-4011
U.S. DEPARTMENT OF EDUCATION

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Institute of Education Sciences

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One unique feature of IES-sponsored practice guides is that they are subjected to rigorous external peer review through the same office that is responsible for independent review of other IES publications. A critical task of the peer reviewers of a practice guide is to determine whether the evidence cited in support of particular recommendations is up-to-date and that studies of similar or better quality that point in a different direction have not been ignored. Because practice guides depend on the expertise of their authors and their group decisionmaking, the content of a practice guide is not and should not be viewed as a set of recommendations that in every case depends on and flows inevitably from scientific research.

The goal of this Practice Guide is to formulate specific and coherent evidence-based recommendations for use by educators addressing a multifaceted challenge that lacks developed or evaluated packaged approaches. The challenge is effective literacy instruction for English learners in the elementary grades. The Guide provides practical and coherent information on critical topics related to literacy instruction for English learners.

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Effective Literacy and English Language Instruction for English Learners in the Elementary Grades

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This report was prepared for the National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences under Contract ED-02-CO-0022 by the What Works Clearinghouse, a project of a joint venture of the American Institutes for Research and The Campbell Collaboration, and Contract ED-05-CO-0026 by Optimal Solutions Group, LLC.

Disclaimer
The opinions and positions expressed in this practice guide are the authors' and do not necessarily represent the opinions and positions of the Institute of Education Sciences or the United States Department of Education. This practice guide should be reviewed and applied according to the specific needs of the educators and education agency using it and with full realization that it represents only one approach that might be taken, based on the research that was available at the time of publication. This practice guide should be used as a tool to assist in decision-making rather than as a "cookbook." Any references within the document to specific education products are illustrative and do not imply endorsement of these products to the exclusion of other products that are not referenced.

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July 2007

Gersten, R., Baker, S.K., Shanahan, T., Linan-Thompson, S., Collins, P., & Scarcella, R. (2007). *Effective Literacy and English Language Instruction for English Learners in the Elementary Grades: A Practice Guide* (NCEE 2007-4011). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education. Retrieved from http://ies.ed.gov/ncee.

This report is available on the IES web site at http://ies.ed.gov/ncee

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Contents

Foreword from the Institute of Education Sciences

What is a practice guide? The health care professions have embraced a mechanism for assembling and communicating evidence-based advice to practitioners about care for specific clinical conditions. Variously called practice guidelines, treatment protocols, critical pathways, best practice guides, or simply practice guides, these documents are systematically developed recommendations about the course of care for frequently encountered problems, ranging from physical conditions such as foot ulcers to psychosocial conditions such as adolescent development.[1]

Practice guides are similar to the products of expert consensus panels in reflecting the views of those serving on the panel and the social decisions that come into play as the positions of individual panel members are forged into statements that all are willing to endorse. However, practice guides are generated under three constraints that typically do not apply to consensus panels. The first is that a practice guide consists of a list of discrete recommendations that are intended to be *actionable*. The second is that those recommendations taken together are intended to be a *coherent* approach to a multifaceted problem. The third, which is most important, is that each recommendation is explicitly connected to the *level of evidence* supporting it, with the level represented by a grade (for example, high, moderate, or low).

The levels of evidence, or grades, are usually constructed around the value of particular types of studies for drawing causal conclusions about what works. Thus, one typically finds that the top level of evidence is drawn from a body of randomized controlled trials, the middle level from well designed studies that do not involve randomization, and the bottom level from the opinions of respected authorities. Levels of evidence can also be constructed around the value of particular types of studies for other goals, such as the reliability and validity of assessments.

Practice guides can also be distinguished from systematic reviews or meta-analyses, which use statistical methods to summarize the results of studies obtained from a rule-based search of the literature. Authors of practice guides seldom conduct the types of systematic literature searches that are the backbone of a meta-analysis, though they take advantage of such work when it is already published. Instead, they use their expertise to identify the most important research with respect to their recommendations, augmented by a search of recent publications to assure that the research citations are up-to-date. Further, the characterization of the quality and direction of the evidence underlying a recommendation in a practice guide relies less on a tight set of rules and statistical algorithms and more on the judgment of the authors than would be the case in a high-quality meta-analysis. Another distinction is that a practice guide, because it aims for a comprehensive and coherent approach, operates with more numerous and more contextualized statements of what works than does a typical meta-analysis.

Thus, practice guides sit somewhere between consensus reports and meta-analyses in the degree to which systematic processes are used for locating relevant research and characterizing its meaning. Practice guides are more like consensus panel reports than meta-analyses in the breadth and complexity of the topics they address. Practice guides are different from both consensus reports and meta-analyses in providing advice at the level of specific action steps along a pathway that represents a more or less coherent and comprehensive approach to a multifaceted problem.

The Institute of Education Sciences (IES) publishes practice guides in education to bring the best available evidence and expertise to bear on the types of systemic challenges that cannot currently be addressed by single interventions or programs. Although IES has taken advantage of the history of practice guides in health care to provide models of how to proceed in education, education is different from health care in ways that may require that practice guides in education have somewhat different designs. Even within health care, where practice guides now number in the thousands, there is no single template in use. Rather, one finds descriptions of general design features that permit substantial variation in the realization of practice guides across subspecialties and panels of experts.[2] Accordingly, the templates for IES practice guides may vary across practice guides and change over time and with experience.

The steps involved in producing an IES-sponsored practice guide are, first, to select a topic, informed by formal surveys of practitioners and requests. Next is to recruit a panel chair who has a national reputation and up-to-date expertise in the topic. Third, the chair, working with IES, selects a small number of panelists to coauthor the practice guide. These are people the chair believes can work well together and have the requisite expertise to be a convincing source of recommendations. IES recommends that at one least one of the panelists be a practitioner with experience relevant to the topic being addressed. The chair and the panelists are provided a general template for a practice guide along the lines of the information provided here. The practice guide panel works under a short deadline of six to nine months to produce a draft document. It interacts with and receives feedback from staff at IES during the development of the practice guide, but its members understand that they are the authors and thus responsible for the final product.

One unique feature of IES-sponsored practice guides is that they are subjected to rigorous external peer review through the same office that is responsible for independent review of other IES publications. A critical task of the peer reviewers of a practice guide is to determine whether the evidence cited in support of particular recommendations is up-to-date and that studies of similar or better quality that point in a different direction have not been ignored. Peer reviewers also are asked to evaluate whether the evidence grades assigned to particular recommendations by the practice guide authors are appropriate. A practice guide is revised as necessary to meet the concerns of external peer reviews and gain the approval of the standards and review staff at IES. The external peer review is carried out independent of the office and staff within IES that instigated the practice guide.

Because practice guides depend on the expertise of their authors and their group decisionmaking, the content of a practice guide is not and should not be viewed as a set of recommendations that in every case depends on and flows inevitably from scientific research. It is not only possible but also likely that two teams of recognized experts working independently to produce a practice guide on the same topic would generate products that differ in important respects. Thus, consumers of practice guides need to understand that they are, in effect, getting the advice of consultants. These consultants should, on average, provide substantially better advice than an individual school district might obtain on its own because the authors are national authorities who have to achieve consensus among themselves, justify their recommendations with supporting evidence, and undergo rigorous independent peer review of their product.

Institute of Education Sciences

Preface from the authors

The goal of this Practice Guide is to formulate specific and coherent evidence-based recommendations for use by educators addressing a multifaceted challenge that lacks developed or evaluated packaged approaches. The challenge is effective literacy instruction for English learners in the elementary grades. At one level, the target audience is a broad spectrum of school practitioners—administrators, curriculum specialists, coaches, staff development specialists, and teachers. At another level, a more specific objective is to reach district-level administrators with a Practice Guide that will help them develop practice and policy options for their schools. The Guide includes specific recommendations for district administrators and indicates the quality of the evidence that supports these recommendations.

Our expectation is that a superintendent or curriculum director could use this Practice Guide to help make decisions about policy involving literacy instruction for English learners in the elementary grades. For example, we include recommendations on curriculum selection, sensible assessments for monitoring progress, and reasonable expectations for student achievement and growth. The Guide provides practical and coherent information on critical topics related to literacy instruction for English learners.

We, the authors, are a small group with expertise on various dimensions of this topic. Several of us are also experts in research methodology. The range of evidence we considered in developing this document is vast, ranging from expert analyses of curricula and programs, to case studies of seemingly effective classrooms and schools, to trends in the National Assessment of Educational Progress data, to correlational studies and longitudinal studies of patterns of typical development. For questions about what works best, high-quality experimental and quasi-experimental studies, such as those meeting the criteria of the What Works Clearinghouse, have a privileged position (www.whatworks.ed.gov). In all cases we pay particular attention to patterns of findings that are replicated across studies.

Although we draw on evidence about the effectiveness of specific programs and practices, we use this information to make broader points about improving practice. In this document we have tried to take a finding from research or a practice recommended by experts and describe how the use of this practice or recommendation might actually unfold in school settings. In other words we aim to provide sufficient detail so that a curriculum director would have a clear sense of the steps necessary to make use of the recommendation.

A unique feature of practice guides is the explicit and clear delineation of the quality—as well as quantity—of evidence that supports each claim. To do this, we adapted a semistructured hierarchy suggested by the Institute of Education Sciences. This classification system uses both the quality and quantity of available evidence to help determine the strength of the evidence base in which each recommended practice is grounded. (This system appears in appendix 2.)

Strong refers to consistent and generalizable evidence that an approach or practice causes better outcomes for English learners or that an assessment is reliable and valid. *Moderate* refers either to evidence from studies that allow strong causal conclusions but cannot be generalized with assurance to the population on which a recommendation is focused

(perhaps because the findings have not been sufficiently replicated) or to evidence from studies that are generalizable but have more causal ambiguity than offered by experimental designs (such as statistical models of correlational data or group comparison designs where equivalence of the groups at pretest is uncertain). For the assessments, *moderate* refers to high-quality studies from a small number of samples that are not representative of the whole population. *Low* refers to expert opinion based on reasonable extrapolations from research and theory on other topics and evidence from studies that do not meet the standards for moderate or strong evidence.

In this English Learner Practice Guide we use effect sizes for describing the magnitude of impact of a program or practice reported in a study. This metric is increasingly used in social science research to provide a gauge of the magnitude of the improvement in performance reported in a research study. A common index of effect size is the mean difference between the experimental and comparison conditions expressed in standard deviation units. In accordance with the What Works Clearinghouse criteria we describe an effect size of +0.25 or higher as *substantively important*. This is equivalent to raising performance of a group of students at least 10 percentile points on a valid test.

For each recommendation we include an appendix that provides more technical information about the studies and our decisions regarding level of evidence for the recommendation. To illustrate the types of studies reviewed we describe one study in considerable detail for each recommendation. Our goal in doing this is to provide interested readers with more detail about the research designs, the intervention components, and how impact was measured. By including a particular study, we do not mean to suggest that it is the best study reviewed for the recommendation or necessarily an exemplary study in any way.

We have not addressed two main areas.

First, we did not address English learners in middle school and high school. Schools face very different issues in designing instruction for students who enter school when they are young (and often have received no education or minimal instruction in another language or educational system) and those who enter in grades 6 to 12 and often are making a transition to another language and another educational system. For that reason we chose to focus on only one of these populations, students in the elementary grades.

Second, we did not address the language of instruction. Our goal is to provide guidance for all English learners, whether they are taught to read in their home language, in English (by far the most prevalent method in the United States), or in both languages simultaneously. The recommendations are relevant for students regardless of their language of reading instruction. The best language to use for initial reading instruction has been the subject of great debate and numerous reviews of the literature.

Some experts conclude that students are best served by having some reading instruction in their native language,[3] others that students should be taught to read simultaneously in both English and their native language,[4] still others that the results are inconclusive.[5] Many reviews have cited serious methodological flaws in all the studies in terms of internal validity;[6] others have not addressed the quality of the research design.[7] Currently, schools operate under an array of divergent policies set by the state and local school district.

In most cases school administrators have little say on issues involving language of initial reading instruction, so we do not take a position on this intricate issue for this Practice Guide.

We would like to thank the following individuals for their helpful feedback and reviews of earlier versions of this Guide: Catherine Snow and Nonie Lesaux of Harvard University; Maria Elena Arguelles, independent consultant; Margaret McKeown of University of Pittsburgh; Michael Coyne of University of Connecticut; Benjamin S. Clarke of University of Oregon and Jeanie Smith of Pacific Institutes for Research; and Lana Edwards Santoro and Rebecca Newman-Gonchar of RG Research Group. We also wish to acknowledge the exceptional contribution of Elyse Hunt-Heinzen, our research assistant on the project, and we thank Charlene Gatewood of Optimal Solutions and the anonymous reviewers for their contributions to the refinement of this report.

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Dr. Scott Baker is the director of Pacific Institutes for Research in Eugene, Oregon. He specializes in early literacy measurement and instruction in reading and mathematics. Dr. Baker is co-principal investigator on two grants funded by the Institute of Education Sciences, and he is the codirector of the Oregon Reading First Center. Dr. Baker's scholarly contributions include conceptual, qualitative, and quantitative publications on a range of topics related to students at risk for school difficulties and students who are English learners.

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Dr. Robin Scarcella is a professor in the School of Humanities at the University of California, Irvine, where she also directs the Program of Academic English/ESL. She has taught English as a second language in California's elementary and secondary schools and colleges. She has written many research articles, appearing in such journals as *The TESOL Quarterly* and *Studies in Second Language Acquisition,* as well as in books. Her most recent volume, *Accelerating Academic English*, was published by the University of California.

Disclosure of potential conflicts of interest

Practice guide panels are composed of individuals who are nationally recognized experts on the topics about which they are rendering recommendations. IES expects that such experts will be involved professionally in a variety of matters that relate to their work as a panel. Panel members are asked to disclose their professional involvements and to institute deliberative processes that encourage critical examination the views of panel members as they relate to the content of the practice guide. The potential influence of panel members' professional engagements is further muted by the requirement that they ground their recommendations in evidence that is documented in the practice guide. In addition, the practice guide is subjected to independent external peer review prior to publication, with particular focus on whether the evidence related to the recommendations in the practice guide has been has been appropriately presented.

The professional engagements reported by each panel members that appear most closely associated with the panel recommendations are noted below.

Dr. Gersten, the panel chair, is a co-author of a forthcoming Houghton Mifflin K-6 reading series that includes material related to English learners. The reading series is not referenced in the practice guide.

Dr. Baker has an author agreement with Cambium Learning to produce an instructional module for English learners. This module is not written and is not referenced in the practice guide.

Dr. Linan-Thompson was one of the primary researchers on intervention studies that used Proactive Reading curriculum, and she developed the ESL adaptations for the intervention. Linan-Thompson co-authored the research reports that are described in the Guide.

Dr. Shanahan receives royalties on various curricula designed for elementary and middle school reading instruction, including Harcourt Achieve Elements of Reading Fluency (Grades 1-3); Macmillan McGraw-Hill Treasures (Grades K-6); and AGS Glove-Pearson AMP (Grades 6-8). None of these products, though widely used, are aimed specifically at the English learner instructional market (the focus of this practice guide). Macmillan publishes a separate program aimed at the English learner population. Shanahan is not involved in that program.

Dr. Scarcella provides on-going teacher professional development services on academic vocabulary through the University of California Professional Development Institutes that are authorized by the California State Board of Education.

Overview

The National Assessment of Educational Progress (NAEP) has tracked the achievement of Hispanic students since 1975. Although many English learners are in the Hispanic designation, English learners as a group have only recently been disaggregated in the NAEP analyses. Recent analysis of long-term trends[8] reveals that the achievement gap between Hispanics and Whites in reading has been significantly reduced over the past 30 years for 9-year-olds and 17-year-olds (although not for 13-year-olds).[9]

Despite apparent progress in the earlier grades, major problems persist. For instance, the 2005 achievement gap of 35 points in reading between fourth-grade English learners and non-English learners was greater than the Black-White achievement gap.[10] And the body of scientific research on effective instructional strategies is limited for teaching English learners.[11]

There have been some significant recent advances. Of particular note is the increase in rigorous instructional research with English learners. Districts and states have increasingly assessed progress of English learners in academic areas and in English language development. Several examples in the literature illustrate success stories among English learners—both for individual students and for schools. These students, despite having to learn English while mastering a typical school curriculum, have "beaten the odds" in academic achievement.[12]

How can we increase the chances that more English learners will achieve these successes? To answer, we must turn first to research. Unfortunately, there has not been sufficient research aimed at understanding how to improve the quality of literacy instruction for English learners. Only about a dozen studies reach the level of rigor necessary to determine that specific instructional practices or programs do, in fact, produce significantly better academic outcomes with English learners. This work has been analyzed and reviewed by the What Works Clearinghouse (the work of the Clearinghouse is integrated into our text when relevant; new studies will be added periodically).

Despite the paucity of rigorous experimental research, we believe that the available evidence allows us to provide practical recommendations about aspects of instruction on which research has cast the sharpest light. This research suggests—as opposed to demonstrates—the practices most likely to improve learning for English learners.

Over the years many terms have been used to refer to children who enter school using a language other than English: limited English proficiency (LEP), English as a second language (ESL), English for speakers of other languages (ESOL), second language learners, language minority students, and so on. In this Practice Guide we use "English learners" because we feel it is the most descriptive and accurate term for the largest number of children. This term says nothing about children's language proficiency or how many other languages they may use—it simply recognizes that they are learning English.

This Practice Guide provides five recommendations, integrated into a coherent and comprehensive approach for improving the reading achievement and English language development of English learners in the elementary grades.

Recommendations

1. Conduct formative assessments with English learners using English language measures of phonological processing, letter knowledge, and word and text reading. Use these data to identify English learners who require additional instructional support and to monitor their reading progress over time **(Level of Evidence: Strong)**.

2. Provide focused, intensive small-group interventions for English learners determined to be at risk for reading problems. Although the amount of time in small-group instruction and the intensity of this instruction should reflect the degree of risk, determined by reading assessment data and other indicators, the interventions should include the five core reading elements (phonological awareness, phonics, reading fluency, vocabulary, and comprehension). Explicit, direct instruction should be the primary means of instructional delivery **(Level of Evidence: Strong)**.

3. Provide high-quality vocabulary instruction throughout the day. Teach essential content words in depth. In addition, use instructional time to address the meanings of common words, phrases, and expressions not yet learned **(Level of Evidence: Strong)**.

4. Ensure that the development of formal or academic English is a key instructional goal for English learners, beginning in the primary grades. Provide curricula and supplemental curricula to accompany core reading and mathematics series to support this goal. Accompany with relevant training and professional development **(Level of Evidence: Low)**.

5. Ensure that teachers of English learners devote approximately 90 minutes a week to instructional activities in which pairs of students at different ability levels or different English language proficiencies work together on academic tasks in a structured fashion. These activities should practice and extend material already taught **(Level of Evidence: Strong)**.

One major theme in our recommendations is the importance of intensive, interactive English language development instruction for all English learners. This instruction needs to focus on developing academic language (the decontextualized language of the schools, the language of academic discourse, of texts, and of formal argument). This area, which researchers and practitioners feel has been neglected, is one of the key targets in this Guide.

Checklist for carrying out the recommendations

Recommendation 1. Screen for reading problems and monitor progress

☑ Districts should establish procedures for—and provide training for—schools to screen English learners for reading problems. The same measures and assessment approaches can be used with English learners and native English speakers.

☑ Depending on resources, districts should consider collecting progress monitoring data more than three times a year for English learners at risk for reading problems. The severity of the problem should dictate how often progress is monitored—weekly or biweekly for students at high risk of reading problems.

☑ Data from screening and progress monitoring assessments should be used to make decisions about the instructional support English learners need to learn to read.

☑ Schools with performance benchmarks in reading in the early grades can use the same standards for English learners and for native English speakers to make adjustments in instruction when progress is not sufficient. It is the opinion of the panel that schools should not consider below-grade-level performance in reading as "normal" or something that will resolve itself when oral language proficiency in English improves.

☑ Provide training on how teachers are to use formative assessment data to guide instruction.

Recommendation 2. Provide intensive small-group reading interventions

☑ Use an intervention program with students who enter the first grade with weak reading and prereading skills, or with older elementary students with reading problems.

☑ Ensure that the program is implemented daily for at least 30 minutes in small, homogeneous groups of three to six students.

☑ Provide training and ongoing support for the teachers and interventionists (reading coaches, Title I personnel, or paraeducators) who provide the small-group instruction.

☑ Training for teachers and other school personnel who provide the small-group interventions should also focus on how to deliver instruction effectively, independent of the particular program emphasized. It is important that this training include the use of the specific program materials the teachers will use during the school year. But the training should also explicitly emphasize that these instructional techniques can be used in other programs and across other subject areas.

Recommendation 3. Provide extensive and varied vocabulary instruction

☑ Adopt an evidence-based approach to vocabulary instruction.

☑ Develop districtwide lists of essential words for vocabulary instruction. These words should be drawn from the core reading program and from the textbooks used in key content areas, such as science and history.

☑ Vocabulary instruction for English learners should also emphasize the acquisition of meanings of everyday words that native speakers know and that are not necessarily part of the academic curriculum.

Recommendation 4. Develop academic English

☑ Adopt a plan that focuses on ways and means to help teachers understand that instruction to English learners must include time devoted to development of academic English. Daily academic English instruction should also be integrated into the core curriculum.

☑ Teach academic English in the earliest grades.

☑ Provide teachers with appropriate professional development to help them learn how to teach academic English.

☑ Consider asking teachers to devote a specific block (or blocks) of time each day to building English learners' academic English.

Recommendation 5. Schedule regular peer-assisted learning opportunities

☑ Develop plans that encourage teachers to schedule about 90 minutes a week with activities in reading and language arts that entail students working in structured pair activities.

☑ Also consider the use of partnering for English language development instruction.

Recommendation 1. Screen for reading problems and monitor progress

Conduct formative assessments with English learners using English language measures of phonological processing, letter knowledge, and word and text reading. Use these data to identify English learners who require additional instructional support and to monitor their reading progress over time.

How to carry out the recommendation

1. Districts should establish procedures for—and provide training for—schools to screen English learners for reading problems. The same measures and assessment approaches can be used with English learners and native English speakers.

Research shows that early reading measures, administered in English, can be used to screen English learners for reading problems. This finding is important because until recently it was widely believed that an absence of oral proficiency in English prevented English learners from learning to read in English,[13] thus limiting the utility of early screening measures. The common practice was to wait until English learners reached a reasonable level of oral English proficiency before assessing them on measures of beginning reading. In fact, oral language measures of syntax, listening comprehension, and oral vocabulary do not predict who is likely to struggle with learning to read.[14] Yet research has consistently found that early reading measures administered in English are an excellent means for screening English learners, even those who know little English.[15]

It is very important to assess phonological processing, alphabet knowledge, phonics, and word reading skills. These measures, whether administered at the middle or end of kindergarten (or at the beginning of the first grade) have been shown to accurately predict later reading performance in all areas: word reading,[16] oral reading fluency,[17] and reading comprehension.[18] So, it is essential to administer some type of screening to provide evidence-based beginning reading interventions to students in the primary grades.

In no way do these findings suggest that oral language proficiency and comprehension are unimportant in the early grades. These language abilities are critical for long-term success in school.[19] We expand on this point in Recommendation 4, by discussing the importance of directly teaching academic English. The assessment findings point to effective ways to screen English learners for reading problems and to determine whether they are making sufficient progress in foundational areas of early reading.

2. Depending on resources, districts should consider collecting progress monitoring data more than three times a year for English learners at risk for reading problems. The severity of the problem should dictate how often progress is monitored—weekly or biweekly for students at high risk of reading problems.[20]

3. Data from screening and progress monitoring assessments should be used to make decisions about the instructional support English learners need to learn to read.

Data from formative assessments should be used to modify (and intensify) the reading and English language development (or ESL) instruction a child receives. These interventions should be closely aligned with the core reading program. Possible

interventions are described in Recommendation 2.

Caveat: Measures administered at the beginning of kindergarten will tend to overidentify students as "at risk."[21] A better indication of how students will respond to school instruction comes from performance scores from the middle and end of kindergarten. These scores should be used to identify students requiring serious instructional support. Scores from the beginning of kindergarten can provide a general sense of students' early literacy skills, but these scores should not be used as an indication of how well students are likely to respond to instruction.

4. Schools with performance benchmarks in reading in the early grades can use the same standards for English learners and for native English speakers to make adjustments in instruction when progress is insufficient. It is the opinion of the panel that schools should not consider below-grade-level performance in reading as "normal" or something that will

Summary of evidence to support this recommendation

This recommendation is based on a large number of studies that used reading assessment measures with English learners. **Level of Evidence: Strong.**

Twenty-one studies demonstrated that three types of measures—phonological processing, letter and alphabetic knowledge, and reading of word lists or connected text—are valid means of determining which English learners are likely to benefit from typical classroom reading instruction and which children will require extra support (see appendix 1 for details).[22] The primary purpose of these measures is to determine whether interventions are necessary to increase the rate of reading achievement. These measures meet the standards of the American Psychological Association for valid screening instruments.[23]

For students in kindergarten and grade 1. The early screening measures for kindergarten and the first grade fit into three categories:

- Measures of phonological awareness—such as segmenting the phonemes in a word, sound blending, and rhyming—are useful in both kindergarten and first grade.[24]
- Measures of familiarity with the alphabet and the alphabetic principle, especially measures of speed and accuracy in letter naming and phonological recoding, are useful in both kindergarten and first grade.[25]
- Measures of reading single words and knowledge of basic phonics rules are useful in first grade.[26] Toward the middle and end of the first grade, and in the next few grades, measures of reading connected text accurately and fluently are useful.[27]

For students in grades 2 to 5. Three studies have demonstrated that oral reading fluency measures are valid screening measures for English learners and are positively associated with performance on comprehensive standardized reading tests. Oral reading fluency is emerging as a valid indicator of reading progress over time for English learners.[28]

These criterion-related validity studies are particularly important because another set of studies has investigated whether English learners can attain rates of reading growth comparable with those of their monolingual peers. These studies have demonstrated that English learners can learn to read in English at the same rate as their peers in the primary grades (K–2).[29] Much of this evidence comes from research in Canada and from schools providing intensive and systematic instruction for all children, supplementary instruction for those falling behind, and instruction in settings where growth in oral proficiency is supported by both peer and teacher-student interactions. Evidence on reading interventions for English learners in the United States is the focus of Recommendation 2.

resolve itself when oral language proficiency in English improves.

Using the same standards for successful reading performance with English learners and native English speakers may mean that a higher percentage of English learners will require more intensive reading instruction to reach the benchmarks, but we believe that this early emphasis on strong reading instruction will be helpful in the long run. Providing intensive early reading instruction for English learners does not imply they have a reading disability or they are not able to learn to read as well as other students. It means that while they are learning a new language and learning to read in that language simultaneously, they face challenges other students do not face. The instruction they receive should reflect the nature of this challenge.

A score on a screening measure indicating that an English learner may be at risk for reading difficulties does not mean the child has a reading disability. Being at risk means that the English learner needs extra instructional support to learn to read. This support might simply entail additional time on English letter names and letter sounds. In other cases additional support might entail intensive instruction in phonological awareness or reading fluency. Additional diagnostic assessments can be administered to determine what areas require instructional attention.

Unless districts have considerable resources and expertise, they should not try to develop the formative assessment materials on their own. Several screening and progress monitoring materials that have been developed and tested with native-English-speaking students are appropriate to use with English learners. Information about formative assessments can be found from a number of sources, including the Web and commercial developers. Please note that the authors of this Guide did not conduct a comprehensive review of available assessments (such a large undertaking was beyond the scope of this project), and individual schools and districts should be careful when selecting assessments to use. It is important to select assessments that are reliable and valid.

5. Provide training on how teachers are to use formative assessment data to guide instruction.

The primary purpose of the formative assessment data is to determine which students are at risk (or not making sufficient progress) and to increase the intensity of reading instruction systematically for those students. We recommend that school-based teams of teachers be trained to examine formative assessment data to identify which English learners are at risk and to determine what instructional adjustments will increase reading progress. These teams can be for one grade or across grades. We believe that the reading coach, in schools that have one, should play a key role on these teams. Although principals should also play an important leadership role, it may be difficult for them to attend all meetings or be extensively involved.

Possible roadblocks and solutions

1. Some teachers believe that reading problems may resolve themselves once English learners develop proficiency in oral English. So, they are hesitant to refer these students for additional assistance or to provide intensive instruction in foundational areas of beginning reading.

There is no evidence to support the position that early reading problems experienced by English learners will resolve themselves once oral language skills in English are established.[30] Districts should develop and disseminate materials explaining that

using English oral language proficiency is as accurate as flipping a coin to decide which English learners are likely to have difficulty learning how to read.

To demonstrate that phonological, letter knowledge, and word reading measures are effective screening measures, principals and reading coaches can look at data from their own schools and see the links between scores on these measures in kindergarten and the first grade and later scores on state reading assessments.

2. Some teachers may feel that it is unfair to test a child in a language that she or he does not understand.

Although this is true in many areas, it is not true for tasks involving phonological processing, as long as the child understands the nature of the task.[31] If students possess phonemic awareness of a word such as *cake* or *fan*, even without knowing the meaning they should be able to tell the examiner the first, middle, and last sounds in the word. Phonological awareness is an auditory skill that greatly helps students with reading development, and it transfers across languages. That is, if students learn the structure of sounds in one language, this knowledge will help them identify individual sounds in a second language without being taught explicitly what those individual sounds are. It is possible to demonstrate this to teachers by having them pull apart the sounds in words from an unfamiliar language, such as Russian or Arabic. Reading coaches can demonstrate that once a student knows how to identify the beginning, ending, or middle sound of a word, knowing the meaning of a word is irrelevant in being able to reproduce the sound.

Teachers should be clear that, for phonological processing tasks to be valid, English learners have to understand the task, but this is different from knowing word meanings. For an assessment to be valid the examiner must clearly explain the nature of the task and the child must understand what she or he is being asked to do. If possible, adults who are fluent in the child's native language can be hired and trained to administer assessments. But good training is essential. When appropriate, the examiner can explain or clarify the task in the language the child understands best. For districts with many native languages and few professional educators fluent in each native language, it is possible to make CDs of instruction in the appropriate native languages.

Make sure at least two or three practice items are provided before formal administration, when the task is modeled for the child and corrective feedback is provided. This will give all children (especially English learners) the opportunity to understand what the task requires of them. An important consideration for all assessments is to follow the testing guidelines and administration protocols provided with the assessment. It is acceptable to provide practice examples or explanations in the student's native language outside the testing situation. During the testing, however, it is essential that all assessment directions and protocols be followed. Remember, the purpose of the assessment is to determine whether children are phonologically aware or know the letters of the alphabet. It is not to determine how quickly or well children learn the formative assessment task when they are given explicit instruction in how to complete the task.

3. Some teachers may feel that native language assessments are more valid than English language measures for this group of students.

Formative early reading assessments in English are valid for English learners.[32] If

district and state policies permit testing a child in her or his native language, it is possible to get a richer picture of her decoding skills or familiarity with the alphabet. But this is not necessary for phonological awareness because it easily transfers across languages. Students who have this awareness in their native language will be able to demonstrate it on an English language assessment as long as they understand the task.[33] In other words, even students who are limited in English will be able to demonstrate knowledge of phonological awareness and decoding in English.

4. Districts should anticipate that schools will have a tendency to view data collection as the terminal goal of conducting formative assessments, especially early in the process.

It is important to remind school personnel that data collection is just one step in the process. The goal of collecting formative assessment data is to identify students who are not making adequate progress and to increase the intensity of instruction for these students. In a system where the performance of all children is assessed multiple times a year, it is easy to become consumed by ways of organizing, analyzing, and presenting data and to lose sight of the primary purpose of data collection: to determine which students need extra support and which do not.

5. In districts that have the same early reading goals and standards for English learners and non-English learners, it is likely that the current performance of many English learners will be below these standards.

Although the average performance of English learners may be lower than that of non-English learners, there is no reason to assume that English learners cannot make the reading progress necessary to reach high standards of performance.[34] This progress will require providing more intensive instruction than the district might normally provide in both reading and language development.

6. Teachers may focus too much on what is tested—phonemic skills, decoding ability, and oral reading fluency—and neglect instruction in comprehension and vocabulary.

In monitoring student progress in phonological processing, phonics, and reading fluency, instruction in the development of comprehension and higher order thinking skills may be overlooked. But these skills should not be neglected. Instruction in comprehension and higher order skills should receive attention in the earliest phases of reading development. The challenge for schools will be to maintain a strong instructional focus on both higher and lower order skills.

Recommendation 2. Provide intensive small-group reading interventions

Provide focused, intensive small-group interventions for English learners determined to be at risk for reading problems. Although the amount of time in small-group instruction and the intensity of this instruction should reflect the degree of risk, determined by reading assessment data and other indicators, the interventions should include the five core reading elements (phonological awareness, phonics, reading fluency, vocabulary, and comprehension). Explicit, direct instruction should be the primary means of instructional delivery.

How to carry out the recommendation

1. Use an intervention program with students who enter the first grade with weak reading and prereading skills, or with older elementary students with reading problems.[35]

Because there are many similarities between the three programs assessed here, we conclude that other programs that follow the same principles of direct and explicit instruction to teach core reading elements in small groups are likely to have the same beneficial effects. The major instructional principles that characterize the three programs are:

- Multiple opportunities for students to respond to questions.
- Multiple opportunities for students to practice reading both words and sentences, either in a small group or with a peer.
- Clear feedback from the teacher when students make errors.
- Explicit instruction in all areas of reading, including explicit comprehension instruction and explicit vocabulary instruction. Sufficient coverage of five areas—phonological awareness, phonics, reading fluency, vocabulary, and comprehension—should be a key criterion in selecting an intervention program for use in the school district.[36]

2. Ensure that the program is implemented daily for at least 30 minutes in small, homogeneous groups of three to six students.

Students make gains in reading when they have daily instruction in small homogeneous groups based on reading skill and receive explicit, clear, direct instruction.[37] So, there is no compelling reason why all students in the group need to be English learners. In fact, we think there could be advantages to groups that include native English speakers and English learners because native English speakers can provide models of more advanced English language usage. But to ensure that students can accelerate their learning, students who are making solid progress based on ongoing assessments should be regrouped (for example, move students making rapid progress to higher performing groups).[38]

3. Provide training and ongoing support for the teachers and interventionists (reading coaches, Title I personnel, or paraeducators) who provide the small-group instruction.[39]

Each of the four research studies that produced a positive impact on reading achievement involved extensive training of the teachers and interventionists. This training is most effective when all personnel who work with English learners participate together in the same professional development activities.[40]

One key aspect of these interventions is pacing. It is particularly important that the teachers and interventionists receive training in how to teach these programs at an appropriate pace. This critical aspect of instruction is frequently overlooked. When it is missing from instruction, it is easy for children to become bored or to lose focus, which can lead to behavior problems.

The three intervention programs studied—and others like them—contain highly engaging activities of short duration. The Panel believes that teachers should implement the activities, whatever their focus, as outlined in the teacher manuals and training materials.

4. Training for teachers and other school personnel who provide the small-group interventions should also focus on how to deliver instruction effectively, independent of the particular program emphasized. It is important that this training include the use of the specific program materials the teachers will use during the school year. But the training should also explicitly emphasize that these instructional techniques can be used in other programs and across other subject areas.[41]

Summary of evidence to support this recommendation

This recommendation is based on four high-quality randomized controlled trials at various sites with different interventions that share core characteristics in design and content. **Level of Evidence: Strong.**

In the past several years four high-quality randomized controlled trials have been conducted on reading interventions for struggling English learners. These studies appear as *Intervention Reports* on the What Works Clearinghouse website.[42] Appendix 1 provides technical details on the methodology used in these studies, the key findings, and statistical significance levels. These interventions used the following three programs:

- Enhanced Proactive Reading.[43]
- Read Well.[44]
- SRA Reading Mastery/SRA Corrective Reading.[45]

The participants in these research studies were English learners in grades 1–5 with serious reading problems (reading at least one year below grade level or scoring in the lowest quartile on standardized tests). Reading achievement was assessed on a wide range of measures, including word reading, comprehension, and vocabulary. The What Works Clearinghouse found that all three curricula demonstrated potentially positive effects on reading achievement. The designation *potentially positive* refers to an effect supported by at least one study but not enough studies to support the Clearinghouse's highest evaluation of *positive*.

An important finding was that in two of the four studies the interventions demonstrated *lasting effects* on reading performance. In investigating the longitudinal effects of *Enhanced Proactive Reading,* positive achievement outcomes were maintained when students who received the intervention in the first grade were assessed at the end of the second grade.[46] Students in the first grade intervention group read at higher levels than students in the control group one year after the intervention ended. For the *SRA* program the positive reading effect was maintained two years after the intervention ended.[47]

The programs used in these studies had many characteristics in common. They formed a central aspect of daily reading instruction and took between 30 and 50 minutes to implement per day. In each study program implementation involved intensive small-group instruction following the principles of direct and explicit instruction in the core areas of reading.

Examples of these techniques include instructional pacing, providing feedback to students, including error corrections, modeling, and providing wait time for student responses. For many teachers this fast-paced interactive instruction will be unfamiliar, and coaching support in the classroom will be critical for them to be effective. This training and coaching in the classroom should be provided by "master" teachers with experience in the specific program.

Possible roadblocks and solutions

1. Teachers may be uncomfortable identifying students for additional reading instruction if their English language skills are low.[48]

English language proficiency is not a good gauge of how well English learners can respond to additional reading instruction (see Recommendation 1). In addition to helping with the development of critical reading skills, extra instructional time devoted to vocabulary, reading comprehension, and listening comprehension will help directly with the development of English language proficiency.

2. Students already are pulled out of class for other services (such as speech, English language development, or English as a second language). Pulling students out for additional reading instruction makes their instructional day too fragmented.

A fragmented instructional day is a legitimate concern (and not just for English learners). But the Panel believes that reading development is too important to withhold any opportunity for small-group instruction. Reducing fragmented instruction must involve the effective coordination of services for English learners, who frequently receive additional services in multiple areas and from multiple funding sources.

3. Students will miss valuable instructional time in other areas.

Although students will miss some instruction in other areas while they are receiving additional small-group reading instruction, learning to read is critical to all other learning demands. So, time spent ensuring that students acquire strong reading skills will pay off in the long run. Evidence for this claim can be found in the sustained effects of intervention studies.[49]

4. Arranging a building-level or grade-level schedule that allows for additional small-group instruction is a complex process. Individual teachers may feel that they do not have the time or resources to provide additional small-group instruction to these students.

Different professionals can provide small-group reading interventions, and schools will have to consider the options seriously if barriers to time and scheduling are to be overcome.[50] The key is training and collaboration among all personnel who provide instruction to English learners. This requires a shared focus and commitment. The benefits of having a pullout program for interventions are that students can be homogeneously grouped, receive additional time on task, and be regrouped regularly as needed to maximize learning opportunities.

Recommendation 3. Provide extensive and varied vocabulary instruction

Provide high-quality vocabulary instruction throughout the day. Teach essential content words in depth. In addition, use instructional time to address the meanings of common words, phrases, and expressions not yet learned.

How to carry out the recommendation

Vocabulary instruction is essential in teaching English learners to read. It is rare that core reading programs include adequate guidelines for vocabulary instruction for English learners. So, districts need to provide teachers with tools that will help them support vocabulary development.

1. Adopt an evidence-based approach to vocabulary instruction.

The Panel believes that an evidence-based approach should require that teachers provide daily explicit vocabulary instruction. Evidence-based vocabulary instruction should be a strong part of reading instruction and an integral part of English language development. Vocabulary instruction should also be emphasized in all other parts of the curriculum, including reading, writing, science, history, and geography.

Typically, the vocabulary instruction supported by research studies is more thorough and explicit than that usually provided in classrooms.[51] Researchers converge in noting that effective vocabulary instruction includes multiple exposures to target words over several days and across reading, writing, and speaking opportunities. A small but consistent body of intervention research suggests that English learners will benefit most from rich, intensive vocabulary instruction that emphasizes "student-friendly" definitions,[52] that engages students in the meaningful use of word meanings in reading, writing, speaking, and listening,[53] and that provides regular review.[54] The goal of rich vocabulary instruction is for students to develop an understanding of word meanings to the point where they can use these and related words in their communication and as a basis for further learning.[55]

The core reading program used in the classroom is a good place to begin choosing words for instruction and methods for teaching them. For English learners additional words need to be identified for instructional attention, and teaching procedures need to be much richer and more extensive than instruction usually recommended within core reading programs.[56]

Valuable for professional development, teacher study groups and lesson study groups can get teachers engaged in planning effective vocabulary instruction.[57] These study groups can be guided by available texts that provide evidence-based approaches to vocabulary instruction. Activities in these study groups should include a good number of hands-on activities, such as transforming textbook definitions into "student-friendly" definitions, identifying crucial words in the texts students will read, and developing daily lesson plans for intensive vocabulary instruction.[58]

2. Develop districtwide lists of essential words for vocabulary instruction. These words should be drawn from the core reading program and from the textbooks used

in key content areas, such as science and history.

A major part of any vocabulary curriculum is specifying the words to be taught. It is the Panel's opinion that adopting a districtwide core vocabulary list for English learners will help focus instruction on valuable words and reduce unnecessary duplication. A core vocabulary list does not prevent teachers or students from adding to this list when problem words arise in the classroom—in fact, some districts even build in space for the addition of such words.

The lists currently identified in core reading programs are inadequate for this purpose.[59] They often fail to emphasize the words most critical for understanding a story or most useful for the child's language development. For example, many vocabulary lists stress decoding issues rather than meaning. Thus, to accomplish vocabulary instruction goals, districts must develop their own lists and provide access to these lists for their teachers.

Words for instruction should be selected carefully. Long lists of words cannot be taught in depth because rich vocabulary instruction is time intensive. Only a handful of words should be taught in intensive ways at any one time. Some authorities recommend teaching only about eight to ten words per week this way, while others suggest teaching two to three words per day (but always with lots of future review and extension).[60]

Reading coaches, teacher teams, curricula specialists, and summer workshops for teachers can generate vocabulary lists for intensive instruction. A key is for teachers to have these lists as they teach reading, social studies, and science units, so they know in advance which words to teach in depth. Study groups and grade-level teams can do this work.

3. Vocabulary instruction for English learners should also emphasize the acquisition of meanings of everyday words that native speakers know and that are not necessarily part of the academic curriculum.[61]

Summary of evidence to support this recommendation

This recommendation is based on three studies conducted specifically with English learners. This recommendation is also indirectly supported by a strong body of research conducted with native English speakers. **Level of Evidence: Strong.**

Three intervention research studies evaluated the effectiveness of explicit vocabulary instruction for English learners.[62] They converge in showing that explicit and intensive vocabulary instruction helps English learners understand what they read (see appendix 1 for details). One study, appearing on the What Works Clearinghouse website,[63] is rated as demonstrating a *potentially positive* effect on students' English reading comprehension.[64] It suggests that intense and explicit vocabulary instruction enhances reading comprehension. Two other studies support the impact of vocabulary instruction on reading comprehension.[65]

Research shows that English learners need to learn many words to catch up with their native-English-speaking peers' word knowledge.[66] Clearly, not all of the words they need to learn to make up this gap can be taught through explicit vocabulary instruction. Our recommendation thus integrates procedures from studies on explicit vocabulary instruction with English learners,[67] extensive research with native English speakers,[68] and expert opinion in establishing a comprehensive framework of vocabulary instruction for English learners.

The vocabulary gap between English learners and native English speakers is substantial because English learners do not know many of the simpler words or conversational words that native English speakers acquire before they enter school or learn in school without explicit teaching. Many of these words are crucial for understanding text and other academic content. For example, English learners may not know such words as *bank, take, sink,* or *can*. Textbook publishers assume that students know these words and do not include them as vocabulary targets. Nor do they provide recommendations for how to address teaching these words should teachers have students who do not know them. English learners can acquire these words easily if teachers provide them with brief instruction during lessons. This instruction can emphasize the meanings of common phrases and expressions, not just single words.

During reading instruction, teachers can teach many of these common words explicitly—in roughly the same way that they teach content words, but much more quickly. They can teach many words as they arise in the classroom, drawing attention to the potentially confusing words and phrases. District practice should ensure that these words are also taught and reviewed during English language development.

Possible roadblocks and solutions

1. Teaching vocabulary effectively is difficult. Many teachers will struggle learning how to provide effective vocabulary instruction to English learners.[69]

Concerted professional development and coaching will be necessary to ensure that all teachers learn to provide effective vocabulary instruction to English learners. Teacher study groups can be an excellent vehicle for work on vocabulary instruction, giving teachers a way to share their frustrations and jointly collaborate on solutions. Study groups can also be a way to keep effective vocabulary instruction in the forefront of instructional priorities. They are especially valuable when led by vocabulary experts, who can provide clear suggestions about how teachers can continue to move forward to provide effective instruction in the classroom.

Coaching teachers in effective vocabulary instruction should have a strong in-classroom component. There are routines in good vocabulary instruction that teachers can learn. For some teachers, these routines will be learned best through in-classroom coaching, where coaches provide immediate feedback and demonstrations.

2. Some teachers may incorrectly assume that English learners know a concept and the word for that concept in their primary language—when, in fact, they do not. This is particularly true for technical terms encountered in science, geography, and history. If students do not know the concept in their primary language, the Panel suggests teaching the word directly in English.

Caveat: For teachers to help English learners develop vocabulary knowledge by making connections to a student's primary language, teachers need some knowledge of the primary language. If the linguistic transfer involves a simple concept or a one-to-one correspondence between the student's primary language (each language has an identifiable word for the concept), teachers may be able to help students even when these teachers know very little of the primary language. But if the concepts are difficult or there is no clear word for the concept in the student's native language, teachers will need more extensive knowledge of the primary language to be able to help the student.

Recommendation 4. Develop academic English

Ensure that the development of formal or academic English is a key instructional goal for English learners, beginning in the primary grades. Provide curricula and supplemental curricula to accompany core reading and mathematics series to support this goal. Accompany with relevant training and professional development.

How to carry out the recommendation

1. Adopt a plan that focuses on ways and means to help teachers understand that instruction to English learners must include time devoted to development of academic English. Daily academic English instruction should also be integrated into the core curriculum.

Academic English is the language of the classroom, of academic disciplines (science, history, literary analysis) of texts and literature, and of extended, reasoned discourse. It is more abstract and decontextualized than conversational English. Those who are knowledgeable about academic English know, for example, that some words used in everyday conversation, such as *fault*, *power,* or *force,* take on special meanings when used in science.

Most scholars believe that instruction in academic English—done early, consistently, and simultaneously across content areas—can make a difference in English learners' ability to understand the core curriculum and that its importance increases as children enter the upper grades.[70] But even in the primary grades, instructional time should focus on the explicit instruction of academic English.[71] Recent correlational research supports this position.[72]

English learners do not need to master conversational oral English before they are taught the features of academic English.[73] In reading, knowledge of academic English helps students gain perspective on what they read, understand relationships, and follow logical lines of thought. In writing, knowledge of academic English helps students develop topic sentences, provide smooth transitions between ideas, and edit their writing effectively. Reading, discussing, and writing about texts needs to be a central part of the English language development instruction dispersed throughout the day.[74]

Many teachers may be unaware of the features of academic English[75] and thus do not instruct students in the features required to succeed in school.[76] The Panel feels that the best way to promote the development of academic English is to use a curriculum with a scope and sequence aimed at building academic English. Unfortunately, the Panel knows of no existing curricular materials that have solid empirical support for this purpose. That is why it is important to select published materials carefully and to devote considerable thought and planning to how these materials will be used effectively in the classroom.

It is also unfortunate that few resources provide guidance to districts in teaching academic English to English learners. Some preliminary frameworks and guidelines—developed by Feldman and Kinsella,[77] Girard,[78] Dutro and Moran,[79] Snow and Fillmore,[80] Diaz-Rico and Weed,[81] and Scarcella[82]—list topics to address when focusing on academic English, such as adverbial forms, conditional sentences,

prepositions, words that express relationships. But these are not designed for regular use by teachers in the classroom or as an instructional manual.

Teachers will need extensive professional development and support in using curriculum materials effectively to teach academic English.[83]

2. Teach academic English in the earliest grades.

Instruction focused on academic English should not wait until students are able to read and write in English. Before English learners are reading, the development of age-appropriate academic English—morphology, syntax, vocabulary—can be accelerated orally through planned and deliberate daily instruction.[84]

Focused instruction in academic English can also build on students' work with text. For example, when English learners read expository text that includes academic language, teachers should discuss the text and the language in structured ways.[85] Instruction should also focus on teaching English learners to use specific features of academic language related to tense agreement, plurals, and proper use of adjectives and adverbs.[86] Students need practice in using these features in the context of meaningful communication (both oral and written).[87] They also must learn to use language accurately in a range of situations—to tell stories, describe events, define words and concepts, explain problems, retell actions, summarize content, and question intentions.[88]

Note: For students entering school, attention in the first year of instruction must also be devoted to informal, social language. For example, newcomers (English learners who have recently arrived in the United States) benefit greatly from immediate instruction in social language (*Hi! What's up?*) and survival language (*Help! Fire!*).[89]

3. Provide teachers with appropriate professional development to help them learn how to teach academic English.

In the opinion of the Panel, professional development needs to be ongoing and to entail a specific and manageable number of key features and principles. Basic features of English morphology, syntax, and discourse need to be addressed carefully and gradually so as not to overwhelm teachers.

Summary of evidence to support this recommendation

Because there is little empirical research on the topic and primarily just expert opinion, the level of evidence is low. Two studies reviewed by the What Works Clearinghouse[90] demonstrate that focused interventions in two relatively narrow areas of academic English (quality of oral narrative and syntax) are potentially effective.[91] That is, evidence suggests that they lead to better outcomes in highly specific areas of formal, academic English. But because the studies address very selective aspects of academic English and only indirectly address classroom instruction, we cannot conclude that the studies affirm the effectiveness of instruction of academic English at this time. **Level of Evidence: Low** (primarily expert opinion).

Despite the paucity of experimental research, the strong consensus of expert opinion[92] is that English learners require considerable explicit and deliberate instruction to learn the features of the type of formal English used in the schools and in academic discourse.[93] This consensus applies to the importance of teaching academic English from the earliest grades.[94]

Professional development should also include extensive practical activities, such as analyzing texts used by students for academic English instruction, determining features of language that students need to complete specific oral and written assignments, and designing "student-friendly" explanations. Professional development should also give teachers opportunities to practice teaching academic language with feedback.

4. Consider asking teachers to devote a specific block (or blocks) of time each day to building English learners' academic English.

Experts agree that English learners require time each day when the primary instructional goal is developing academic English (as opposed to mastering the academic content).[95] A recent observational research study found that students' growth in English language proficiency was much higher in classrooms where a separate block of time was devoted to ESL or English language development.[96] So, in addition to the better integration of teaching academic English in the context of academic content such as reading or mathematics, the Panel also suggests that there be specific times during the day when the primary instructional focus is on English language development and that some of the time be devoted to academic English. We are aware that this recommendation extrapolates from only one study and that this study looked at all English language development instruction, not only academic English instruction. So, this should be considered as merely a recommendation based on our opinion.

We believe that devoting specific blocks of time to academic English has three distinct advantages. First, it increases the time English learners have to learn the language. Second, instruction spaced throughout the day provides better opportunities for deep processing and retention. Third, during English language development time, the focus is clearly on language. When teachers try to merge English language development with academics, it becomes easy to lose track of the dual objectives and focus more on teaching reading or mathematics or science than on teaching academic English. The obvious exception is writing instruction, a natural fit with teaching academic English.

It is easy to overlook academic English and to allow teachers and students to communicate in informal English. For this reason, it might be a good idea for administrators to structure specific blocks of time each day to ensure its instruction. For example, in kindergarten, the instruction of academic English can be routinely incorporated into the instruction of storytelling and vocabulary development at specific times each day. As Saunders, Foorman, and Carlson[97] have shown, providing specific blocks of instruction in English language development leads to gains in measures of oral language proficiency. In later grades, specific blocks of time dedicated to the development of academic English can be scheduled, for example, in reading and writing instruction and in the instruction of vocabulary in all subject matter. Scheduling regular blocks of time for the instruction of academic English should not only guarantee an increased focus on academic English in the classroom. It should also make teachers more diligent in structuring instructional activities that require the use of academic English and in monitoring their students' development of academic English.

Possible roadblocks and solutions

1. Some educators may want to cushion their English learners, believing that academic English is too hard for them to develop or that the expectations are too demanding.

Many teaching approaches still advocate giving English learners highly simplified, informal texts that are easy to read but not challenging. The problem with regularly giving English learners a diet of familiar reading material is that the academic texts of assessments and most content areas remain unfamiliar. Informal, narrative texts tend to be familiar, but reading these texts does not lead to proficiency in academic English. In academic writing crammed with facts, the content is often unfamiliar to English learners.

The focus on developing academic English can come after a challenging text has been read and discussed, so that the vocabulary and meaning are clear. Then the teacher can come back to the story and focus on the aspects of language that may be problematic for English learners (sentence construction, word usage, prepositions) in the familiar text. Language-focused activities will have more meaning for English learners if they already have a general understanding of the material in the text.

2. There may not be enough time in the instructional day to provide English learners with sufficient instruction on the features of academic English.

This problem is particularly relevant when English learners enter the upper grades with little knowledge of academic English, limited reading ability, and large educational gaps. Teachers need to be aware that many features of academic English can and should be included during the block of time devoted to reading instruction. Virtually all students would benefit from activities that teach them how to build complex sentences through sentence combining—and how to use words such as *however* and *but* to build an argument. Thus, a partial solution to the time problem is to include daily academic English instruction as part of the core reading instruction delivered to all students, including English learners and native English speakers.

3. Many teachers fail to link vocabulary instruction to instruction on proper language usage.

Even when English learners know word meanings, they may be uncertain about how to use new words appropriately. As knowledge deepens, words have to be used with the appropriate number (*goose, geese*), tense (*is, are, was*), and word form (*fun, funnier, funny*). Systematic instruction in usage and language conventions needs to be a core feature of English language development, and many of the words used should be the same words students are working with during their reading lesson. Teachers should model appropriate syntax, word order, and tense agreement and have students practice these skills with new vocabulary words. Teachers should be careful and explicit about pointing out or modeling appropriate use, as students use new vocabulary in the context of sentences that should, over time, become more complex and grammatically correct.

Note that *instruction in the proper usage of words* is very different from *correction of any and all errors a student makes in word usage.* In the Panel's view, error correction needs to be focused on the instructional target of the lesson. If the instructional focus of the vocabulary lesson is on word forms such as *success*, *successful*, and *succeed*, teachers should correct errors in word forms but ignore other errors. For instance, in the learner's sentence, "The boy is very succeed on mathematics," teachers should point out that the correct word is *successful* but should not focus on the incorrect use of the word *on*. In restating the sentence, the teacher might emphasize correct usage by saying "Yes, the boy is very *successful at* mathematics."

Recommendation 5. Schedule regular peer-assisted learning opportunities

Ensure that teachers of English learners devote approximately 90 minutes a week to instructional activities in which pairs of students at different ability levels or different English language proficiencies work together on academic tasks in a structured fashion. These activities should practice and extend material already taught.[98]

How to carry out the recommendation

1. Develop plans that encourage teachers to schedule about 90 minutes a week with activities in reading and language arts that entail students working in structured pair activities.

Kindergarteners can learn peer-assisted learning techniques if the routines are reasonably simple and taught in an explicit fashion.[99] Older elementary students can learn fairly sophisticated strategies for providing peers with feedback on comprehension and vocabulary. Students can also assist each other in learning or clarifying the meanings of words in English.[100]

The Panel recommends that the focus of the pair activities be tied to areas that emerge as key targets from a district's evaluation data. These could include oral reading fluency, vocabulary development, syntax, and comprehension strategies.

Districts should provide professional development for teachers setting up peer-assistance learning systems. Professional development should be scheduled during the early part of the school year, so that teachers can practice immediately with their own students. Training need not be lengthy and could be provided by reading coaches. Coaches should also observe teachers as they get started and help teachers during the difficult early phases.

2. Also consider the use of partnering for English language development instruction.[101]

The Panel members know that there was no experimental research on this topic, but we still consider this to be a promising practice, based on the documented success of peer-assisted learning in other areas of language arts. During the part of the day reserved for English language development, for example, peers would work together on reading connected text to each other and then discussing the text in a structured way. Students could read short passages of text and then practice summarizing the text for a few minutes, using specific summarization strategies. Or, after reading the text, they could answer questions, generate "gist" statements, or use another comprehension procedure, such as "prediction relay," thinking ahead in the text and predicting what might happen based on the story content to that point.

Possible roadblocks and solutions

1. Some teachers may feel that the added time required by English learners may take instructional time away from other students.

A benefit of peer-assisted instruction is that all students can participate. So, teachers do not have to plan additional activities for separate groups of students in the class. This partner work gives teachers a way to structure learning opportunities that address some of the unique learning needs of English learners. It also gives them a way to address the learning needs of other students in the class. Students who have learning

disabilities or who are low performers, as well as average and above-average students, will benefit from working with a partner in a structured way if the activities are organized and carried out appropriately.

Peer-assisted learning is not, however, a substitute for teacher-led instruction. It is an evidence-based approach intended to replace some of the independent seatwork or round-robin reading that students do, for example, when the intention is to provide practice and extended learning opportunities for students.

2. Teachers may be concerned about the time it takes to teach students the routines.

Once students have learned peer-assisted instructional routines, such as how to respond to errors, the format can be used in a number of different content areas across grade levels. The use of peer-assisted instruction across grade levels provides a consistent and familiar structure for practicing specific content.

3. Teachers may be concerned that this takes time away from instruction.

Most teachers replace some of the independent seatwork or round-robin reading with peer-assisted learning. Again, peer-assisted learning is not a substitute for instruction. It is an opportunity for English learners to practice and work with skills and concepts they are learning. It allows students to receive feedback as they practice.

Summary of evidence to support this recommendation

This recommendation is based on several high-quality experiments and quasi experiments with English learners. In addition, many peer-assisted studies also have been conducted with native-English-speaking students, and the results have consistently supported the positive impact of peer tutoring on student learning outcomes. **Level of Evidence: Strong.**

Three high-quality experiments and quasi experiments have evaluated the effectiveness of English learners working in pairs in a structured fashion several times a week.[102] These studies spanned virtually all of the elementary grade levels. All these studies demonstrated positive impacts on reading achievement for students at various ability levels. Two additional studies provide evidence of the positive impact of student activities in cooperative groups of four to six students.[103] Although less evidence supports cooperative groups than pairs of students working together, the guidance here is relevant for districts wanting to implement some type of cooperative learning structure in their schools.

Of the five studies, two were reviewed by the What Works Clearinghouse and rated as providing *potentially positive* effects on reading achievement.[104] One of the two met the Clearinghouse evidence standards[105] and the other met the standards with reservations.[106]

Partner work is an opportunity for students to practice and extend what the teacher has taught during regular instruction. Partner work is excellent for tasks in which correct and incorrect responses can be clearly determined (word and text reading and phonological awareness activities, such as identifying sounds in words).

However, evidence also demonstrates that partner activities can build skills for tasks in which correct and incorrect responses are harder to determine, such as reading comprehension and other tasks that require student explanations. In three of the five studies, students worked in pairs to practice, consolidate, and extend prereading, decoding, comprehension, and spelling skills. In each of the studies student pairs, with different abilities in either reading or English language proficiency, were provided with clear instructional activities and taught procedures for working effectively with peers. Teachers used guides that included prompt cards and activities for students.

Appendix 1. Technical information on the studies

Recommendation 1. Screen for reading problems and monitor progress

The Panel rated the level of evidence as **Strong.** It considered 21 studies that addressed the criterion-related validity of assessment measures to screen English learners in reading and to monitor their reading progress over time. The body of research on early screening measures meets the standards of the American Psychological Association for valid screening instruments (American Educational Research Association, American Psychological Association, & National Council on Measurement in Education, 1999).

Eighteen reviewed studies conducted screening and criterion assessments with English learners at different points in time on measures of phonological awareness, letter knowledge, and word and text reading. Although the number of studies in this category was large, we noted that in many of these studies the samples of English learners were not adequately representative of the population of English learners in the United States. So, we have some concern about the generalizability.

However, the fact that so many studies have replicated these findings supports this recommendation. In addition, the set of screening measures demonstrates moderate predictive validity for English learners from homes speaking a variety of languages: Spanish, Punjabi, Tamil, Mandarin, Cantonese, Farsi, Hmong, and Portuguese, among others.

Example of a criterion-related validity study

In a recent study by Geva and Yaghoub-Zadeh (2006), second-grade English learners (Cantonese, Punjabi, Tamil, and Portuguese) and native English speakers were assessed in English on cognitive and linguistic measures (nonverbal intelligence, rapid letter naming, phonological awareness, vocabulary, and syntactic knowledge) and reading measures (pseudoword reading, word recognition, and word and text reading fluency).

Phonological awareness, rapid letter naming, and word recognition accounted for the bulk of the variance on word and text reading fluency. These measures accounted for 60 percent and 58 percent of the variance on measures of fluency of word and text reading, respectively, after oral language measures (vocabulary and syntactic knowledge) were entered into the hierarchical regression models. The pattern of relationships among the measures was similar for the English learners and native English speakers. Oral language measures, although entered first into the regression models, accounted for just 11 percent and 12 percent of the variance on measures of word and text reading fluency, respectively. In other studies the predictive validity for oral language measures is even smaller for kindergarten and the first grade. We thus assert that oral language proficiency is a poor predictor of subsequent reading performance.

Studies that systematically monitored student progress over time in grades 1 to 5

Four studies also investigated the regular monitoring of student progress over time (Baker & Good, 1995; Dominguez de Ramirez & Shapiro, 2006; Leafstedt,

Richards, & Gerber, 2004; Wiley & Deno, 2005), with three of four investigating the use of oral reading fluency. Two of these focused specifically on the technical issues of monitoring progress regularly. They indicated that oral reading fluency was sensitive to growth over periods as short as two weeks when used in the early grades (Baker & Good, 1995) and when used with students up to grade 5 (Dominguez de Ramirez & Shapiro, 2006). In two of the studies (Baker & Good, 2005; Wiley & Deno, 2005) oral reading fluency predicted the performance of English learners on comprehensive reading tests such as the SAT-10 and state-developed reading assessments.

Comparable expectations for English learners

An interesting and important sidelight of the validity studies is the corresponding set of descriptive statistics. Many of the studies demonstrate that English learners can perform at comparable levels of proficiency to native English speakers on measures assessing phonological awareness, word reading, and reading connected text fluently. These studies have been conducted with English learners in the primary grades who receive their instruction exclusively in the general education classroom alongside their native-English-speaking peers. It is in these contexts that they develop comparable word reading, word attack, and spelling skills in kindergarten through the second grade (Chiappe & Siegel, 1999; Chiappe, Siegel, & Wade-Woolley, 2002; Lesaux & Siegel, 2003; Limbos & Geva, 2001; Verhoeven, 1990, 2000).

The comparable development of early reading skills for English learners appears to extend beyond accuracy in word recognition and spelling. There is evidence that English learners can develop equivalent degrees of fluency in reading both word lists and connected text by the second grade (Geva & Yaghoub-Zadeh, 2006; Lesaux & Siegel, 2003). There is also some limited evidence that English learners can develop equivalency with native English speakers in reading comprehension (Chiappe, Glaeser, & Ferko, 2007; Lesaux, Lipka, & Siegel, 2006; Lesaux & Siegel, 2003). We conclude that it is reasonable to expect that English learners can learn to read at rates similar to those of native speakers if they are provided with high-quality reading instruction.

Recommendation 2. Provide intensive small-group reading interventions

The Panel rated the level of evidence as **Strong.** We located four high-quality, randomized controlled trials demonstrating support for the practice of explicit, systematic small-group instruction. Each of the studies met the standards of the What Works Clearinghouse (WWC). Conducted at various sites by different research groups, they targeted different interventions that share core characteristics in design and content.

For sample sizes, there were 91 first graders in one of the studies of *Enhanced Proactive Reading,* 41 first graders in the other, 33 students in grades 2–5 for *Read Well,* and 17 students in kindergarten through third grade for *SRA Reading Mastery.* All the students were English learners. In three of the studies, all were students reading at or below the first-grade level.

Effect sizes were consistently positive for reading but inconsistent for English

language development. Only the study of *Enhanced Proactive Reading* (Vaughn, Mathes, et al., 2006) demonstrated a statistically significant effect in reading. Yet all the studies demonstrated substantially important effect sizes for reading: 0.89 and 0.25 for *Enhanced Proactive Reading,* 0.76 for *SRA Reading Mastery,* and 0.25 for *Read Well.*

Despite the different names and some differences in lesson content and sequencing, all three interventions have many features in common: fast-paced, intensive, highly interactive small-group instruction; frequent review; frequent opportunities for students to respond; heavy emphasis on systematic teaching of phonological awareness and phonics principles; use of decodable text; and emphasis on fluency as well as comprehension.

Example of a study of intensive small-group reading intervention

In one *Enhanced Proactive Reading* study (Vaughn, Cirino, et al., 2006), 91 English learners below the 25th percentile in English reading from four schools were randomly assigned (at the student level) to the intervention or comparison condition. The intervention involved daily small-group reading instruction focusing on five areas: phonological awareness, letter knowledge, word recognition, fluency, and comprehension. There were 120 50-minute lessons. Teachers modeled new content, and the lessons were fast paced. Students' responses were primarily choral, with some individual responses. Students in the comparison group received the same core reading instruction as students in the intervention condition, and many students also received supplemental instruction, although it was different from the supplemental instruction provided to English learners in the intervention condition.

The What Works Clearinghouse concluded that the effects for reading achievement were not statistically significant (largely because of analysis at the classroom level, which decreased power), but five of the seven effect sizes, as well as the average effect size, were large enough to be substantively important. These effects were average for overall reading achievement (effect size = 0.27) and for specific measures of letter-sound knowledge (0.26), decoding (word attack, 0.42), reading fluency (DIBELS passage 1, 0.32; DIBELS passage 2, 0.27), and word reading efficiency (0.41). Impacts on letter-word identification and passage comprehension were not considered important (0.13 and 0.06, respectively).

In the second *Enhanced Proactive Reading* study (Vaughn, Mathes, et al., 2006), which met the WWC standards with reservations (because of randomization problems), there was a statistically significant and substantively important impact on reading overall (0.89), on decoding (word attack, 1.53), and on comprehension (1.32).

Together, these two studies, plus the other studies in this set, showed potentially positive effects in reading achievement and no discernible effects in English language development.

Recommendation 3. Provide extensive and varied vocabulary instruction

The Panel rated the level of evidence as **Strong.** We reviewed three studies that directly investigated the impact of vocabulary instruction with English learners. A randomized controlled trial (Carlo et al., 2004) reviewed by the What Works Clearinghouse and was found to meet the WWC evidentiary standards with

reservations (because of differential attrition). Perez (1981) also conducted a randomized controlled trial, and Rousseau, Tam, and Ramnarain (1993) conducted a single-subject study. All three studies showed improvements in reading comprehension, and in the one study that assessed vocabulary specifically (Carlo et al., 2004), the effect was positive.

The Panel also considered that many studies of vocabulary instruction for native English speakers have found that explicit word meaning instruction improves reading achievement (see Beck & McKeown, 1991; Blachowicz & Fisher, 2000; Blachowicz, Fisher, Ogle, & Watts-Taffe, 2006; Mezynski, 1983; National Institute of Child Health and Human Development, 2000; Stahl & Fairbanks, 1986). We also reviewed intervention research conducted with English learners.

Example of a vocabulary intervention study

In the study of the *Vocabulary Improvement Program* (Carlo et al., 2004), 16 classrooms were randomly assigned to treatment ($n = 10$) and control ($n = 6$) conditions. These classrooms included 142 fifth-grade English learners and 112 English-only students. The intervention lasted 15 weeks. At the beginning of each week, 10 to 12 target words were introduced, and instruction was provided four days per week for 30 to 45 minutes. Each fifth week was a review of the previous four weeks.

On Mondays English learners previewed a reading assignment in their native language. On Tuesdays intervention activities began, with English learners reading the assignment in English and defining the target vocabulary words in large-group discussion with the teacher. On Wednesdays the English learners completed cloze activities (fill in the blanks) in small groups (heterogeneous groups based on language). On Thursdays students completed word association, synonym/antonym, and semantic feature analysis activities. On Fridays specific intervention activities varied, but the central objective was to promote general word analysis skills, rather than to focus specifically on learning the target words.

In the control classrooms, English learners received instruction normally included in the school curriculum.

In the WWC analysis the intervention was found to have a potentially positive impact on both reading achievement and English language development. But because of the small sample size (with the classroom as the unit of analysis), the gains in these domains were not statistically significant. The effect size in reading comprehension was 0.50, and the average effect size across five specific measures of English language development was 0.43. Both effect sizes were considered substantively important.

Perez (1981) also found that a vocabulary intervention had a positive impact on reading achievement with third-grade English learners. In a multiple baseline study, Rousseau et al. (1993) found that discussion of key words prior to text reading in combination with teacher reading of the text prior to students' reading of the text on their own resulted in a positive impact on both oral reading and reading comprehension.

Reading interventions and vocabulary development

These three studies are the only direct tests of the impact of vocabulary instruction on the reading development of English learners. But it is important that many complex interventions that have improved

the reading achievement of English learners also include explicit teaching of vocabulary. Various studies reviewed positively by the What Works Clearinghouse make it clear that these more complex interventions have been successful in increasing English learners' reading and language achievement, but these studies were not designed to allow the specific effects of vocabulary teaching to be calculated. These successful programs include *Read Well* (Denton, Anthony, Parker, & Hasbrouck, 2004); *Instructional Conversations* (Saunders, 1999; Saunders & Goldenberg, 1999); *Enhanced Proactive Reading* (Vaughn, Cirino, et al., 2006); and *SRA Reading Mastery* (Gunn, Biglan, Smolkowski, & Ary, 2000; Gunn, Smolkowski, Biglan, & Black, 2002). In all these programs, potentially confusing or difficult words for English learners were drawn from reading texts and given additional instructional attention, often using procedures similar to those noted in the explicit vocabulary studies reviewed above.

Recommendation 4. Develop academic English

The Panel rated the level of evidence as **Low.** Two studies (Scientific Learning Corporation, 2004; Uchikoshi, 2005) demonstrate that focused interventions in two relatively narrow areas of academic English (quality of oral narrative and syntax) are potentially effective. But because the studies address very selected aspects of academic English and only indirectly address classroom instruction, we cannot conclude at this time that the studies affirm the effectiveness of instruction in academic English. Additional support is provided by a recent classroom observational study that correlates devotion of specific blocks of time to English language development with enhanced outcomes.

The two randomized controlled studies pertaining to academic English (Scientific Learning Corporation, 2004; Uchikoshi, 2005) are described in greater depth on the What Works Clearinghouse website (www.whatworks.ed.gov). Both were assessed as possessing high control for internal validity; they were rated as *meets evidence standards* without reservations.

In one randomized controlled trial (Uchikoshi, 2005), 108 Spanish-speaking English learners were assigned to watch either 54 half-hour episodes of *Arthur* (*Arthur* emphasizes stories with a plot, conflict, and resolution) or the same number of episodes of *Reading Between the Lions* (a book-based program emphasizing phonics and reading). *Arthur* had an overall positive impact on measures of English language development (effect size = 0.29) and specifically on overall quality of the students' retelling a story (0.44); these effects were not statistically significant. See Dickinson and Tabors (2001) and Snow, Tabors, Nicholson, and Kurland (1995) for discussions of the role of narratives in emerging literacy and the link of narratives to the subsequent academic success of monolingual children.

The study of *FastForWord* (Scientific Learning Corporation, 2004), a computer-based program conducted with 81 English learners in kindergarten through the fifth grade, assessed three aspects of comprehension of oral language that encompass three domains: word classes and relations, grammatical morphemes, and elaborated sentences. The effect size across these three areas was 0.88 (statistically significant).

Example of a study of academic English

The correlational study by Saunders, Foorman, and Carlson (2006) supports the recommendation that student growth in

oral language is stronger in classes that designate specific blocks of time for English language development. This observational study was conducted in 85 kindergarten classrooms in 11 school districts in two states with large populations of English learners. In 26 classrooms the entire school day was in English. In the remaining 59 classrooms teachers used Spanish for most of the day but spent some time on English language development instruction (also known as ESL or ESOL). The *Woodcock Language Proficiency Battery—Revised: English and Spanish Forms* (WLPB-R; Woodcock, 1991; Woodcock & Muñoz-Sandoval, 1993) was used to measure oral language development; word reading skills were assessed with the word identification (Identificación de letras y palabras) subtest from the WLPB-R. Students were assessed at the beginning and the end of the school year.

Two findings are worth noting. First, whether academic instruction was in English or Spanish, classrooms with a fixed block of time devoted to English language development had greater proportions of time during the school day devoted to oral language development. Students in these classes made significantly greater growth in both language and literacy outcomes than students in classes where English language development was infused throughout the day. So, it seems important for teachers to have a block of time each day during which English language development is the primary focus.

Second, very little time was devoted to building academic English in any of the various programs. On average, only 4.5 percent of the time was devoted to vocabulary development and less than 2 percent of the time was spent on work on language structures, such as grammar and syntax. In other words, less than 10 percent of the time was devoted to developing academic English (see also Arreaga-Mayer & Perdomo-Rivera, 1996).

Recommendation 5. Schedule regular peer-assisted learning opportunities

The Panel rated the level of evidence as **Strong.** Three studies of English learners addressed peer-assisted learning (Calhoon, Al Otaiba, Cihak, King, & Avalos, 2006; McMaster, Kung, Han, & Cao, in press; Saenz, Fuchs, & Fuchs, 2005) and two investigated the use of cooperative groups (Calderón, Hertz-Lazarowitz, & Slavin, 1998; Klingner & Vaughn, 1996).

Two studies were randomized controlled trials, and two were high-quality quasi experiments. The Saenz et al. study (randomized controlled trial) met the WWC evidence standards without reservations. Calhoon et al. was also a randomized controlled trial. The Calderón et al. quasi experiment met the WWC criteria with reservations. McMaster et al. was a methodologically acceptable quasi experiment. Because a set of four studies across multiple sites conducted by multiple research teams reached consistent conclusions about the positive academic impacts of structured work in heterogeneous teams of two or four, we consider the evidential basis strong.

The study by Klingner and Vaughn (1996) used a weaker design (with threats to internal validity). This study compared peer-assisted learning (using groups of two) with reciprocal teaching (using groups of four). Both interventions seemed promising, and impacts were roughly equivalent for the two. But because the design did not include a control group, the study cannot make strong claims. It does, however,

provide additional evidence of the potential effectiveness of structured peer-assisted learning.

Nature of the impacts on student learning

In the kindergarten (Saenz et al., 2005) and first-grade (Calhoon et al., 2006) studies, positive effects were found for peer-assisted learning on letter-sound and word attack measures, phoneme awareness, and oral reading fluency. The effect sizes were substantively important. In grades 3–6 the impact on reading comprehension was significant.

Example of a study on peer-assisted learning

The Saenz et al. (2005) study provides a good example of how peer-assisted learning works and how this research is frequently conducted. Twelve classroom teachers were randomly assigned to peer tutoring and control conditions. Within each classroom four groups of English learners were identified: two English learners with learning disabilities, and three students per group in low, average, and high achieving groups, for a total of 11 students per classroom. Peer-assisted instruction was conducted three times per week in 35-minute sessions for 15 weeks. Relatively strong readers were paired with relatively weak readers for the tutoring sessions, and pairs were rotated every three to four weeks. Each student assumed the role of tutor and tutee and engaged in three reading activities: partner reading with story retelling, summarizing text (paragraph shrinking), and making predictions (prediction relay). In these activities the stronger reader was the tutee first, and tutors were trained to respond with structured prompts when tutees were having difficulty. Treatment fidelity was very high, above 90 percent in all areas.

In this study, there was a positive impact on reading comprehension, as measured by questions answered correctly. There was no interaction with learner type, and the effect sizes were 1.03 for English learners with learning disabilities, and 0.86, 0.60, and 1.02, respectively for the low, average, and high achieving groups. These effect sizes were substantively important.

Appendix 2. Levels of evidence for the recommendations in the practice guide

We rely on the What Works Clearinghouse (WWC) Evidence Standards to assess the *quality* of evidence supporting educational programs and practices. The What Works Clearinghouse addresses evidence for the causal validity of instructional programs and practices according to WWC Standards. Information about these standards is available at www.whatworks.ed.gov/reviewprocess/standards.html.

The technical quality of each study is rated and placed in one of three categories:

- *Meets evidence standards*—for randomized controlled trials and regression discontinuity studies that provide the strongest evidence of causal validity;
- *Meets evidence standards with reservations*—for all quasi-experimental studies with no design flaws and randomized controlled trials that have problems with randomization, attrition, or disruption; and
- *Does not meet evidence standards*—for studies that do not provide strong evidence of causal validity.

Criteria for assessing problems of attrition and randomization are described in detail in a set of *Technical Working Papers.* The following are the main reasons for excluding studies:

1. There is only one teacher per condition or one school per condition. This creates a major problem in interpretation because it is uncertain whether one particular teacher or one particular school produces the effect, or whether the effect is due to the practice.
2. Failure to provide pretest information on a salient pretest variable—for quasi experiments only. In this case we don't know whether the effect is due to the practice or to important initial differences between the experimental and control groups.
3. Differential attrition between intervention and control groups or extremely high attrition (without an adequate attempt to account for this factor in data analysis procedures).

Strong level of evidence

In general, characterization of the evidence for a recommendation as *strong* requires both studies with high internal validity (studies whose designs can support causal conclusions) and studies with high external validity (studies that in total include enough of the range of participants and settings on which the recommendation is focused to support the conclusion that the results can be generalized to those participants and settings). Evidence for this Practice Guide is strong if:

- A systematic review of research generally meets the standards of the What Works Clearinghouse and supports the effectiveness of a program, practice, or approach—and there is no contradictory evidence of similar quality.

OR

- Several well designed, randomized, controlled trials or well designed quasi experiments generally meet the standards of the What Works Clearinghouse and support the effectiveness of a program, practice, or approach—and there is no contradictory evidence of similar quality.

OR

- One large, well designed, randomized, controlled, multisite trial meets the standards of the What Works Clearinghouse and supports the effectiveness of a program, practice, or approach—and there is no contradictory evidence of similar quality.

- For assessments, evidence of reliability and validity meets the standards in *Standards for Educational and Psychological Testing*.[107]

Moderate level of evidence

In general, characterization of the evidence for a recommendation as *moderate* requires studies with high internal validity but moderate external validity or studies with high external validity but moderate internal validity. In other words moderate evidence is derived from studies that support strong causal conclusions but for which generalization is uncertain, or from studies that support the generality of a relationship but for which causality is uncertain. Evidence for this Practice Guide is moderate if:

- Experiments or quasi experiments generally meet the standards of the What Works Clearinghouse and support the effectiveness of a program, practice, or approach with small sample sizes or other conditions of implementation or analysis that limit generalizability—and there is no contrary evidence.

OR

- Comparison group studies that do not demonstrate equivalence of groups at pretest and therefore do not meet the standards of the What Works Clearinghouse but that consistently show enhanced outcomes for participants experiencing a particular program, practice, or approach and have no major flaws related to internal validity other than lack of demonstrated equivalence at pretest (such as only one teacher or one class per condition, unequal amounts of instructional time, or highly biased outcome measures).

OR

- Correlational research with strong statistical controls for selection bias and for discerning influence of endogenous factors, and there is no contrary evidence.

- For assessments, evidence of reliability that meets the standards in *Standards for Educational and Psychological Testing* but provides evidence of validity from samples that are not adequately representative of the population on which the recommendation is focused.

Low level of evidence

In general, characterization of the evidence for a recommendation as *low* means that the recommendation is based on expert opinion derived from strong findings or theories in related areas or expert opinion buttressed by direct evidence that does not rise to the *moderate* or *strong* level. Evidence is low if it does not meet the standards for *moderate* or *high*.

Notes

1. Field & Lohr (1990).

2. American Psychological Association (2002).

3. Greene (1997).

4. Slavin & Cheung (2005).

5. August & Hakuta (1997); Rossell & Baker (1996).

6. August & Hakuta (1997); Francis, Lesaux, & August (2006).

7. Greene (1997).

8. See http://nces.ed.gov/nationsreportcard/ltt/results2004/sub_reading_race2.asp (retrieved October 9, 2006).

9. See http://nces.ed.gov/nationsreportcard/nrc/reading_math_2005/s0015.asp (retrieved March 16, 2007).

10. See http://nces.ed.gov/nationsreportcard/nrc/reading_math_2005/s0015.asp.

11. August & Hakuta (1997); Shanahan & August (2006).

12. Morrison Institute for Public Policy (2006).

13. Fitzgerald (1995); Krashen (1985).

14. Bialystok & Herman (1999); Geva, Yaghoub-Zadeh, & Schuster (2000); Limbos & Geva (2001).

15. Chiappe & Siegel (1999); Chiappe, Siegel, & Wade-Woolley (2002); Lesaux & Siegel (2003); Limbos & Geva, (2001).

16. Chiappe, Siegel, & Wade-Wooley (2002); Geva et al. (2000); Lesaux & Siegel (2003); Limbos & Geva (2001); Manis et al. (2004); Swanson et al. (2004).

17. Geva & Yaghoub-Zadeh (2006); Lesaux & Siegel (2003).

18. Chiappe, Glaeser, & Ferko (2007); Lesaux, Lipka, & Siegel (2006); Lesaux & Siegel (2003).

19. Miller, Heilmann, Nockerts, Iglesias, Fabiano, et al. (2006); Proctor, Carlo, August, & Snow (2005).

20. Baker & Good (1995); Dominguez de Ramirez & Shapiro (2006).

21. Baker (2006).

22. Arab-Moghaddam & Sénéchal (2001); Baker (2006); Baker, Gersten, Haager, & Dingle (2006); Baker & Good (1995); Chiappe, Siegel, & Gottardo (2002); Chiappe, Siegel, & Wade-Woolley (2002); Dominguez de Ramirez & Shapiro (2006); Geva & Yaghoub-Zadeh (2006); Geva et al. (2000); Lafrance & Gottardo (2005); Leafstedt, Richards, & Gerber (2004); Lesaux & Siegel (2003); Limbos (2006); Limbos & Geva (2001); Manis, Lindsey, & Bailey (2004); Quiroga, Lemos-Britton, Mostafapour, Abbott, & Berninger (2002); Swanson, Sáez, & Gerber (2004); Verhoeven (1990, 2000); Wang & Geva (2003); Wiley & Deno (2005).

23. American Educational Research Association, American Psychological Association, & National Council on Measurement in Education (1999).

24. Chiappe, Siegel, & Wade-Woolley (2002); Geva et al. (2000); Lafrance & Gottardo (2005); Lesaux & Siegel, (2003); Limbos & Geva (2001); Manis et al. (2004).

25. Chiappe, Siegel, & Wade-Woolley (2002); Geva et al. (2000); Lesaux & Siegel (2003); Limbos & Geva (2001); Manis et al. (2004); Swanson et al. (2004).

26. Limbos & Geva (2001); Swanson et al. (2004).

27. Baker & Good (1995).

28. Baker & Good (1995); Dominguez de Ramirez & Shapiro (2006); Wiley & Deno (2005).

29. Chiappe & Siegel (1999); Chiappe, Siegel, & Wade-Woolley (2002); Lesaux & Siegel (2003); Limbos & Geva (2001).

30. August & Hakuta (1997); August & Shanahan (2006); Geva et al. (2000).

31. Cisero & Royer (1995); Gottardo (2002); Hsia (1992); Mumtaz & Humphreys (2001).

32. Chiappe, Siegel, & Wade-Woolley (2002); Geva et al. (2000); Limbos (2006); Manis et al. (2004); Townsend, Lee, & Chiappe (2006).

33. Cisero & Royer (1995); Gottardo (2002); Quiroga et al. (2002).

34. Chiappe & Siegel (2006); Chiappe, Siegel, & Wade-Woolley (2002); Lesaux & Siegel (2003); Geva et al. (2000); Limbos & Geva (2001); Verhoeven (1990, 2000).

35. Denton, Anthony, Parker, & Hasbrouck (2004); Gunn, Smolkowski, Biglan, & Black (2002); Vaughn, Cirino, et al. (2006); Vaughn, Mathes, et al. (2006).

36. August & Siegel (2006); Quiroga et al. (2002); Shanahan & Beck (2006).

37. Denton et al. (2004); Gunn et al. (2002); Vaughn, Cirino, et al. (2006); Vaughn, Mathes, et al. (2006).

38. Vaughn, Linan-Thompson, & Hickman-Davis (2003).

39. In two of the four intervention studies, instructional assistants were trained to provide the instruction. Gunn et al. (2002); Vaughn, Cirino, et al. (2006); Vaughn, Mathes, et al. (2006); Cirino et al. (2007).

40. Haager & Windmueller (2001).

41. Vaughn, Cirino, et al. (2006); Vaughn, Mathes, et al. (2006). Gunn et al. (2002).

42. For further information on the What Works Clearinghouse, visit www.whatworks.ed.gov.

43. Vaughn, Cirino, et al. (2006); Vaughn, Mathes, et al. (2006).

44. Denton et al. (2004).

45. Gunn et al. (2002).

46. Cirino et al. (2007); Gunn et al. (2002).

47. Gunn et al. (2002).

48. Franklin (1986); Limbos & Geva (2001).

49. Gunn et al. (2002); Cirino et al. (2007).

50. In the intervention studies, teachers and instructional assistants were trained to provide instruction.

51. National Institute of Child Health and Human Development (NICHD) (2000).

52. Carlo et al. (2004); Perez (1981).

53. Carlo et al. (2004); Perez (1981); Rousseau, Tam & Ramnarain (1993).

54. Carlo et al. (2004); Perez (1981).

55. Gersten, Dimino, & Jayanthi (in press).

56. August, Carlo, Dressler, & Snow (2005); Blachowicz, Fisher, Ogle, & Watts-Taffe (2006).

57. Gersten, Dimino, Jayanthi, Kim, & Santoro (2006).

58. Gersten et al. (2006).

59. Hiebert (2005).

60. Beck, Perfetti, & McKeown (1982); Biemiller (1999).

61. August et al. (2005).

62. Carlo et al. (2004); Perez (1981); Rousseau et al. (1993).

63. See www.whatworks.ed.gov.

64. Carlo et al. (2004).

65. Perez (1981); Rousseau et al. (1993).

66. Umbel, Pearson, Fernandez, & Oller (1992); Verhallen & Schoonen (1993).

67. Carlo et al. (2004); Perez (1981); Rousseau et al. (1993).

68. NICHD (2000).

69. Baker et al. (2006); Gersten et al. (2006).

70. August & Hakuta (1997); Bailey (2006); Francis, Rivera, et al. (2006); Genesee, Lindholm-Leary, Saunders, & Christian (2006); Goldenberg (2006); Scarcella (2003); Schleppegrell (2001, 2004); Snow & Fillmore (2000).

71. August & Hakuta (1997); Bailey (2006); Callahan (2005); Diaz-Rico & Weed (2002); Francis, Rivera, et al. (2006); Genesee et al. (2006); Goldenberg (2006); Meltzer & Haman (2005); Scarcella (2003); Schleppegrell (2001, 2004); Snow & Fillmore (2000).

72. Proctor et al. (2005).

73. Francis, Rivera, et al. (2006).

74. August & Hakuta (1997); Callahan (2005) Francis, Rivera, et al. (2006); Genesee et al. (2006); Goldenberg (2006); Meltzer & Haman (2005); Scarcella (2003); Snow & Fillmore (2000).

75. Fillmore & Snow (2002).

76. Michaels & Cook-Gumperz (1979); Saunders et al. (2006); Schleppegrell (2004).

77. Feldman & Kinsella (2005).

78. Girard (2005).

79. Dutro & Moran (2002).

80. Snow & Fillmore (2000).

81. Diaz-Rico & Weed (2002).

82. Scarcella (2003).

83. August & Hakuta (1997); Francis, Rivera, et al. (2006); Meltzer & Haman (2005); Scarcella (2003); Snow & Fillmore (2000).

84. Francis, Rivera, et al. (2006); Saunders, Foorman, & Carlson (2006); Schleppegrell (2004); Fillmore (2004); Scarcella (2003).

85. Francis, Rivera, et al. (2006); Gibbons (2002).

86. Goldenberg (2006).

87. Celce-Murcia (2002); Fillmore & Snow (2000).

88. Francis, Rivera, et al. (2006); Fillmore & Snow (2000).

89. Bailey (2006); Gibbons (2002); Schleppegrell (2004). Note that English learners who enter school in the primary grades without the ability to use English in such ways can learn grade-appropriate academic English as well as their English-speaking peers if they are given access to the same rigorous curriculum early and appropriate instructional support and interventions, delivered daily in blocks of time dedicated to the development of academic language. When students receive high-quality instruction in academic English early in their education, we see gains in their test scores later.

90. See www.whatworks.ed.gov.

91. Scientific Learning Corporation (2004); Uchikoshi (2005).

92. August & Hakuta (1997); August & Shanahan (2006); Bailey (2006); Callahan (2005); Francis, Rivera et al. (2006); Gennesee et al. (2006); Goldenberg (2006); Meltzer & Haman (2005); Scarcella (2003); Schleppegrell (2001, 2004); Snow & Fillmore (2000).

93. At this stage, the reader may be a bit confused. In Recommendation 1 (Formative Assessments to Screen for Reading Problems and Monitor Progress), we noted that studies consistently find that oral English language proficiency is a weak predictor of how quickly a child will learn to read in English. Yet, in Recommendation 4 we argue for the importance of intensive work on the development of academic English, including oral language proficiency, beginning in kindergarten.

A subtle but important distinction needs to be made to explain the seeming contradiction. The fact that oral English language proficiency is not a valid predictor of who needs extra support in learning to read in the early grades in no way indicates that oral English language proficiency is not important for the development of reading in the long term. In fact, experts consistently consider building oral proficiency in the features of academic English to be critical. In Recommendation 1, we were addressing screening measures for learning how to read (the act of reading and understanding the relatively straightforward books suitable for students in the early grades).

94. Echevarria, Vogt, & Short (2004); Francis, Rivera, et al. (2006).

95. Francis, Rivera, et al. (2006); Gersten & Baker (2000); Fillmore & Snow (2000).

96. Saunders et al. (2006).

97. Saunders et al. (2006).

98. 90 minutes is the median amount of time per week in the research.

99. McMaster, Kung, Han, & Cao (in press).

100. Calderón, Hertz-Lazavowitz, & Slavin (1998).

101. Klingner & Vaughn (1996).

102. Calhoon, Al Otaiba, Cihak, King, & Avalos (2006); McMaster et al. (in press); Saenz, Fuchs, & Fuchs (2005).

103. Calderón et al. (1998); Klingner & Vaughn (1996).

104. Calderón et al. (1998); Saenz et al. (2005).

105. Saenz et al. (2005).

106. Calderón et al. (1998).

107. American Educational Research Association et al. (1999).

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