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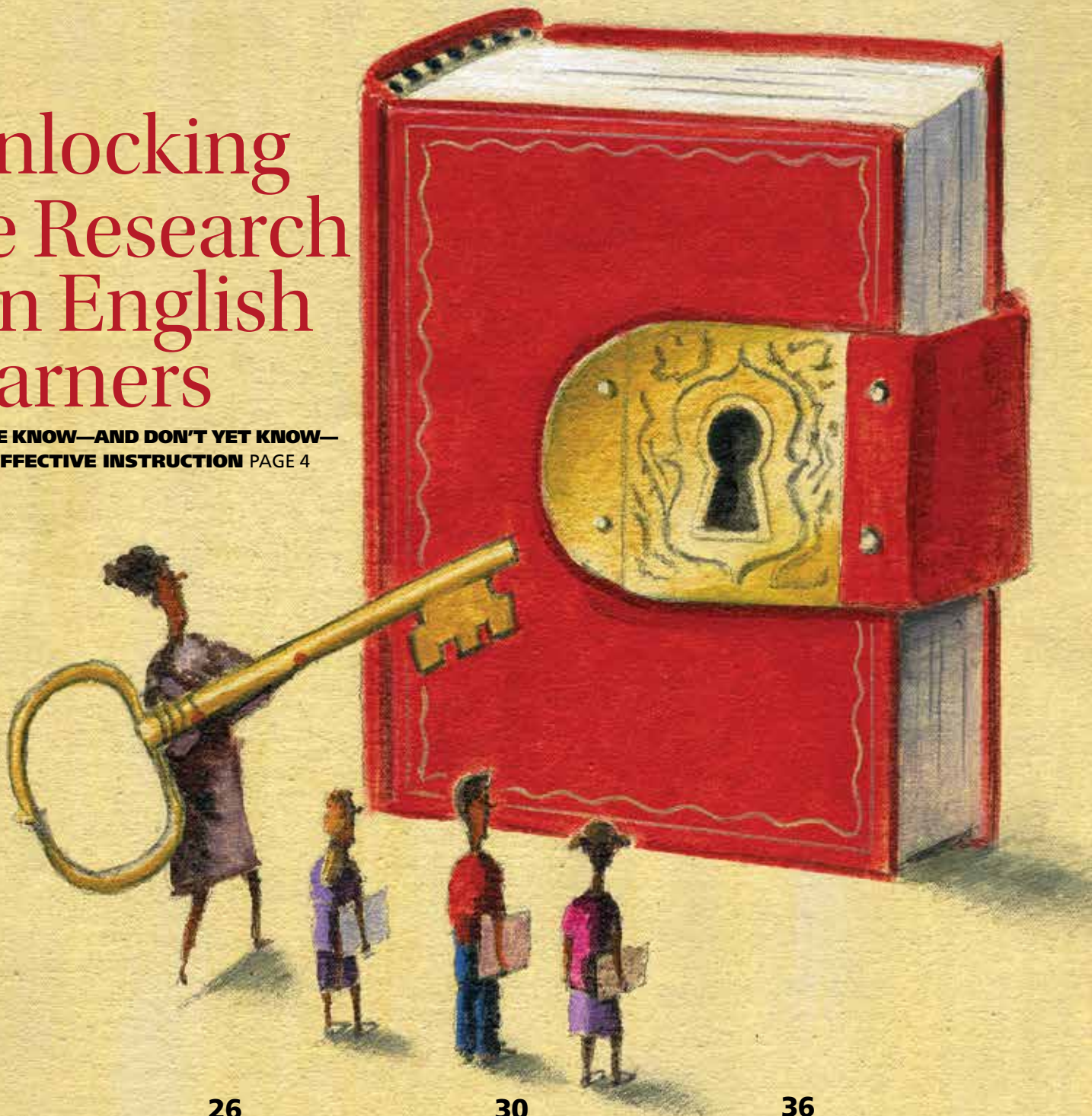
Unlocking the Research on English Learners

WHAT WE KNOW—AND DON'T YET KNOW—ABOUT EFFECTIVE INSTRUCTION PAGE 4



New Chapter

I am honored to have been named the new editor of *American Educator*, and I am equally excited to return to the AFT. I am also quite grateful to former editor Lisa Hansel, who spent 11 years with this publication. Lisa has been kind enough to share her vast expertise with me, and she has patiently oriented me to my new role. While this Summer issue bears my name, it was Lisa who commissioned the articles within and saw them through to production. Thank you, Lisa, for setting a high bar throughout your time with the AFT. We wish you well in your future endeavors, and I am committed to continuing your in-depth reporting such that *American Educator* remains as trustworthy a source as ever.

Sincerely,
Amy Hightower

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Keep It Simple to Avoid Data Distractions

EDUCATORS OFTEN embellish charts with colorful pictures and designs to engage students in learning new material, but such well-intentioned efforts can end up making graphics more difficult for children to read and can hinder their learning, according to the article "Extraneous Perceptual Information Interferes with Children's Acquisition of Mathematical Knowledge," by Jennifer Kaminski and Vladimir Sloutsky, which was published in the May 2013 issue of the *Journal of Educational Psychology*.

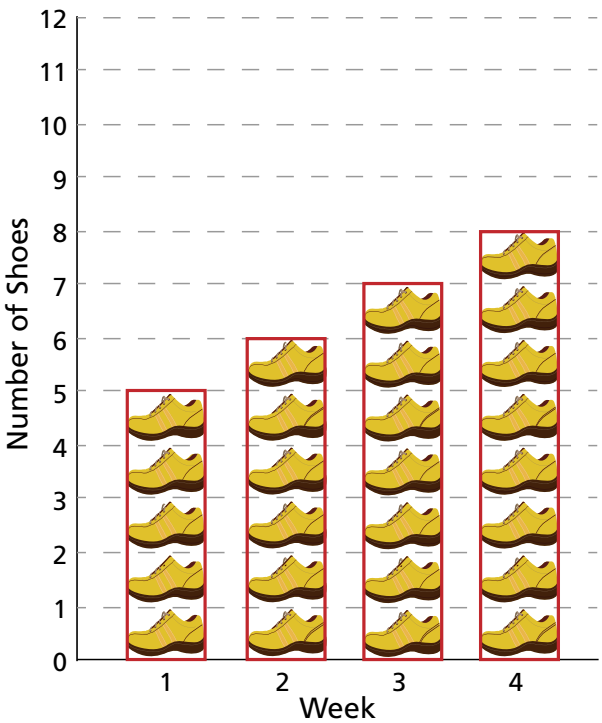
Researchers showed 16 kindergarten and elementary school teachers the graphs pictured below and asked if the charts with colorful objects displayed within the bars would be more effective than charts with solid bars in teaching their students how to read charts. Fourteen teachers said the graphs with colorful objects would be more effective, and two teachers said they would not use the solid-bar graphs at all. All 16 teachers said they would use the graphs with colorful objects in their teaching.

The researchers also conducted four separate experiments with students interpreting bar charts. In one experiment, researchers taught 122 6- to 8-year-olds how to read basic bar charts representing quantities of different objects (shown on the y-axis) at different times (shown on the x-axis). While some of the charts featured solid bars, others depicted the same information with stacks of countable objects inside the bars. When the researchers first taught students how to interpret the charts, the number of objects stacked in each bar equaled the number of items shown on the y-axis. For instance, as shown in the shoe chart below, in week 1, the number of shoes in the Lost and Found is five, and so five shoes are shown inside the column for week 1.

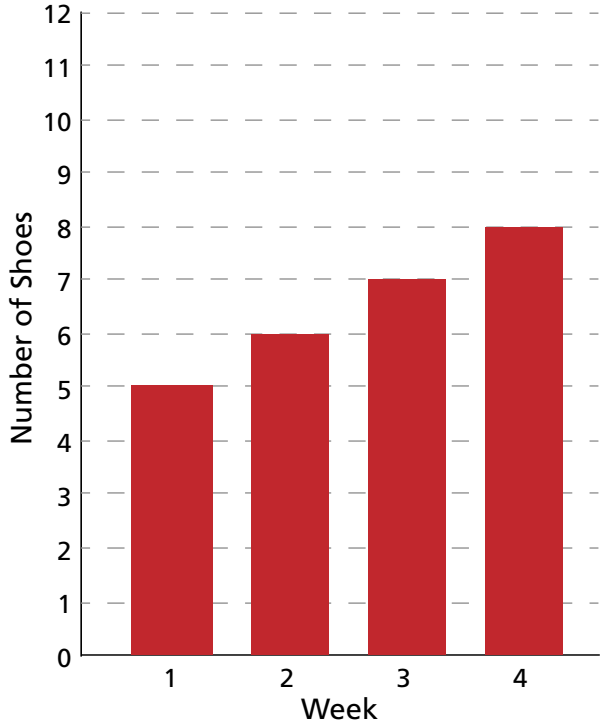
Researchers then tested students with new charts in which the number of countable icons did not always equal the y-axis. They found that instead of correctly reading the y-axis, many students counted the icons in each stack. All of the first- and second-graders and 75 percent of the kindergartners who had been taught to read the solid-bar charts correctly read the new charts. But for students who learned to read bar charts with countable objects, 90 percent of kindergartners, 72 percent of first-graders, and 30 percent of second-graders counted the icons in the stacks, thus incorrectly reading the new charts.

"These findings underscore the importance of considering children's limited attentional capacities when designing and introducing learning material," the authors write. To that end, textbook and lesson plan designers should "not simply rely on intuition as to what features may seem desirable or visually pleasing." For more on how teachers can help students strengthen their abilities to understand tables, maps, graphs, and diagrams, read "Seeing Relationships" in the Spring 2013 issue of *American Educator*, available at www.aft.org/pdfs/americaneducator/spring2013/Newcombe.pdf.

This chart is less effective.



This chart is more effective.



SOURCE: JENNIFER A. KAMINSKI AND VLADIMIR M. SLOUTSKY, "EXTRANEOUS PERCEPTUAL INFORMATION INTERFERES WITH CHILDREN'S ACQUISITION OF MATHEMATICAL KNOWLEDGE," *JOURNAL OF EDUCATIONAL PSYCHOLOGY* 105, NO. 2 (2013): 351–363.

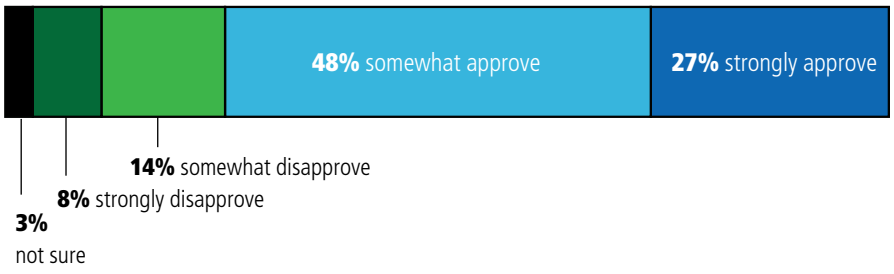
Concerns Amid Support for Common Core

DO TEACHERS SUPPORT the Common Core State Standards (CCSS) for math and English language arts, which have been adopted by the vast majority of states and the District of Columbia? Have they received the training needed to teach to them? The AFT sought answers to these key questions by asking the professionals who will be working with these standards the most: educators. So in March 2013, 800 K–12 teachers who are also AFT members were surveyed to gauge their support for the new standards and to gather information on how implementation is going.

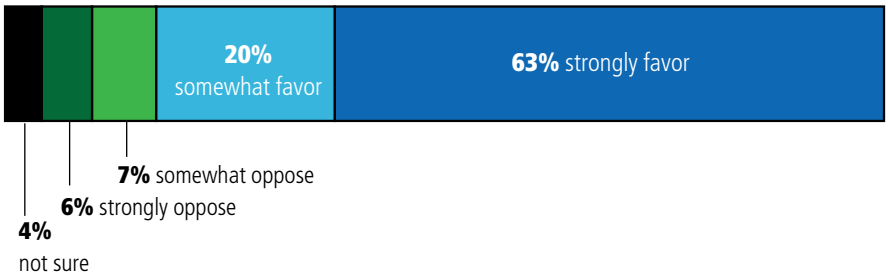
The results confirm that teachers overwhelmingly support the CCSS as well as a moratorium, like the one AFT President Randi Weingarten has called for, on the consequences for students, teachers, and schools on Common Core–aligned assessments until the standards have been well implemented and field-tested. In the poll, 75 percent of the teachers surveyed approve of the CCSS, and 83 percent support a moratorium on high-stakes consequences until the CCSS and related assessments have been in use for one year.

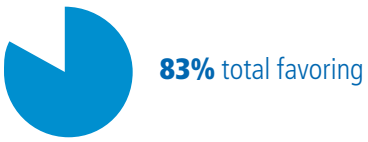
While 78 percent of the teachers surveyed said they have received professional development training related to the CCSS, less than half said that training adequately prepared them to teach to the new standards. Meanwhile, 74 percent said they worry that new Common Core–aligned assessments will begin before everyone understands the new standards and before instruction has been fully aligned with them. See the charts below for some highlights of the survey results.

Based on what you know about the Common Core State Standards and the expectations they set for children, do you approve or disapprove of your state's decision to adopt them?

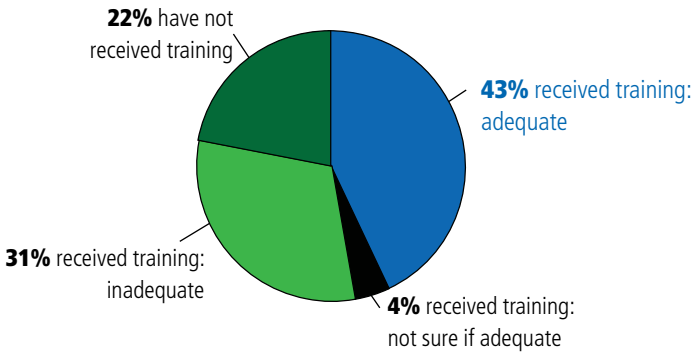


Do you favor or oppose the establishment of a moratorium on high-stakes consequences for students, teachers, and schools until the Common Core standards and related assessments are fully in use for one year?

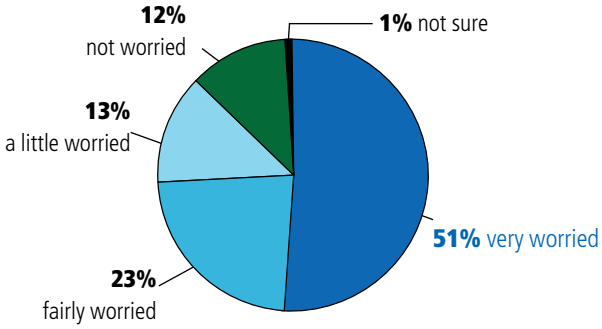




Have you received any professional development or training related to the CCSS? Was that training adequate in preparing you to teach to the standards?



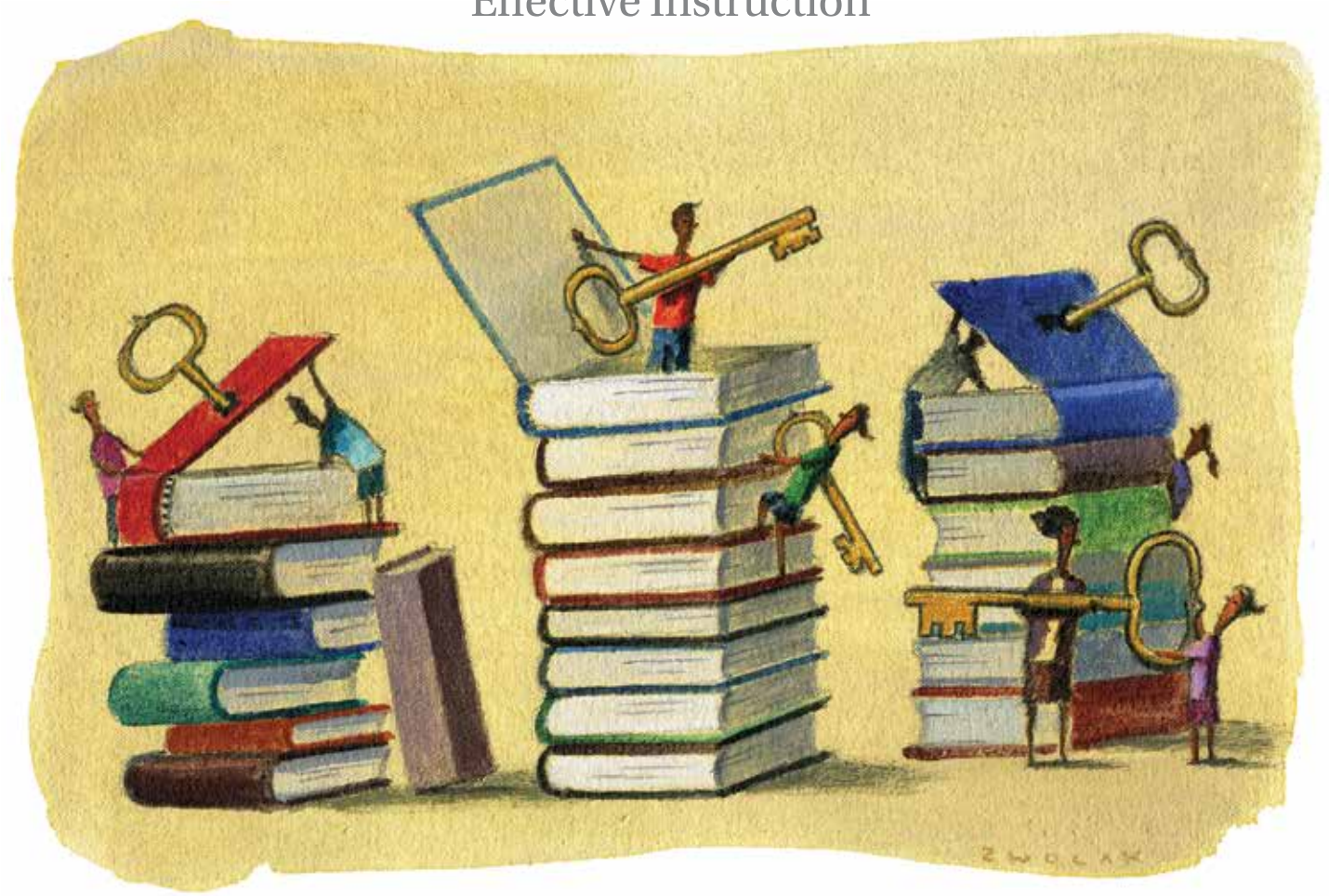
How worried are you that the new assessments will begin—and students, teachers, and schools will be held accountable for the results—before everyone involved understands the new standards, and before instructional practice has been fully aligned with the standards?



For more survey results, see **www.aft.org/pdfs/press/ppt_ccss-pollresults2013.pdf**.

Unlocking the Research on English Learners

What We Know—and Don't Yet Know—about Effective Instruction



By Claude Goldenberg

The number of professional publications aimed at improving instruction for English learners has exploded since the early 2000s. Dozens of books, articles, and reports were published in the space of a few years following the appearance of two major research reviews in 2006.[1] According to one count, nearly 15 books on the topic of English learners were published in 2010 alone,[2] most aimed at professional audiences. Since then, the pace has only accelerated, with new and specialized books on assessment, literacy, English language development, and content instruction for English learners (ELs) seeming to appear continuously.

Yet there is surprisingly little research on common practices or recommendations for practice with the more than 5 million ELs in our nation's schools, many of whom come from families in poverty and attend lower-resourced schools. This absence of adequate research applies to all areas, including promoting English language development and instruction in content areas such as math and history. One of the 2006 research reviews noted "a dearth of empirical research on instructional strategies or approaches to teaching content" for ELs.[3] A subsequent review of research on content area instruction for ELs echoed the same theme.[4] Rather than providing a list of instructional practices specifically validated by research as effective with ELs—which

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would be a short list—I instead identify three important principles based in the research. These are:

I. Generally effective practices are likely to be effective with ELs.
II. ELs require additional instructional supports.
III. The home language can be used to promote academic development.

There is also a fourth principle: ELs need early and ample opportunities to develop proficiency in English (see page 13 for an article devoted to that topic). For each of the three principles listed above, I provide specific examples from research on ELs.

This serious look at the research comes at an opportune time. The new Common Core State Standards (CCSS) for English Language Arts and Literacy in History/Social Studies, Science, and Technical Subjects, which have been adopted by the vast majority of states and the District of Columbia, are now in the process of being implemented. In calling for students to study and understand complex texts in English language arts and other academic subjects, these new standards place an even greater emphasis on content knowledge and language and literacy skills than the previous standards of many states. Indeed, large numbers of ELs had difficulty meeting states' prior standards. In California, for example, data from the past several years indicate that approximately 40–50 percent of originally classified ELs performed well below criteria established for the previous English language arts standards.[5] To meet the demands of the CCSS, ELs clearly need additional help, and teachers need a great deal of support. Meeting the Common Core standards constitutes an enormous challenge we should not underestimate.[6]

Effective instruction in general is the foundation of effective instruction for ELs. However, it is probably not sufficient to promote accelerated learning among ELs.

I. Generally Effective Practices Are Likely to Be Effective with ELs

There is a vast literature on effective teaching practices. Educational research over more than a half century has yielded a number of reasonably consistent findings about the features of teaching likely to result in improved student learning. These include:

- Clear goals and objectives;
- Appropriate and challenging material;
- Well-designed instruction and instructional routines;
- Clear instructions and supportive guidance as learners engage with new skills;
- Effective modeling of skills, strategies, and procedures;
- Active student engagement and participation;
- Informative feedback to learners;
- Application of new learning and transfer to new situations;
- Practice and periodic review;
- Structured, focused interactions with other students;
- Frequent assessments, with reteaching as needed; and
- Well-established classroom routines and behavior norms.

All published studies with which I am familiar that have demonstrated positive effects on ELs' achievement incorporate at least several of these features into the instructional procedures. For example, one found that structured writing instruction—including teacher instruction, error correction and feedback, and a focus on building writing skills—had more positive effects on fifth-grade ELs' writing than did a free writing approach with no explicit instruction or error correction.[7] Both groups were allowed to write in either Spanish or English. Another writing study with native Cantonese speakers in Hong Kong reported similar findings—explicit teaching of revision strategies helped improve the quality of student writing and helped students learn to write so that readers could understand them.[8]

Many other studies illustrate the value of well-known elements of effective instruction to promote the learning of ELs, whether in vocabulary instruction,[9] early reading interventions,[10] English language development,[11] or science education.[12] In fact, several studies have shown similar effects on both ELs and non-ELs,[13] again suggesting that there is considerable overlap between what is effective instruction for ELs and what is effective for students already proficient in English.

Two researchers[14] reviewed many of the same studies as the National Literacy Panel on Language-Minority Children and Youth* and concluded that "the programs with the strongest evidence of effectiveness in this review are all programs that have also been found to be effective with students in general" and modified for ELs (see the next section on instructional supports and modifications). These programs include various versions of

*To learn about this panel and read a summary of a subsequent report edited by Diane August and Timothy Shanahan, visit www.cal.org/projects/archive/natlitpanel.html.

Success for All (a school-wide program that involves far more than classroom instruction), Direct Instruction,* and phonics instruction programs. Other programs with at least some evidence of effectiveness include vocabulary instruction programs,[15] a comprehensive language arts program† combining direct teaching and literature study,[16] a program that promotes reading between parents and kindergarten children,[17] a Spanish version of Reading Recovery,[18] an English tutoring program,[19] and programs that incorporate cooperative learning.[20]

The key message is that what we know about effective instruction in general is the foundation of effective instruction for ELs. However, as we'll see in the next section, although "generic" effective instruction is almost certainly a necessary base, it is probably not sufficient to promote accelerated learning among ELs.

II. ELs Require Additional Instructional Supports

ELs in an English instructional environment will almost certainly need additional supports so that instruction is meaningful and productive. Aside from the pedagogical need, there is also the legal requirement mandated by the Supreme Court's decision in *Lau v. Nichols* (1974) that classroom instruction must be meaningful to students even if their English language proficiency is limited. The need for additional supports is particularly true for instruction aimed at higher-level content and comprehension of academic texts. Because the Common Core standards focus more on academic literacy skills than do prior state standards, teachers will certainly need to bolster ELs' efforts to understand more challenging content in English language arts and all academic subjects. One of the most important findings of the National Literacy Panel on Language-Minority Children and Youth[21] was that the effects of reading instruction on ELs' reading comprehension were uneven and often nonexistent even when comprehension skills were taught directly. This is in contrast to studies with English-proficient students, for whom reading instruction helps improve reading comprehension.[22]

ELs in an English instructional environment will almost certainly need additional supports so that instruction is meaningful and productive.

Why does improving reading comprehension for English learners instructed in English appear so elusive? A likely explanation is that lower levels of English proficiency interfere with comprehension and can blunt the effects of otherwise sound instruction. William Saunders and I conducted a study that suggests this possibility.[23] We randomly assigned a group of ELs either to an instructional conversation group (interactive teacher-led discussions designed to promote better understanding of what students read) or to a control condition, where the teacher used comprehension questions in the teacher's guide. We found that instructional conversations had no overall effect on ELs' story comprehension—students in both groups understood the story about equally. We did find that instructional conversations produced deeper understandings of a complex concept at the heart of a story the students read, but this is different from story comprehension.

However, when we looked at the results for students with different English proficiency levels, we found something striking: for the students with the highest English proficiency, participation in instructional conversations did have an impact on story comprehension—91 percent accuracy versus 73 percent accuracy for students in the comparison group. The middle-level students also did better with instructional conversations, but the results were not statistically significant. The lowest-level English speakers did worse with instructional conversations, although also not to a statistically significant degree. These results suggest that instruction aimed at improving ELs' comprehension is likely to be more effective when ELs have relatively higher English skills, but less effective, *in*effective, or even possibly counterproductive when their English skills are lower.

One obvious implication is that we need to focus on English language development for ELs, particularly those least proficient in English. (Along with William Saunders and David Marcelletti, I address that topic in a companion article that begins on page 13.) But what can teachers do to help ELs who are developing their English skills as they simultaneously learn advanced academic content and skills in English?

Sheltered Instruction

To meet this challenge, educators and researchers have proposed a set of instructional supports or modifications that are sometimes referred to as *sheltered instruction*.[24] The goal of sheltered strategies is to facilitate the learning of grade-level academic content and skills for students being instructed in English but who have limited proficiency in the language. Sheltered instruction can be expected to contribute to English language development, but its real focus is academic content and skills.

Some of the supports and modifications‡ that have been proposed for instructing ELs include:

- Building on student experiences and familiar content (then adding on material that will broaden and deepen students' knowledge);
- Providing students with necessary background knowledge;
- Using graphic organizers (tables, web diagrams, Venn diagrams)

*To learn about Success for All, see www.successforall.org; for information about Direct Instruction, see www.nifdi.org.

†To learn more about this program, Opportunities through Language Arts, go to https://people.stanford.edu/claudeg/video/opportunities-through-language-arts.

‡For a comprehensive list of "sheltered" strategies, definitions, and video illustrations, go to https://people.stanford.edu/claudeg/cqell/about.

to organize information and clarify concepts;
- Making instruction and learning tasks extremely clear;
- Using pictures, demonstrations, and real-life objects;
- Providing hands-on, interactive learning activities;
- Providing redundant information (gestures, visual cues);
- Giving additional practice and time for discussion of key concepts;
- Designating language *and* content objectives for each lesson;
- Using sentence frames and models to help students talk about academic content; and
- Providing instruction differentiated by students' English language proficiency.

The goal of sheltered strategies is to facilitate the learning of grade-level academic content and skills for students who have limited proficiency in the language.

There are also sheltered strategies that involve strategic use of students' home language—for example, cognates and other home language support. These will be discussed in the third section on use of the home language for classroom instruction.

The problem, however, is that there is not much evidence that these strategies actually help English learners overcome the challenges they face in learning advanced academic content and skills, as they will be required to do with the implementation of the CCSS for English language arts. There are virtually no data to suggest that sheltered instruction or any of these modifications and supports help ELs keep up with non-ELs or help close the achievement gap between them. For some of the items on the list, such as the use of content and language objectives, sentence frames, and differentiating instruction by English proficiency levels, there are no published data at all about their effects on ELs' learning.

Even the most popular sheltered model in existence and one that brings together many disparate elements into a useful and coherent instructional model—the Sheltered Instruction Observation Protocol (SIOP)[25]—has yet to demonstrate more than a very modest effect on student learning.[26] A recent study showed stronger effects than did prior research,[27] but unfortunately researchers excluded from the analysis classrooms with lower implementation levels.[28] The most recent study[29] found modest effects that were *not* statistically significant. Another professional development model designed to help teachers of ELs accomplish high-level language and content goals with students, Quality Teaching for English Learners,[§] produced no significant effects on student achievement in language arts or English language proficiency and no effects on teacher attitudes, knowledge, or classroom practice.[30] Other popular programs, such as Project GLAD (Guided Language Acquisition Design),** have never even been evaluated.

We also have compelling portraits of teachers who incorporate many of the supports included in the SIOP into their teaching in order to make instruction more meaningful for English learners and to promote academic language skills. One researcher,[31] for example, describes high school biology teachers who integrate language and content instruction; use hands-on activities, pictures, and diagrams; build on student background and experiences; and provide opportunities and time for discussion and language use. But we do not know the extent to which these supports actually compensate for students' lack of proficiency in English, particularly in the sort of English language skills required for academic success.

Some Evidence of Benefits

There is some evidence that these supports and modifications do benefit ELs. For example, studies reviewed by the National Literacy Panel on Language-Minority Children and Youth[32] find that building on students' experiences and using

These three articles on English learners provide a comprehensive update of "Teaching English Language Learners: What the Research Does—and Does Not—Say," by Claude Goldenberg, in the Summer 2008 issue of *American Educator*, which is available for free at http://go.aft.org/goldenberg.

[§]To learn more about Quality Teaching for English Learners, see http://qtel.wested.org.

**To learn more about Project GLAD, see www.projectglad.com.

material with familiar content can facilitate ELs' literacy development and reading comprehension. One ethnographic study found that young English learners' writing development is helped when the teacher incorporates literacy activities and materials from home and the community into classroom activities.[33] Another set of studies showed that second-language learners' reading comprehension improves when they read material with familiar content.[34]

It is generally true that what we know and are already familiar with can influence new learning and the comprehension of what we read.[35] Teachers should therefore use materials with some degree of familiarity to students. If students are expected to read material with unfamiliar content, it is important to help them acquire the necessary background knowledge. Building background knowledge or building on prior experience and familiar content might be especially important for ELs, since they face the double challenge of learning academic content and skills as they learn the language of instruction. However, like all students, ELs must learn to read and comprehend unfamiliar material—important objectives of the CCSS for English language arts.

There is also a substantial literature on graphic displays and organizers, which facilitate and support learning by clarifying content and making explicit the relationships among concepts.[36] One study[37] found that graphic representations helped improve seventh-grade Canadian ESL (English as a second language) students' comprehension and academic language, but this appears to be the only study of its kind with second-language learners.[38] Another researcher[39] also described the use of graphic organizers to help sixth-grade ELs write a historical argument, although he concluded that students would have benefited from additional explicit instruction in historical writing.

Perhaps these and other instructional supports, which are applicable to learners generally, are especially important or helpful for ELs. That certainly makes intuitive sense, but we have scant evidence either way. In fact, there is some evidence that these supports are equally effective for ELs and non-ELs. One team of researchers[40] taught students explicitly about the science inquiry method by using pictures to illustrate the process, employing multiple modes of representation (for example, verbal, gestural, graphic, or written), and incorporating students' prior linguistic and cultural knowledge into the instruction. Another team[41] built its intervention around the topic of immigration, which presumably had considerable resonance for the ELs, who were themselves immigrants or whose parents were immigrants from Latin America or the Caribbean. This team also used supports in the home language. While both programs showed positive effects on student learning, neither study found any difference in learning outcomes for ELs and non-ELs.

One recent study[42] represents a new development. The researchers found that "multimedia-enhanced instruction" (videos used as part of lessons) helped make read-aloud vocabulary instruction more effective for ELs in preschool to second grade but had no effect on the learning of non-ELs. Teachers used videos related to the topics in books they read aloud to their students as part of the science curriculum on habitats (for example, coral reefs or deserts). The ELs who saw the videos as part of the vocabulary instruction learned more of the target words and made greater gains on a general vocabulary measure than those who did not. The videos helped either greatly diminish or eliminate the gap between ELs and non-ELs on the target words. This suggests a potentially very effective strategy that improves ELs' vocabulary learning while not compromising the learning of students already proficient in English.

We have many promising leads but not a very good understanding of how to help ELs learn high-level academic content and skills.

In short, we have many promising leads but not a very good understanding of how to help ELs learn high-level academic content and skills despite limited English proficiency. What one researcher[43] wrote about instruction focusing on language in addition to academic content—"the published research is at an early stage"—is equally true for other supports intended to help ELs achieve at high academic levels.

III. The Home Language Can Be Used to Promote Academic Development

We turn, finally, to the most controversial topic in instructing ELs—the role of the home language. There are two aspects to the issue: teaching academic content and skills, such as reading and mathematics, in the home language, and using the home language as support in an otherwise all-English instructional environment—for example, providing definitions or brief explanations in the home language, but keeping instruction overwhelmingly in English.

Teaching academic skills in the home language is at the core of the great "bilingual education" debate. Proponents of bilingual education have long argued that students should be taught in their home language (although certainly not exclusively) and that doing so strengthens the home language and creates a more solid foundation for acquiring academic skills in English. Opponents of bilingual education argue that instruction in a student's home language is a waste of time, depresses achievement in English, and simply delays an EL's entrance into the academic (and social) mainstream.*

These debates over bilingual education are typically framed in terms of outcomes in English. English outcomes are without a doubt important, but there is an additional reason to consider primary language instruction for English learners, and that is the inherent advantage of knowing and being literate in two languages. No one should be surprised to learn that all studies of bilingual education have found that teaching children in their primary language promotes achievement in the primary language. This should be seen as a value in and of itself. Of course, if primary language achievement comes at the expense of achievement in English, this might not be a worthwhile tradeoff. As we will see, however, bilingual education tends to produce better outcomes in English; at worst, it produces outcomes in English equivalent to those produced by English immersion. In other words, bilingual education helps students become bilingual—something that is valuable for anyone, not just ELs.[44] This should not be lost amid the controversy over bilingual education and English immersion.

There is no controversy over the positive effects of home language instruction *on home language skills*. This is important given the possible advantages of bilingualism and biliteracy.

What the Research Tells Us

Although bilingual education continues to be a politically charged issue,[45] we can draw some conclusions from the research.

Reading Instruction in the Home Language Can Be Beneficial

Numerous experimental studies have been conducted over the past 40 years, and the consensus—although it is by no means unanimous—is that learning to read in their home language helps ELs boost reading skills in English. Learning to read in the home language also maintains home language literacy skills; there is no controversy over this. To date, there have been five meta-analyses conducted since 1985 by researchers from different perspectives. All five reached the same conclusion—namely, that bilingual education produced superior reading outcomes in English compared with English immersion.

A more recent study, and probably the strongest methodologically, reached a different conclusion. Researchers[46] randomly assigned Spanish-speaking ELs to either transitional bilingual education or English immersion. All students were in the Success for All program. This is very important, since previous studies of bilingual education had not controlled for instruction, curriculum, or other factors that could have compromised the findings. The authors found that in first grade, children in English immersion did significantly better on English achievement measures than did children in bilingual education. By fourth grade, English immersion students' scores were somewhat higher than that of the bilingual education students, but the differences were not significant. The researchers contend that these results support neither side in the bilingual education controversy. Instead, they argue, quality of instruction and curriculum and the school supports needed to support them are more important determinants of ELs' achievement than language of instruction.

Effects Are Small to Moderate

The effects of home language instruction on English achievement are fairly modest, even if we disregard the findings of the recent study just discussed. The five meta-analyses mentioned in the previous section found that, on average, teaching reading in the home language could boost children's English literacy scores by approximately 12 to 15 percentile points in comparison with children in the control conditions. This is not a trivial effect, but neither is it as large as many proponents of bilingual education suggest. Of course, if we add in the results of the new study, the average effect would be reduced. But we should keep in mind that there is no controversy over the positive effects of home language instruction *on home language skills*. This should be seen as an important outcome in itself, given the many possible advantages—intellectual, cultural, and economic—of bilingualism and biliteracy.[47]

Insufficient Data on Length of Time in Primary Language Instruction

The soundest studies methodologically focus on relatively short-term transitional bilingual education. In transitional programs, children generally receive instruction in the home language from one to three years and then transition to all-English instruction. Among this group of studies, there is no evidence that more or less time spent in bilingual education is related to higher or lower student achievement.[48]

Another type of bilingual education[49] is two-way or dual-language.† The goal of two-way bilingual education is bilingualism and biliteracy, in contrast to transitional bilingual education, which uses the home language only to help students transition to

*For an excellent history of the political and ideological debates around bilingual education, see *Educating English Learners: Language Diversity in the Classroom,* by James Crawford.

†To learn more about two-way immersion education, see www.cal.org/twi/index.htm.

all-English instruction and then stops instruction in the home language. Two-way programs use the home language for far longer, at least through elementary school and often into middle school and beyond (K–12 two-way programs are rare). Two-way programs were virtually excluded from the five meta-analyses. The reason is that these longer-term studies do not meet the methodological requirements set by the meta-analyses. For example, they do not control for possible differences in the types of students in different programs, who vary considerably in terms of language, literacy, and parents' education levels.[50] If we don't control for these factors, we are likely to get misleading results.

Our knowledge about the effects of two-way programs is unfortunately very limited. Nonetheless, two-way bilingual education offers a promising model for the education of ELs. It also offers a way to promote bilingualism and biliteracy for non-English learners, since two-way programs include English-speaking students as well as students from language-minority backgrounds (for example, Spanish speakers). This is an area in great need of additional research and rigorous evaluation.

It is an inconvenient truth that we lack the knowledge base to fully prepare teachers to help many of their ELs overcome the achievement gaps they face.

Virtually No Data Exist on Bilingual Education in Other Curriculum Areas

Reading is by far the curriculum area that has received the most attention in studies of bilingual education. A small number have found positive effects in math.[51] We know very little about the effects of bilingual education in other areas of the curriculum.

Instructional Support in the Home Language

Students' home language can play a role even in an all-English instructional program. This is referred to as home (or primary) language support. There is no teaching of content and academic skills in the home language; instead, the home language is used to help facilitate learning content and skills in English. The home language can be used to support learning in an English instructional environment in the following ways:

- Cognates (words with shared meanings that have common etymological roots, such as *geography* and *geografía*);
- Brief explanations in the home language (not direct concurrent translations, which can cause students to "tune out" while English is being spoken);
- Lesson preview and review (lesson content is previewed in students' home language to provide some degree of familiarity when the lesson is taught; following the lesson, there is a review in the home language to solidify and check for understanding); and
- Strategies taught in the home language (reading, writing, and study strategies are taught in the home language but then applied to academic content in English).

Cognates have been used with a number of vocabulary and reading programs.[52] No study has ever isolated the specific effects of cognate instruction, but more successful second-language learners do use cognates when trying to understand material in the second language.[53]

In one study, teachers previewed difficult vocabulary in Spanish before reading a book in English; the teachers then reviewed the material in Spanish afterward. This produced better comprehension and recall than either reading the book in English or doing a simultaneous Spanish translation while reading.[54] The program described above that was based on the topic of immigration[55] made use of a similar technique. Before the class read a written passage, Spanish speakers were given written and audiotaped versions to preview in Spanish.

We also have evidence that reading strategies can be taught in students' home language, then applied in English. One study[56] found that teaching comprehension strategies in students' primary language improved reading comprehension when students afterward read in English.

It should be clear that despite progress in understanding how to improve teaching and learning for the millions of ELs in our schools, many gaps remain. The challenges posed by the Common Core State Standards make those gaps glaring. Two Berkeley researchers put it squarely:[57]

> What will the more demanding complex texts implied by the Common Core State Standards (CCSS) mean for those students who are already having trouble with existing standards? This group includes English learners (ELs), and also the language minority students (LMs) who speak English only, but not the variety that is valued and promoted in the society's schools. What will the CCSS mean for the educators who work with these students? … [Teachers] are worried. How can they

be expected to help their students handle materials that are more demanding than what already seems difficult enough?

This worry is justified.

The researchers then outline an approach to studying complex texts that holds promise for helping ELs meet the Common Core challenge but for which, they acknowledge, there is no real supporting evidence. As we've seen over the course of this article, this is a familiar refrain. And even when there is evidence of effects, they are modest—far too modest to make major inroads on the very large achievement gaps ELs face. It is an inconvenient truth: we lack the knowledge base to fully prepare teachers to help many of their English learner and language-minority students overcome this gap.

So what is to be done? Clearly, educators cannot wait until researchers have adequately solidified our understanding of how to help ELs meet the content and language challenges they face. They'll be waiting a long time. Maybe forever. But if policymakers and the public wish to create a high-stakes environment where teachers and students are expected to do what we do not fully know how to do, at the very least we must provide all possible supports. A good place to begin in thinking about these supports is with famed psychology professor Seymour Sarason's admonition from more than 20 years ago: "Teachers cannot create and sustain the conditions for the productive development of children if those conditions do not exist for teachers."[58] What this means in practice is that we must create settings in schools where teachers have the time and space to:

- Systematically study with colleagues the CCSS or whatever standards or learning goals teachers are expected to follow;
- Specify and articulate what these standards and goals mean for curriculum and instruction *in their classrooms*;
- Implement curriculum, and plan and carry out instruction, based on these understandings;
- Systematically collect student work indicating student progress toward desired outcomes;
- Analyze and evaluate student work with colleagues to help determine what is working and what is not; and
- Repeat the above continuously and systematically, throughout and across school years.

Putting the above in place is no simple matter. It will require school-wide, concerted, and coherent efforts made possible by leadership, accountability, support, and assistance.* Even with all this in place, there are no guarantees that we can accomplish the very ambitious and worthwhile goals we have set for ourselves and our students. However, without creating these conditions in schools, these goals will remain a pipe dream.

I am cautiously optimistic. The current interest in developing, studying, and evaluating effective practices for ELs promises increased understanding of how to help these students succeed, even thrive, in our schools. But evaluating effective practices will not suffice. Schools must become places, in Sarason's words, for teachers' "productive development." In the end, progress will require creating these conditions in schools, continued research, and thoughtful practice to see what works in classrooms. Practitioners have an extraordinary opportunity to contribute to our knowledge base for educating ELs. We should put aside the ideological debates that have defined this field for too long and work as a profession to seek approaches that will enable all students to succeed in school and beyond. The millions of EL children and youth represent a vast and largely untapped source of social, economic, cultural, and linguistic vitality. Our job is to make sure this vitality is not squandered. □

As Seymour Sarason warned: "Teachers cannot create and sustain the conditions for the productive development of children if those conditions do not exist for teachers."

Endnotes

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(Continued on page 38)

*For research on the school and district roles in creating conditions for improving EL achievement, see chapter 6 of *Promoting Academic Achievement among English Learners: A Guide to the Research,* by Claude Goldenberg and Rhoda Coleman. See also the Talking Teaching Network (www.talkingteaching.org) for a current effort to engage teachers in substantive, systematic work to improve teaching and learning framed by the CCSS.

Recommended Resources

While any teacher with an Internet connection is awash in resources, finding the right resource is still difficult. The following websites, in addition to those cited in the related articles, may help.

1. Instructional Materials

Colorín Colorado: www.colorincolorado.org

Colorín Colorado offers free teacher tip sheets on reading instruction, professional development videos, and tools for effective outreach to Hispanic parents, among other resources, to help English learners in preK–12th grade.

Word Generation: www.wg.serpmedia.org

Word Generation provides free curricular materials, classroom videos, and other supports to help ELs in middle school learn important academic vocabulary in the core disciplines: language arts, mathematics, science, and social studies.

Understanding Language: http://ell.stanford.edu

Understanding Language has a wide array of papers to keep educators up-to-date on the latest thinking about educating ELs, particularly in a Common Core environment. It also provides free teaching resources aligned to the Common Core State Standards in English language arts and mathematics as well as the Next Generation Science Standards. While a handful of these resources are currently available, many more will be added to the site throughout 2013.

2. Research and Evaluation

What Works Clearinghouse: www.ies.ed.gov/ncee/wwc/topic.aspx?sid=6

What Works Clearinghouse, which has particularly high standards for evidence of effectiveness, has devoted a section of its free website to research publications and program evaluations for ELs.

Best Evidence Encyclopedia: www.bestevidence.org/reading/ell/ell_read.htm

Two reviews of reading programs for ELs are available for free on the Best Evidence Encyclopedia website.

3. National and State Statistics

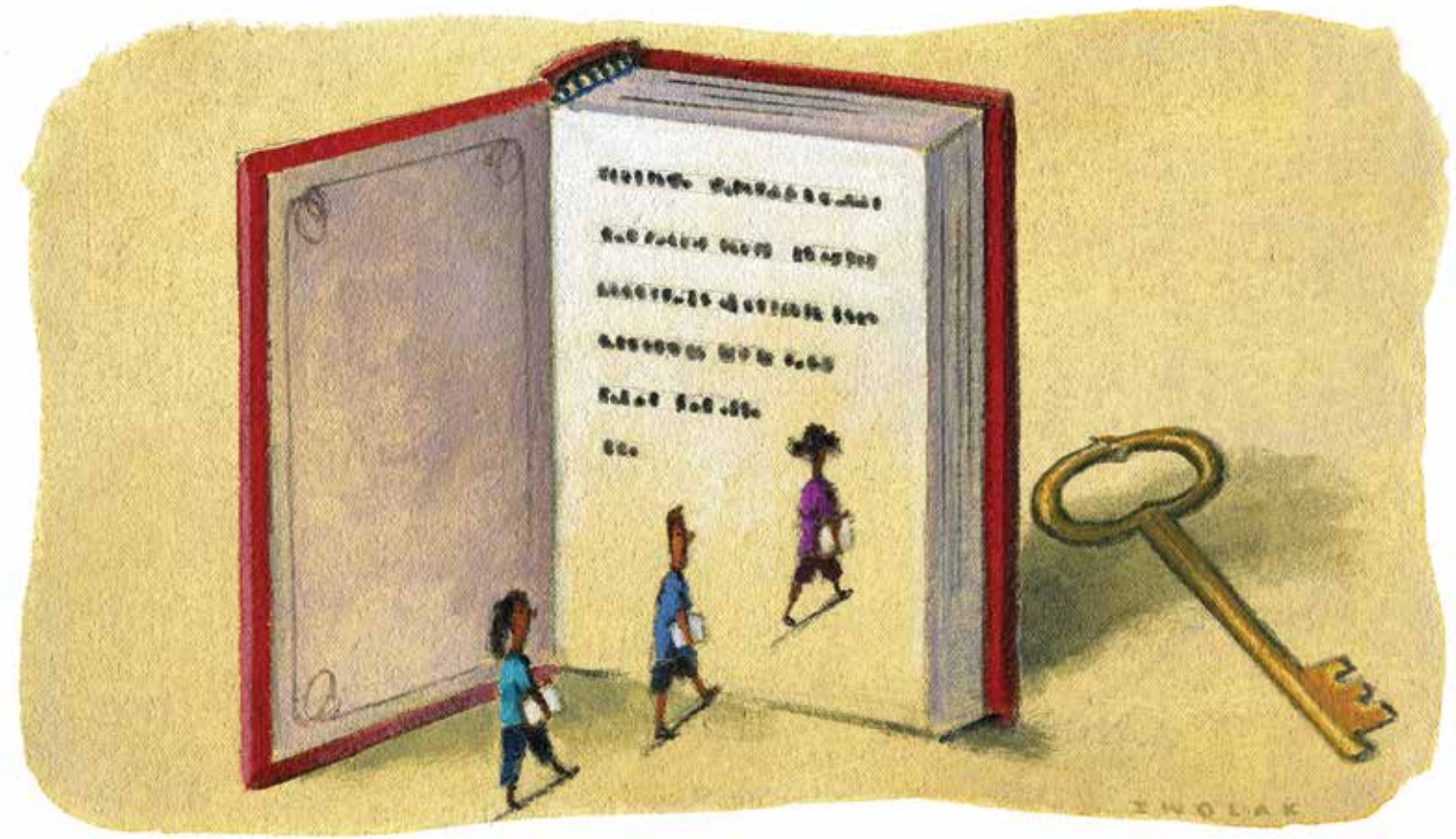
National Clearinghouse for English Language Acquisition & Language Instruction Educational Programs: www.ncela.gwu.edu

This free website provides a variety of demographic information about ELs, as well as reports, webinars, and other resources on EL education.

–C.G.

English Language Development

Guidelines for Instruction



By William Saunders, Claude Goldenberg, and David Marcelletti

Despite a growing US literature on educating English learners (ELs) and an upsurge in studies of vocabulary interventions,[1] surprisingly little research examines the effects of instruction on ELs' English language development (ELD). Since the Supreme Court's 1974 *Lau v. Nichols* decision affirming that English learners must be guaranteed a "meaningful education," controversy over bilingual versus English-only education has dominated research and policy discussions of ELs. Many of the programs involved in these studies included ELD instruction, but studies sought to measure the effects of the program on academic achievement, primarily reading, rather than estimating the effects of ELD instruction on English language acquisition.

This article synthesizes research that provides guidelines for ELD instruction. Many resources, such as theory, ELD standards, practitioner experience, and published programs, might provide such guidance. We focus on individual studies and research syntheses that point to how educators might provide effective ELD instruction—instruction that focuses specifically on helping English learners develop English language skills and that is delivered in a portion of the school day separate from the academic content that all students need to learn.

Using existing research to identify effective guidelines for ELD instruction is problematic. There is little that focuses specifically on K–12 ELD instruction for ELs in US schools. In the absence of a comprehensive body of research, the field of ELD instruction has been driven mostly by theory. The result is a large body of accepted practices that are not adequately supported by research. Currently, the dominant theoretical perspective of educators is "communicative language teaching." There are two primary tenets of communicative language teaching: (1) The goal of second-

William Saunders and David Marcelletti cofounded and codirect research projects at the Talking Teaching Network, a nonprofit organization. Both former teachers, they have participated in and directed research and development projects for more than 20 years that are focused on school change, English learners, English language arts, and the role of standards and assessments. Saunders is also a research associate at the University of California, Los Angeles. Claude Goldenberg is a professor of education at Stanford University. (To learn more about Goldenberg, turn to the author's note on page 4.) *This article is adapted with permission from William Saunders and Claude Goldenberg, "Research to Guide English Language Development Instruction," in* Improving Education for English Learners: Research-Based Approaches, *edited by David Dolson and Lauri Burnham-Massey (CDE Press, 2010).*

ILLUSTRATIONS BY PAUL ZWOLAK

language education is to develop learners' communicative competence (more so than formal accuracy), and (2) communication is both a goal and means for developing language.[2] From this perspective, second-language learning is a social process in which language develops largely as a result of meaningful and motivated interaction with others,[3] much as a first language does.[4] Language *in use* is emphasized more than *knowledge about* language.

Teachers might note that some of the practices they have come to accept as standard or even exemplary might not be represented among the guidelines we report here. This, of course, does not necessarily mean that teachers are engaged in "wrong" practices, but rather that the standard wisdom of the field needs to be examined further through the lens of research. For example, second-language acquisition teachers, theorists, and researchers have realized that exposure and interaction might help promote fluency and communicative competence, but they are not sufficient for native-like proficiency.[5] Advanced—ideally, to the point of native-like—English proficiency is imperative for English learners in the United States, indeed for any language-minority student whose future and livelihood will be influenced by his or her competence in the dominant social language. We have therefore seen a renewed focus on form (that is, "correct usage" of vocabulary, grammar, norms of interaction in particular circumstances, etc.) as a critical element of second-language instruction.

We begin with an explanation and discussion of ELD instruction, what it is and is not. We then provide a brief description of the research base for ELD instruction and why it is so small. Subsequently, we report research related to 14 guidelines relevant to ELD instruction. The 14 guidelines are grouped into four categories representing concentric circles of influence, from the most global (the broad basis for school and district ELD policies) to the most specific (how ELD should be taught).

English Language Development Instruction

ELD instruction is designed specifically to advance English learners' knowledge and use of English in increasingly sophisticated ways. In the context of the larger effort to help English learners succeed in school, ELD instruction is designed to help them learn and acquire English to a level of proficiency (e.g., advanced) that maximizes their capacity to engage successfully in academic studies taught in English. Although there might be multiple goals for ELD instruction—engaging in social interactions inside and outside of school and in other pursuits requiring English proficiency (e.g., obtaining news, serving as a juror, voting, shopping, banking, and locating and using information)—we would argue that preparation for academic studies taught in English remains the top priority because of its relevance to school and career success. Helping ELs succeed in academic contexts is no doubt the most challenging goal and most likely the greatest need to emerge in recent English learner research.

ELD instruction should not be confused with sheltered instruction (see "Unlocking the Research on English Learners," which begins on page 4 of this issue). The essence of sheltered instruction is this: where use of the primary language is not possible, and thus students are being taught in a language they do not fully comprehend, instruction is "sheltered" (or adjusted) in order to help students learn skills and knowledge in the content areas—English language arts, math, science, social studies, physical education, and the arts. In doing so, sheltered instruction ideally also supports ongoing learning of English, particularly academic language. So, while the primary goal of sheltered instruction is academic success in the content areas, the primary goal of ELD instruction is learning English.

In ELD instruction, language is the primary objective and content is secondary. In sheltered instruction, content is primary and language is secondary.

The distinctions we are making might appear contrived and artificial, since so much of academic content learning is highly language-dependent. It is particularly hard to know where the dividing line is between English *language arts* (content area) and English *language development*. But although the distinction between ELD and sheltered instruction can get blurred, our assumption is that it is better to keep them distinct and for teachers to be clear in their thinking when they are planning, delivering, and evaluating ELD instruction and when they are planning, delivering, and evaluating sheltered content instruction. As we discuss below, clarity about objectives contributes to effective instruction. In ELD instruction, language is the primary objective and content is secondary. In sheltered instruction, content is primary and language is secondary.

The Research Base for ELD Instruction: Why Is It Small?

This article draws heavily on six research syntheses, including meta-analyses that are especially useful because they pool the

results from multiple studies and can offer more confidence in the findings. We also draw on a few studies relevant to ELD instruction that were published subsequent to these six syntheses and meta-analyses, as well as on other broader syntheses that, while not focused specifically on EL populations, are applicable to ELD instruction (e.g., a review of research on grouping[6]).

The six major syntheses and meta-analyses represent divergent populations and contexts:

- The first[7] casts a wide net across the entire field of second-language acquisition. It suggests 10 principles of instructed language learning but notes that "research and theory do not afford a uniform account of how instruction can best facilitate language learning" and calls these principles "provisional specifications."[8]

This article draws heavily on six key research syntheses and meta-analyses; it also integrates subsequent studies relevant to ELD instruction and broader research applicable to ELD instruction.

- The second[9] synthesizes 50 K–12 studies conducted within the United States and mostly involving Spanish-speaking English learners.
- The third[10] addresses US and international studies involving primarily foreign-language contexts at the university level and a variety of primary and second languages.
- The fourth[11] analyzes both classroom and laboratory studies involving foreign-language, second-language, and ESL (English as a second language) contexts and populations.
- The fifth[12] focuses on studies of immersion, primarily French immersion programs implemented in Canada.
- The sixth[13] draws mainly upon US and international studies of foreign language instruction involving primarily college and adult education contexts.

In sum, although there is considerable research on second-language instruction broadly defined, we have a relatively small body of research to guide the design and delivery of K–12 ELD instruction specifically. Many studies are relevant to ELD instruction (e.g., language use, peer interaction, rates of proficiency attainment), but few explicitly focus on instruction or, more importantly, the effects of instruction. Even research on second-language instruction broadly defined does not provide a basis for universally accepted principles of instruction.[14] Given the research base, we have chosen to be inclusive. Rather than rule out studies and meta-analyses involving widely different populations and contexts (e.g., college-age and adult learners), we have chosen to review them and interpret them as best we can for their relevance to K–12 ELD instruction.* Furthermore, there are several important questions about ELD instruction for which we have no direct research, not even in different second-language acquisition contexts. For example, should districts prioritize ELD instruction? Should students be grouped by language proficiency levels for ELD instruction? Should teachers use specific language objectives? For these questions, we draw on the larger educational research literature, even though those studies are not based on ELD or second-language instruction or conducted with EL populations.

ELD Guidelines and the Related Research

This section explains 14 ELD guidelines and the research on which they are based. The guidelines are organized into four groups, each group framed around a driving question. The first group—global policy guidelines—answers the questions of *whether* and *to whom* schools should provide explicit ELD instruction. The second group—organizational guidelines—takes up the question of *how* ELD instruction should be organized in schools. The third group—curricular focus guidelines—addresses *what* should be taught during ELD instruction. Finally, the fourth group—instructional guidelines—focuses on the *pedagogical* question of how ELD should be taught.

Group 1: Global policy guidelines: What should state, district, and school policy commit to for ELD instruction?

The available evidence suggests the following major commitments: schools should make ELD part of the program of instruction for English learners; they should do so for ELs at *all* levels of proficiency; and they should make the presence, consistency, and quality of ELD instruction a strong and sustained priority.

1. Providing ELD instruction is better than not providing it. Existing research does not provide sufficient basis for determining the most effective methods of ELD instruction with total confidence. However, there is ample evidence that providing ELD instruction, in some form, is more beneficial than not providing it. Contemporary audiences may perhaps find it difficult to conceive, but three decades ago "Does second-language instruction make a difference?"[16] was a viable question. A dominant view (then and for some time after) was the "monitor" hypothesis,[17] which proposed that formal instruction is of limited utility for second-language acquisition; instead, large amounts of exposure to comprehensible input in authentic communicative contexts is critical. This hypothesis posited that although second-language instruction might help learners learn some rules, language forms, and the like, this type of learning is not very useful for *language acquisition*—that is, being able to speak and understand a lan-

*For a complete discussion of the strength of the evidence for each of the 14 guidelines based on population, outcomes, and replication, see "Research to Guide English Language Development Instruction," by William Saunders and Claude Goldenberg.[15] See also the listing of the 14 guidelines appearing on page 23 of this article that includes Saunders and Goldenberg's original classification in terms of strength of evidence for each guideline.

guage in natural conversations and authentic contexts. However, a review published 30 years ago of studies comparing second-language *instruction* with second-language *exposure*[18] concluded that instruction indeed aided second-language learning. This finding was true for young as well as older learners and at beginning, intermediate, and advanced levels. There are certainly benefits to exposure—that is, living, working, and going to school with English speakers (or any target language)—as well as to sheltered instruction that seeks to make academic subjects comprehensible. But ELD instruction clearly has added benefits.

A more recent meta-analysis[19] revisited this question and asked: How effective is second-language instruction overall and in comparison with exposure and communication with speakers of a second language? It found that focused second-language instruction (designed to teach specific aspects of the second language) is more effective than conditions that do not provide focused second-language instruction (including exposure only, minimally focused instruction, and minimal exposure). Students who received focused second-language instruction made more than five times the gains of students who did not.[20]

There is ample evidence that providing ELD instruction, in some form, is more beneficial than not providing it.

An important study[21] found that providing kindergarten and first-grade students with an "English-oracy intervention" resulted in more accelerated ELD growth compared with students in control schools who received typical "ESL instruction." The ELD intervention, which was equally effective with students in either English immersion or bilingual education, comprised (a) daily tutorials with a published ELD program, (b) storytelling and retelling with authentic, culturally relevant literature and leveled questions from easy to difficult, and (c) an academic oral language activity using a "Question of the Day." One important caveat: students who received the experimental treatment also received more ELD instruction than students in the control schools, so it is therefore impossible to rule out the effects of additional time independent of the particular curriculum and instruction used. The study is nonetheless important in demonstrating the value added by ELD instruction even in an English immersion context wherein students receive instruction in English throughout the day.

2. ELD instruction should continue at least until ELs attain advanced English language ability.

This guideline emerges from evidence about the rate at which students achieve advanced levels of proficiency. Students' academic English—both oral language proficiency and literacy—develops over time (five or more years). The evidence regarding literacy development has been reported and debated and theorized about for more than 25 years.[22] The evidence regarding oral English development among English learners has received much less direct attention. However, one synthesis of research on oral language[23] provides estimates based on a compilation of a small number of K–12 US studies that contained longitudinal or cross-sectional oral language outcomes. Summarizing across the studies (primarily elementary grade levels) and the various measures, it reported the following:

a. English learners typically require four to six years to achieve what would be considered "early advanced" proficiency (level 4, where level 1 is beginner and level 5 is advanced).
b. Average oral English proficiency approached native-like proficiency (level 5, advanced) by grade 5 in fewer than half of the available studies.
c. Progress from beginning to middle levels of proficiency is fairly rapid (from level 1 to 3), but progress from middle to upper levels of proficiency (from level 3 to 5) slows considerably—in other words, there is evidence of a *plateau effect*, where many English learners reach a middle level of English proficiency and make little progress thereafter.
d. As evident in one study that allowed for comparisons with native English-speaker norms,[24] the gap between ELs and native speakers increased across grade levels.

The hypothesis, then, is this: if English learners continue to receive explicit ELD instruction even after they reach middle levels of English proficiency, and as they move into early advanced and advanced levels, they can more rapidly attain native-like levels of oral proficiency and avoid the plateau many experience before becoming advanced speakers of English. Two assumptions underlie this hypothesis. First, the hypothesis assumes that English learners typically do not receive ELD instruction once they get to middle proficiency levels and, even less so, as they move into early advanced and advanced levels. Second, it assumes that the lack of ELD instruction is one reason for the stagnation. Our observations at school sites and a new study[25] corroborate these assumptions. With few exceptions, schools tend not to provide an ELD block, pull-out, or coursework once English learners pass the middle proficiency levels.

3. The likelihood of establishing and sustaining an effective ELD instructional program increases when schools and districts make it a priority.

Considerable research suggests that a sustained and coherent focus on academic goals in schools and districts is associated with higher levels of student achievement. However, because of the near absence of experimental research and detailed case studies in this area, it is difficult to draw firm conclusions about cause and effect. Moreover, some researchers have concluded that distal factors such as school and district policies are too removed from students' daily experience to have much impact on their achievement.[26] There is nonetheless at least some consensus in the published literature that what gets emphasized in schools and districts can influence what teachers do and students learn. Numerous dimensions of school and district functioning—leadership, common goals and curricula, professional development, ongoing

support and supervision, regular assessments that inform instruction—are levers that school and district administrators can use to help shape the academic experiences of students.[27]

The same holds true for English learners: what school and district leaders emphasize influences what happens in classrooms and what students learn. At least two studies[28] found that relatively high-achieving California schools with high concentrations of ELs shared various characteristics that converged on their making academic achievement a priority. At the school level, according to principals, there was a school-wide focus on ELD and standards-based instruction; shared priorities and expectations regarding the education of English learners; and curriculum, instruction, and resources targeted at them. District administrators cited a shared vision and plan for EL achievement and professional development, resources, and school and classroom organization to support achievement. Smaller intervention studies have reported complementary findings.[29]

Researchers found that students who received focused second-language instruction made more than five times the gains of students who did not.

Although far from definitive, available research suggests that one way to promote higher levels of ELD among English learners is to make sure it is a school- and district-wide priority. As is true in other areas of academic achievement, the direction set by school and district leadership, combined with consistent, focused, and effective implementation and follow-up, is likely to influence what is emphasized in classrooms and what students learn.

Group 2: Organizational guidelines: How should ELD instruction be organized in school?

School personnel should strongly consider establishing within the daily schedule, and without compromising access to the core curriculum (English language arts and all other content areas), a block of time dedicated exclusively to ELD instruction. To the greatest extent possible, ELs should be grouped by language proficiency levels for their ELD instruction.

4. A separate, daily block of time should be devoted to ELD instruction.

Two studies offer guidance on whether ELD instruction should be provided during a separate time of the school day, as typically happens with reading, math, and the like. One[30] found small (but still statistically significant) positive effects on oral language proficiency among Spanish-speaking kindergartners who received ELD instruction during a separate block of time. Compared with kindergartners whose teachers integrated ELD instruction in their larger language arts block, kindergartners from ELD block classrooms made greater gains on end-of-year measures of oral English proficiency and also word identification.* The study included more than 1,200 students from 85 classrooms in 35 schools spread across Southern California and Texas. The positive effects of an ELD block were found in both English immersion and bilingual education programs. Even in the English immersion classrooms, where instruction was delivered almost exclusively in English, English learners provided with a separate ELD instructional block outperformed English learners whose teachers tried to integrate ELD in the language arts block.

What explains this effect? The researchers[31] found that most of the ELD block time was devoted to oral English language *activities* like sharing personal experiences, identifying and naming colors, and describing picture cards. They conjecture that, although outcomes were significant, the magnitude of the effects may have been small because of the lack of explicit language teaching. In other words, establishing a separate block of time for ELD instruction is probably beneficial—perhaps in part because it helps teachers focus on English language itself and promotes both listening and speaking in English—but the size of the benefit likely depends on what teachers actually do within the ELD block.

Another study addressed both questions: whether a separate ELD block *and* an explicit ELD program are beneficial for English learners' oral language development. The study[32] included nine classrooms representing three conditions: (1) classrooms with a separate ELD block taught by teachers delivering an explicit ELD program being evaluated, (2) classrooms with a separate ELD block taught by teachers delivering ELD derived from various components the individual teachers culled from published sources, and (3) classrooms without a separate ELD block taught by teachers who were integrating ELD during their language arts time (where they used a published reading program). Students in all three conditions made significant gains over the year, but the gains were not equivalent. Students in condition 1 (separate ELD

*See guideline 8 for a discussion of teaching literacy during ELD instruction.

block using an explicit ELD program being evaluated) scored significantly higher than did students in conditions 2 (separate ELD block using materials that teachers themselves pulled together) and 3 (ELD integrated with language arts).

One of the studies of California schools mentioned previously[33] lends further support to this guideline insofar as high-achieving schools with high concentrations of English learners tended to emphasize ELD instruction and most utilized a separate daily block of time to deliver ELD instruction.

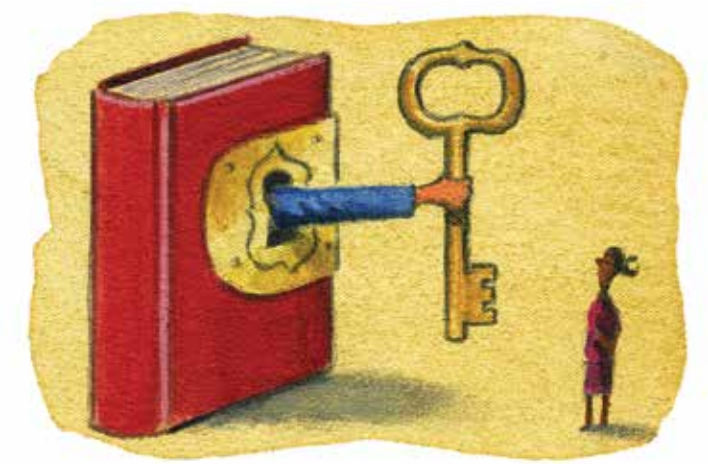
5. English learners should be carefully grouped by language proficiency for ELD instruction, but they should not be segregated by language proficiency throughout the rest of the day.

Should ELs be grouped with other ELs or kept with English speakers? If grouped with other ELs, should they be with others at similar language levels, or should they be in mixed language-level groups? If they are grouped with others at similar language levels, for what purposes and for how much of the school day? We know of no research that answers these questions directly. However, many studies have examined the pros and cons of different types of grouping arrangements in other content areas, primarily reading and mathematics. This research[34] suggests the following:

a. Keeping students of different achievement/ability levels in entirely separate (homogeneous) classes for the entire school day (and throughout the school year) leads to depressed achievement among lower-achieving students with little to no benefit for average and higher-achieving students. A possible exception is extremely high-achieving students (sometimes referred to as "gifted"), whose achievement can be significantly enhanced in homogeneous classes with other extremely high-achieving students. We have found no studies that have looked at grouping practices for extremely high-achieving English learners.
b. Students in mixed (heterogeneous) classrooms can be productively grouped by achievement level for instruction in specific subjects (e.g., math or reading). Groups can be formed with students in the same classroom or students in different classrooms (the latter is sometimes called the "Joplin plan"). In contrast to keeping students in homogeneous classes throughout the day, grouping students by achievement level in certain subjects will result in enhanced achievement at all ability levels if (1) instruction is tailored to students' instructional levels, and (2) students are frequently assessed and regrouped as needed to maintain an optimal match with their instructional needs (that is, students are taught what they need to know to make continual progress).

To the extent that second-language learning is analogous to learning in other curriculum areas, findings from the ability-grouping literature serve as a useful starting place to make decisions about how to group ELs. These findings suggest that English learners should not be segregated into classrooms consisting of only ELs, much less into classrooms consisting of all low-achieving ELs. Instead, English learners should be in mixed-ability classrooms and then grouped by English language proficiency specifically for ELD instruction. Moreover, they should be regularly assessed to monitor their progress and to make certain that instruction and group placement are well suited to their language-learning needs. Presumably, as ELs attain proficiency in English, they can and should receive increasing amounts of instruction with students who are already proficient in English.

The direction set by school and district leadership, combined with consistent, focused, and effective implementation and follow-up, is likely to influence what is emphasized in classrooms and what students learn.



Group 3: Curricular focus guidelines: What should be taught during ELD instruction?

The available evidence suggests that ELD instruction should explicitly teach, and engage students in consciously studying, the elements of the English language as applicable to both academic and conversational language, with significant time devoted to speaking and listening, and particular attention to meaning and communication.

6. ELD instruction should explicitly teach forms of English (e.g., vocabulary, syntax, morphology, functions, and conventions).

Language forms refer to standard, formal aspects of a language—words, sentence constructions, and generally what is considered to be "correct" or "grammatical" usage, such as subject-verb agreement, possessives, the order of adjectives and the nouns they modify, and so on. The essential body of evidence on teaching language forms explicitly comes from studies[35] in primarily college and adult-level foreign-language contexts, where explicit instruction consistently produced stronger results than implicit instruction. Here, explicit instruction means either (a) instructors explain a language element (a rule or a form) to students and then

provide opportunities for them to study or practice the element with many examples, or (b) instructors engage students in tasks containing many examples of a particular form or rule and then direct students' attention to the language element so that students arrive at the rule by themselves or with the teacher's guidance. Explicit instruction included both approaches to studying features of the second language. Instructional treatments were classified as implicit in cases where instructors did not present or explain the language element and did not direct students' attention to the language form. On average, explicit instructional approaches were more than twice as effective as implicit approaches.

As we have noted, most of the evidence for explicitly teaching language forms comes from studies with college and adult students. In addition, the great majority of the studies were of short duration and narrow in scope—teaching a specific feature of language (for example, verb tense, adverb placement, relative pronouns, or *wh*- questions) and then measuring the extent to which students learned that feature. However, the hypothesis that emerges from this body of evidence is corroborated by other reviews of research. For example, a recent review[36] found that exposure to a second language in meaning-based school programs designed to promote second-language learning (e.g., content-based second-language instruction) successfully develops comprehension, oral fluency, self-confidence, and communicative abilities, but tends not to develop as fully other features of the second language, such as pronunciation and morphology, syntax, and pragmatics. Explicit instructional attention to forms is likely to facilitate students' second-language learning in a way that relying solely on meaning- and communication-oriented instruction alone will not.[37] Another review of research[38] posits the same hypothesis based on studies from French immersion programs.

The term *explicit* should be interpreted carefully. Explicit instruction is often associated with direct instruction. Indeed, direct instruction is, by definition, explicit (and, on average, effective). However, it is not the only form of explicit instruction. Most models of direct instruction[39] typically involve an explanation, demonstration, or presentation of the concept or skill in the early part of the lesson, followed by various forms of practice, feedback, and assessment. As such, direct instruction generally takes a deductive approach to teaching and learning. Explicit instruction can be inductive as well. For example, in the review discussed above with college and adult students, some learners received a certain amount of experience with a language form (e.g., possessives or interrogatives), and then were directed to attend to the form or to focus on deriving the underlying rule or nature of the form.[40] The key point is that instruction that explicitly focuses students' attention on the targeted language form produces higher levels of second-language learning, at least in the short term that the studies examined, than instruction that does not. Focusing the learners' attention is also a central concept in other researchers' principles of instructed language learning.[41]

One aspect of language development that has received minimal attention from K–12 researchers is "pragmatics." Pragmatics refers to understanding and using the target language in genuine interactive situations where language formalisms can take a back seat to receiving or getting a message across. For example, there are discourse norms that dictate how and whether one disagrees with a peer or a teacher without generating negative feelings or breaking down the communication. Classroom teaching can help second-language learners understand and use these pragmatic rules and norms,[42] but instructional studies are again limited to adult second-language learners. There are no instructional studies with which we are familiar that focus on K–12 ELs.[43]

7. ELD instruction should emphasize academic language as well as conversational language.

Nearly two decades ago, a pair of researchers provided a succinct definition of academic language: "the language that is used by teachers and students for the purposes of acquiring new knowledge and skills ... imparting new information, describing abstract ideas, and developing students' conceptual understanding."[44] Expanding on this definition, we think *academic language* refers to the specialized vocabulary, grammar, discourse/textual, and functional skills associated with academic instruction and mastery of academic material and tasks. In the simplest terms, *academic language* is the language that is needed in academic situations such as those students encounter during classroom instruction or reading texts.[45] These would obviously refer to academic texts but also include many newspaper and magazine articles or other nonfiction that the Common Core State Standards call for, which are information-dense and presume certain background knowledge as well as familiarity with key vocabulary and sentence structures.

ELs should be carefully grouped by language proficiency for ELD instruction but not segregated by language proficiency during the rest of the day.

It is widely believed that successful performance in school requires proficiency in academic language and that a major objective of education for both majority- and minority-language students is teaching the academic language skills they need to master the diverse subjects that make up the curriculum. For example, a group of researchers[46] found that performance on highly decontextualized tasks, such as providing a formal definition of words, predicted academic performance, whereas performance on highly contextualized tasks, such as face-to-face communication, did not.

Definitions of academic language often contrast it with language used in everyday social situations. The first researcher to propose a distinction between basic communication and academic language,[47] for example, characterized academic language as decontextualized and cognitively demanding, whereas social language tends to be more contextualized and less cognitively demanding. As a result, academic language tends to draw on

more-specialized technical vocabulary, to use more-complex grammatical constructions, and to be more precise in its intended meaning. Others have highlighted the nature of the vocabulary that characterizes academic versus everyday language use: academic language tends to use less-common, more-technical, and highly specialized vocabulary in contrast to that which is used in everyday conversations.[48]

The premise that ELD instruction should focus on both social, interpersonal language and academic language is not controversial. ELs require both kinds of proficiency. That there should be greater emphasis on academic language within ELD instruction, however, is a more recent hypothesis. Although there is, as yet, virtually no research that has examined empirically the effects of instruction focused specifically on academic language, the hypothesis emerges from at least two interrelated findings. First, studies consistently find that ELs require from five to seven years to achieve native-like proficiency in oral language and literacy.[49] Since academic language probably plays an increasingly important role in defining what actually constitutes language proficiency as students go up the grade levels, it is reasonable to hypothesize that a focus on academic language might help students attain advanced language proficiency more quickly. The second finding is that the rate at which students acquire proficiency tends to slow or even plateau as they move to higher levels of proficiency.[50] Since higher levels of proficiency tend to be characterized by more-academic uses of language, it is reasonable to hypothesize that a greater focus on academic language, especially at the middle and upper levels of proficiency, might minimize that plateauing effect.

8. ELD instruction should incorporate reading and writing, but should emphasize listening and speaking.

Along with explicit ELD instruction, programs for ELs should include literacy instruction,[51] sheltered content area instruction as needed,[52] and primary language support or instruction where possible.[53] In such a comprehensive program, it would seem most beneficial to emphasize speaking and listening during ELD instruction. Although speaking and listening are emphasized in other parts of the instructional day, the textual demands of literacy and content area instruction no doubt need to be given priority during those instructional times. It is likely that time allotted for ELD is the one opportunity to make speaking and listening a priority.

The importance of oral English proficiency for ELs is well established in the research literature. With increasing oral English proficiency, English learners are more likely to use English, and more frequent use of English tends to be correlated with subsequent gains in oral English proficiency.[54] In addition, with increasing oral proficiency in English, ELs are more likely to interact and establish relationships with native English-speaking peers, leading to more opportunities to use English.[55] With increasing oral English proficiency, ELs also tend to use more complex language-learning strategies that allow them to monitor language use and interact more effectively with others.[56] Finally, as oral English proficiency develops, ELs demonstrate a wider range of language skills, including skills associated with more-academic uses of language, specifically higher-level question forms[57] and the capacity to define words.[58]

Several studies have documented a positive relationship between oral English proficiency and English reading achievement.[59] Moreover, the relationship between oral English proficiency and English reading achievement is stronger for measures that are associated with more-academic aspects of oral language proficiency. For example, the number of *different* words English learners use during an interview correlates more strongly with reading achievement than the total number of words they use (r=.63 and r=.40, respectively).[60] The relationship between oral English proficiency and English literacy strengthens across the grades, arguably because both are similarly influenced by schooling and both are indicative of academic success. In one study,[61] correlations between English reading achievement and quality measures of English learners' word definitions increased from r=.16 in grade 2 to r=.50 in grade 5.

Along with explicit ELD instruction, programs for ELs should include literacy instruction, sheltered content area instruction as needed, and primary language support or instruction where possible.

Two studies provide evidence suggesting that devoting more instructional time to listening and speaking yields significantly higher levels of oral language proficiency. Among kindergarten ELs, one study[62] found that more time spent on oral English language instruction leads to stronger oral language outcomes without compromising literacy outcomes. Teachers who produced the strongest outcomes (oral and literacy) devoted approximately 60 percent of their ELD block time to oral language activities (without text) and 40 percent to literacy-related activities (the average daily time allotment for ELD was 37 to 40 minutes). Among first-grade ELs, another study[63] found that more time on listening and speaking (approximately 90 percent of the ELD block time) targeted toward language elements produced significantly higher oral English language outcomes than less time on listening and speaking (approximately 50 percent of the ELD block time) that did not target specific language elements.

9. ELD instruction should integrate meaning and communication to support explicit teaching of language.

Meaning, of course, plays a central role in language use. We use language to express and comprehend meaningful communication with others and to help build understanding for ourselves.

Meaning also plays a central role in language learning insofar as being able to express and comprehend meaningful communication in the language being learned probably motivates and compels language learning. Although there is little controversy about the role of meaning and communication in language use—and by *communication* we mean both receiving and sending messages—their role in language *instruction* is more complicated. Should authentic, meaningful communication drive instruction? Or, alternatively, should explicit teaching of language forms drive instruction? Research on second-language learning and acquisition has advanced over the last two decades in coming to understand that instructed language learning must involve meaning and communication, but it also must direct students' attention to forms and functions of the language being learned. No doubt, the interplay between meaning-making and conscious attention to language vary for different aspects of language, levels of second-language proficiency, the age of the learner, the learner's first language, and other factors.[64] Unfortunately, we do not have sufficient empirical evidence to fully understand this dynamic interplay.

Communication and meaning should be used to motivate and facilitate second-language learners' acquisition and use of targeted language forms.

We constructed the wording of this guideline based on our review of the literature relative to the focus of this article: *ELD instruction should integrate meaning and communication to support explicit teaching of language*. Communicating meaning and providing explicit teaching are both important. However, we propose that communication and meaning should support explicit teaching of language, not necessarily drive ELD instruction. In other words, communication and meaning should be used to motivate and facilitate second-language learners' acquisition and use of targeted language forms.

A recent review[65] of primarily second-language immersion studies provides one source of evidence supporting the importance of incorporating meaning and communication in language-learning contexts. But it also points out the need for better understanding of how to balance meaning and communication with explicit language teaching. Drawing primarily from French immersion studies (K–12, college, and adults), it notes both the successes and limitations of such programs: students instructed through carefully designed programs that immerse students in content study and language study consistently produce levels of second-language proficiency that exceed the levels achieved by students who study a second language simply as one more school subject. The content emphasis of the French immersion studies exemplifies consciously communicating meaning—in this case, the meaning and communication associated with studying academic content. However, the review also highlights another set of findings from French immersion studies: "What emerges from these studies is that immersion students are second language speakers who are relatively fluent and effective communicators, but non-targetlike [that is, not fully proficient] in terms of grammatical structure and non-idiomatic in the lexical choices and pragmatic expression—in comparison to native speakers of the same age."[66] It concludes that language immersion programs are likely to improve language learning by more strategically and systematically teaching and helping students explicitly attend to language forms without compromising the effects of content-based, meaning-oriented pedagogy.

The study[67] discussed earlier that compared nine classrooms representing three conditions (which concluded that a separate ELD block with an ELD program was more effective than either a separate ELD block with materials teachers pulled together or ELD integrated with language arts) illustrates this guideline. Meaning and communication can support explicit teaching of language during ELD instruction. All three conditions in the study involved meaning and meaning-making, primarily by focusing on content, concepts, and vocabulary that first-grade students were studying in their English language arts units and reading selections. However, the meaning or meaning-making aspects of the lessons from condition 1 (which produced the strongest outcomes) were utilized *to support* the learning of specific language forms. The teacher's modeling and explanation of how to use the language form (e.g., "Where did X sail? X sailed to Y."), and the practice students engaged in, were supported by at least three dimensions of the lesson that involved meaning and meaning-making: First, the lesson was broadly contextualized by the story students had read (about a character that sailed to different parts of the world). Second, the lesson was contextualized by a map of the world and a figurine students held and maneuvered as they constructed their responses (e.g., "Max sailed to Europe."). Third, students eventually took over the role of asking one another the general question (e.g., "Where did Max sail?"), and the respondent could construct his or her own answer, choosing the location on

the map (showing where they had Max sail) and uttering the corresponding response. While we do not know empirically the unique effects of each of the three meaning dimensions (story, map/figurine, and interactions), apart from the focus on form (*where* question and response), we hypothesize that these meaning dimensions contributed to language learning and explicit language teaching.

Group 4: Instructional guidelines: How should ELD be taught?

ELD instruction should maximize students' purposeful and ready use of English involving carefully planned interactive activities focused on specific language objectives. ELD instruction should also provide students with corrective feedback that is nonthreatening and comprehensible, and encourage students to use strategies that help them progress as language learners.

10. ELD instruction should be planned and delivered with specific language objectives in mind. The use of instructional objectives is often considered a centerpiece of effective instruction (although not necessarily by everyone[68]). Good objectives function as starting points and rudders to help keep lessons and activities focused and heading toward productive ends.[69] Instructional objectives enhance learning outcomes "to the degree to which objectives, teaching, and assessment are coordinated with one another."[70]

What we do not know empirically is the degree to which what seems to be generally true for other academic subjects also holds true for ELD instruction. However, we would like to elaborate on a potential connection between the more general research on instructional objectives and the evidence on explicit versus implicit second-language instruction reported earlier.[71] A subset of the studies analyzed in that synthesis included direct contrasts between treatments that specifically focused students' attention on the targeted language form and comparison conditions that involved simple exposure to or experience with the same language form. Such comparisons showed that explicit instruction focusing student attention on the targeted language form can substantially increase the success of such lessons. It is quite possible that formulating clear language objectives would support teachers' efforts to plan and deliver instruction that effectively directs students' attention to the targeted language form. Thus, our hypothesis is that instructional objectives will be as useful for ELD instruction as they are for other types of academic instruction.[72]

11. Use of English during ELD instruction should be maximized; the primary language should be used strategically. This guideline does not negate the fact that many studies have shown the advantages of maintenance and development of English learners' home languages, in particular the benefit to English literacy of teaching ELs literacy skills in their primary language (see "Unlocking the Research on English Learners," which begins on page 4 of this issue). We do not know with certainty, however, the impact that use of the primary language during ELD instruction will have on oral English language acquisition. In general, the evidence suggests that students' language choices tend to align with the dominant language of instruction. For example, one study[73] investigated the language choices of Spanish-speaking ELs in bilingual preschool classes. In classes where teachers tended to use more English for instruction, ELs tended to use more English with their peers. In classes where teachers tended to use more Spanish, learners tended to use more Spanish. A follow-up study[74] reported language-use data for first-grade Mexican American ELs, half of whom were enrolled in "English" classes, and half of whom were enrolled in Spanish bilingual classes. In the English classes, ELs used English during peer interactions most of the time. English learners in the bilingual classes used Spanish most of the time. Among second-grade English learners in Spanish bilingual programs where at least most instruction was delivered in Spanish, two studies[75] found that ELs were more likely to use Spanish during peer interactions. One of these studies[76] found students using Spanish over English by a ratio of 6 to 1. Finally, among fourth-grade English learners who had participated in Spanish bilingual classrooms through grade 3 and were then placed in an "English-only" class, a study[77] found a substantial increase from the beginning to the end of the year in students' use of English in their classroom interactions (53 percent to 83 percent).

Based on these studies, we conclude the following: If a practical goal of ELD instruction is increased use of English, that goal will be served best by instruction delivered and tasks carried out

Activities that *effectively* mix ELs and more-proficient ELs or native English speakers typically involve carefully structured tasks that strongly encourage productive interaction.

primarily in English. However, we can imagine using the primary language in a limited but strategic manner during ELD instruction to ensure that students understand task directions, pay attention to cognates, and master language learning and metacognitive strategies.

12. ELD instruction should include interactive activities among students, but they must be carefully planned and carried out. If interactive activities are to benefit ELs, careful consideration must be given to the following factors:

- The design of the tasks in which students engage;
- The training or preparation of the more-proficient English speakers with whom the ELs interact; and
- The language proficiency of the ELs themselves.[78]

Without attention to these factors, interactive activities tend not to yield language-learning opportunities at all.[79] For example, in a study of cooperative learning groups comprised of grade 6 ELs and native English speakers, researchers found that paper-and-pencil tasks designed to spur interaction actually minimized interaction and language-learning opportunities.[80] ELs and non-ELs tended to cut short their interactions in order to complete assigned paper-and-pencil tasks in the allotted time: "Just write that down. Who cares? Let's finish up." Other researchers[81] drew a similar conclusion based on their review of EL studies that focused on reading outcomes: interactive activities that *effectively* mix ELs and more-proficient ELs or native English speakers typically involve carefully structured tasks that required or at least strongly encouraged productive interaction.

This guideline regarding interactive activities is supported by

English Language Development Guidelines

Group 1: Global policy guidelines: What should state, district, and school policy commit to for ELD instruction?

1. Providing ELD instruction is better than not providing it. (*Relatively strong supporting evidence from EL research*)
2. ELD instruction should continue at least until ELs attain advanced English language ability. (*Based on hypotheses emerging from recent EL research*)
3. The likelihood of establishing and sustaining an effective ELD instructional program increases when schools and districts make it a priority. (*Applicable to ELD but grounded in non-EL or non-ELD research*)

Group 2: Organizational guidelines: How should ELD instruction be organized in school?

4. A separate, daily block of time should be devoted to ELD instruction. (*Based on hypotheses emerging from recent EL research*)
5. English learners should be carefully grouped by language proficiency for ELD instruction, but they should not be segregated by language proficiency throughout the rest of the day. (*Applicable to ELD but grounded in non-EL or non-ELD research*)

Group 3: Curricular focus guidelines: What should be taught during ELD instruction?

6. ELD instruction should explicitly teach forms of English (e.g., vocabulary, syntax, morphology, functions, and conventions). (*Based on hypotheses emerging from recent EL research*)
7. ELD instruction should emphasize academic language as well as conversational language. (*Based on hypotheses emerging from recent EL research*)
8. ELD instruction should incorporate reading and writing, but should emphasize listening and speaking. (*Based on hypotheses emerging from recent EL research*)
9. ELD instruction should integrate meaning and communication to support explicit teaching of language. (*Based on hypotheses emerging from recent EL research*)

Group 4: Instructional guidelines: How should ELD be taught?

10. ELD instruction should be planned and delivered with specific language objectives in mind. (*Applicable to ELD but grounded in non-EL or non-ELD research*)
11. Use of English during ELD instruction should be maximized; the primary language should be used strategically. (*Based on hypotheses emerging from recent EL research*)
12. ELD instruction should include interactive activities among students, but they must be carefully planned and carried out. (*Relatively strong supporting evidence from EL research*)
13. ELD instruction should provide students with corrective feedback on form. (*Based on hypotheses emerging from recent EL research*)
14. Teachers should attend to communication and language-learning strategies and incorporate them into ELD instruction. (*Based on hypotheses emerging from recent EL research*)*

–W.S., C.G., and D.M.

*For a more complete discussion of the strength of the evidence for each of the 14 guidelines based on population, outcomes, and replication, see William Saunders and Claude Goldenberg's chapter, "Research to Guide English Language Development Instruction," in *Improving Education for English Learners: Research-Based Approaches*, http://bit.ly/10Kabqd.

research on older second-language learners. A meta-analysis[82] found that treatments with carefully constructed interactive tasks produced a significant and substantial effect on language-learning outcomes. It examined two critical features of interactive tasks: essentialness and output. Essentialness has to do with the extent to which the targeted language form is essential to the task the group is trying to complete: Does successful completion of the task *require*, or is it at least *facilitated by*, correct oral comprehension or production of the meaning of certain target words (e.g., modes of transportation: cars, trucks, trains, etc.) or language constructions (e.g., if-then, before-after)? Learning outcomes were stronger when the language forms or rules were essential for successful completion of a group task. A second analysis with the same studies focused on interactive tasks that required attempts to actually produce the language form, for example, tasks that required students to produce oral utterances using the target words, such as modes of transportation, or the target construction, such as an if-then construction. Interactive tasks that required learners to attempt to produce the language form more consistently yielded stronger effects on both immediate and delayed posttests than tasks that did not require learners to produce the language form. Another review[83] found similar results based on studies involving students ages 7 to 14: to be effective in supporting language development, interactive tasks need to be designed so that learners must *use* specified language forms in order to communicate successfully.

13. ELD instruction should provide students with corrective feedback on form.

Providing ELs with feedback on form is not a matter of whether to do it but how best to do it. During ELD instruction wherein the primary objective is studying and learning language, corrective feedback can be beneficial. A meta-analysis[84] that examined the effects of corrective feedback specifically on grammar included studies with a mixture of foreign-language, second-language, and English-as-a-second-language contexts, some of which were conducted in classrooms and some conducted under laboratory conditions. Despite several limitations, all of the studies involved a treatment group that received some form of grammar-focused corrective feedback, a comparison group that did not receive corrective feedback, and a measure of language learning. In all of the studies, the treatment group outperformed the comparison group, and in two-thirds of the studies, the effects were large.

Another review[85] examined the effects of implicit and explicit forms of corrective feedback: recasts versus prompts. When teachers *recast* a student's utterance, they rearticulate what the student was trying to say with an utterance that includes corrections of one or more errors the student made. For example, if a student says, "My brown cat more big than my white," the teacher would say, "Oh, you mean your brown cat *is bigger* than your white *one*?" In contrast, *prompts* explicitly draw a student's attention to an error and encourage or require the student to attempt to repair (linguistics-speak for "to correct") the utterance. So in the previous example, the teacher would say something like, "Oh, your brown cat is bigger than your white one. Can you say it that way?" And if the student hesitates, the teacher might help get him or her started (e.g., "My… brown…") and try to have the student formulate as much of the utterance as possible. All of the studies found positive effects for both recasts and prompts but with stronger effects for prompts.

ELD teachers should not hesitate in providing corrective feedback. The central issue is how to do it so that students understand it as part of language learning rather than a negative evaluation.

The same review[86] also provides an analysis of how feedback given through more- and less-explicit forms might function differentially depending on teachers' relative emphasis on form versus meaning. Based on a review of studies that looked at recasts and prompts in French and Japanese immersion classes,[87] it concludes that the general classroom orientation influences the potential benefits of either recasts or prompts. In form-focused classrooms where teachers spend some time engaging students in oral drills and repetition of correct forms, the more subtle or implicit recast can serve as meaningful feedback, yielding student repairs, because the students are used to attending to form and repetition of teacher utterances. Recasts are less effective in meaning-oriented classrooms where students are more accustomed to attending to communication and less likely to attend to corrections embedded in teacher utterances. In meaning-oriented classrooms, prompts may be more effective because they explicitly mark the need for the repair of an utterance and therefore purposefully redirect students' attention, at least momentarily, away from meaning to the language itself.

In sum, feedback should not be taken for granted. Where and when implicit feedback, such as recasts, seem to be relevant, ELD teachers will want to help students recognize them and under-

stand their function, most likely as a broader orientation to the instruction block. ELD teachers should provide similar orientation to interactional activities and lessons that involve explicit feedback, so as to alert students to the fact that interactions will be momentarily interrupted to give students feedback intended to help them refine their language use. Most important, the evidence suggests that ELD teachers should not avoid or hesitate in providing corrective feedback. Rather, the central issue is how to do it effectively so that students respond to it, benefit from it, and understand it as a productive part of language learning rather than a negative evaluation of *their* language learning.

14. Teachers should attend to communication and language-learning strategies and incorporate them into ELD instruction. Two researchers[88] found that more-proficient ELs demonstrate a wider repertoire of language-learning strategies than less-proficient English learners. These strategies appear to emerge in the same order—from less to more sophisticated—and are correlated with levels of language proficiency. Second-language learners first use and rely most heavily on fairly simple strategies, such as repetition and memorization. As they learn words and phrases, they will repeat them upon hearing them (e.g., the teacher says "only," and the students repeat "only" to themselves), and they will practice and sometimes produce an entire group of related words they are learning to memorize (e.g., Monday, Tuesday, Wednesday, etc.). As they progress to the middle levels of language development, English learners begin to use more interactive strategies. For example, they are more apt to talk to themselves ("I'll put this here, and this…"), insert themselves into conversations with verbal attention-getters ("I know…" or "I have one…" or "It was me…"), and elaborate on topics ("My mom and dad took me to…"). Finally, at more advanced levels, ELs use language- and communication-monitoring strategies in order to maintain and, as needed, repair communication with others, including self-correction ("I need some pencil—a pencil."), appeals for assistance ("How do you say…?"), and requests for clarification ("Decorate? What does decorate mean?").

In addition to the relevance of these findings for designing instructional strategies, in more general terms we view them as important information for ELD teachers. As students develop increasing proficiency, their capacity to use English increases, but so does their strategy use, which seems to undergo significant qualitative changes: from heavy reliance on receptive strategies to increased use of interactive strategies and eventually to more sophisticated, metacognitive communication-monitoring strategies.

Reviewing the literature on language-learning strategies, one researcher wrote:[89]

> Taken together, these studies identified the good language learner as one who is a mentally active learner, monitors language comprehension and production, practices communicating in the language, makes use of prior linguistic and general knowledge, uses various memorization techniques, and asks questions for clarification.

One study[90] found that explicit instruction on how to use strategies effectively, especially metacognitive strategies, might be beneficial for ELs' oral language development. Several other studies have shown positive effects of teaching or prompting listening comprehension strategies to English learners.[91] Teachers may need to use students' primary language (when they can) to teach strategies for students at lower levels of second-language proficiency.[92]

Our experience in schools suggests that attention to ELD instruction is growing, and that important efforts are underway to develop effective ELD programs for both elementary and secondary school students. Attention to the matter of academic language proficiency is also increasing.[93] It is imperative to complement such efforts and interest with careful research and evaluation. Clearly, no one guideline will be sufficient to help ELs gain access to high-level, mainstream academic curriculum. Instead, we must not only test individual components and guidelines, we must also construct comprehensive ELD programs and test the proposition that they help students acquire high levels of English language proficiency as rapidly as possible, regardless of whether they are in bilingual or English-only programs. From our experience, strong opinion too often trumps careful weighing of evidence in what remains a volatile and politically charged field. ☐

ELD program development must be complemented by careful research and evaluation. Strong opinion too often trumps careful weighing of evidence.

Endnotes

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(Continued on page 38)

Dual Language Learners

Effective Instruction in Early Childhood

ILLUSTRATIONS BY PAUL ZWOLAK

By Claude Goldenberg, Judy Hicks, and Ira Lit

As the number of English learners in K–12 public schools has increased, so too has the population of preschool dual language learners, or DLLs. For preschoolers, the term dual language learners is preferred since young children are still in the midst of acquiring their first language.* More than 4 million DLLs are enrolled in early childhood programs nationally. Thirty percent of the children in Head Start and Early Head Start are DLLs.[1]

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Although a large majority of preschool-age children in the United States attend some type of early education setting, Latino children and children of immigrants attend at a lower rate than do children of nonimmigrant parents.[2] This is unfortunate, since children who attend preschool during the year before kindergarten have an advantage in reading and math over their peers who are not enrolled in center-based care.[3] Many children who are learning English as a second language while they are gaining early proficiency in their home language are therefore disproportionately missing academic benefits that attending preschool provides.[4]

For those DLLs who do attend an early childhood care or education setting, early educators must be informed by what research has to say about creating optimal learning environments. Concern over the achievement of this population of students has led to a large number of recent research reviews and professional publications aimed at improving preschool DLLs' educational opportunities.[5] In

*For discussions of terms, see the CECER-DLL's website at http://cecerdll.fpg.unc.edu and the NCELA's glossary of terms at www.ncela.gwu.edu/files/rcd/BE021775/Glossary_of_Terms.pdf.

this article, we survey this growing body of research to help inform educators responsible for creating settings for our young DLLs.

We organize our review of the research by addressing four key topics:

1. Employing children's home language in the early childhood curriculum;
2. Comparing effective practices for DLLs and English speakers in English-only programs;
3. Promoting language development in English and the home language; and
4. Involving families in supporting children's language learning.

At best, instruction in the home language contributes to growth in both English and home language skills; at worst, there's no difference in English achievement but an advantage in home language achievement.

1. Employing children's home language in the early childhood curriculum

The debate over bilingual education has been the most controversial aspect of the education of English learners for more than a half century and continues to be politically charged.[6] Bilingual education's basic premise is that students should be taught academic skills in their home language as they learn and acquire skills in English. According to this view, instruction in the home language strengthens the home language and creates a more solid foundation for cognitive and academic growth in English; moreover, promoting bilingual competence is valuable in its own right. Opponents of bilingual education argue that instruction in students' home language both delays English learners' entrance into the academic and social mainstream and depresses English achievement; bilingualism might be fine, but the school should focus on rapid and effective English learning. Others have also raised concerns about the resources required to fund bilingual programs and whether the benefits justify the costs.[7]

Preschool studies tend to find that at best, instruction in the home language contributes to growth in both English and home language skills; at worst, there is no difference in English achievement but an advantage in home language achievement.[8] In addition to promoting bilingual language and literacy skills, utilization of the home language can also have psychological and social benefits that immersion in a second language cannot offer. One study[9] found that Spanish-speaking children who experienced Spanish interactions with their teachers were more likely to engage in more complex linguistic interactions than children who experienced only English interactions with their teachers. Teachers in classrooms where Spanish was used also tended to rate their students more positively in terms of the students' frustration tolerance, assertiveness, and peer social skills.

Teachers can also use the students' home language in various ways that support children's learning, even when instruction is essentially in English. For example, teachers could supplement a book they are reading aloud with explanations or brief clarifications in the home language or by pointing out a cognate (e.g., "Do you know what a market is? It sounds like *mercado*, right?"), which can make texts in English more accessible to DLLs and possibly make them aware of linkages across languages.

2. Comparing effective practices for DLLs and English speakers in English-only programs

Studies of effective early childhood curricula have shown cognitive and social benefits for DLLs that may be comparable to or greater than those for native English speakers. Researchers in Nebraska, for example, found that a professional development literacy workshop series (HeadsUp! Reading) for early childhood educators was equally effective in promoting early literacy skills for children from English-speaking and Spanish-speaking homes.[10] In Oklahoma, one of the pioneers of universal high-quality pre-K education, preschools produce developmental gains across various demographic groups, including Latinos, approximately 70 percent of whom come from predominantly Spanish-speaking homes. Gains for these students (in English) were stronger than for students from English-speaking homes;[11] this might be explained by the fact that the Spanish-speaking students began with far lower English levels than the English-speaking students.

Studies also illustrate the value for young DLLs of well-known elements of effective teaching, such as explaining vocabulary words encountered during reading and using them in different contexts.[12] In other words, successful teaching and curricula seem to be successful for most children, suggesting that there is probably considerable overlap between what is effective practice for

DLLs and for students already proficient in English.[13]

Regardless of their level of English development, young DLLs who are working to master the rudiments of English probably need additional supports to help them participate fully in classroom learning activities if the activities are in English. Although preschool DLLs benefit from explanations about the meaning of words (just as English speakers do), one study found that children who began with lower English scores learned fewer words than children with higher English scores.[14] Pictures help DLL preschoolers with low levels of oral English learn story vocabulary (e.g., dentist, mouse, cap), suggesting that *visual representations*, not just *explanations*, provide these children with additional support for learning.[15] Video resources also have proven useful.[16]

Attempts to incorporate additional supports such as these into comprehensive programs and curricula have had mixed success. For example, a professional development program that succeeded in having early childhood educators add scaffolding strategies for DLLs into their core practices found that the improvements in child outcomes were limited to some phonological awareness measures.[17]

Preschool educators should use children's home language where possible and build bridges with families to support children's learning.

The key message is that what we know about effective instruction in general is the foundation of effective instruction for English learners of all ages. "Generic" effective instruction, however, is probably not sufficient to promote accelerated learning among ELs, although it is almost certainly a necessary base. While we have some intriguing clues about what else is needed to make programs effective for English learners (as described in the articles on pages 4 and 13 of this issue), there is little certainty about how to incorporate these supports into programs that optimize developmental outcomes for DLLs.

3. Promoting language development in English and the home language

Language development is, of course, a high priority in early childhood programs. English language development is critically important, but so is promoting development of the home language. Developing the home language is important in its own right *and* as a means of promoting other important cognitive and social outcomes.[18]

In her volume, *One Child, Two Languages*, dual language researcher Patton Tabors describes the sequence that most young children follow as they begin learning a second language in preschool.[19] First, young children often attempt to use their home language. Then, when they realize their home language is not working in this context, they tend to become silent. DLLs listen and observe, gaining an understanding of the classroom language. Next, they begin to "go public," testing out some new words and phrases. Finally, they begin to produce the new language, using phrases and then sentences.

Children may approach English learning differently, so this developmental sequence is not universal and invariant. But when teachers are aware of the general sequence, they have the opportunity to support DLLs most effectively. For example, it is important to be able to recognize and respond to children's nonverbal requests and protests—a silent child has needs that must be met, and the teacher can couple meeting those needs with introducing new phrases. Additionally, children who are not yet communicating verbally can be encouraged to build relationships through shared interests (e.g., working with a partner on a puzzle or dressing dolls) and through humor. Children can also be provided with the space and time both to act as *spectators* and to *rehearse* what they hear and want to repeat. Furthermore, models of pragmatically appropriate phrases—that is, appropriate to the particular situation in which the word or phrase is used—can be very useful for children who are just starting to "go public" with their new language.

As discussed in the article on page 13, explicit English language development instruction is also important. We know surprisingly little, however, about the relative effects, benefits, and disadvantages of different approaches to promoting English language development for DLLs in early childhood settings (or K–12 schools).

In early elementary settings, researchers[20] have found that a separate block of English language development instruction during the school day was somewhat more effective than only integrating English language development into other instruction throughout the day, although there certainly should be English language learning opportunities throughout the day as well. There is also evidence in the preschool context for a separate block of language development in the home language: for Spanish-speaking children in an English-immersion preschool, researchers found that a 30-minute block of Spanish-language development led to significant gains in children's oral proficiency in Spanish.[21] Second-language instruction should provide an appropriate bal-

ance of opportunities for meaningful, authentic communication and for more organized instruction and specific feedback on the proper use of conventional forms.[22]

4. Involving families in supporting children's language learning

Families play an important role in helping to make children's preschool experiences successful. DLLs' parents consistently show interest in their children's education and are highly motivated to provide their support.[23] Unfortunately, teachers often underestimate language-minority parents' ability to help their children succeed in school.[24] Most parents are responsive to focused and sensitive efforts to help them play an active role in supporting their children's earliest school success. However, researchers have found variability on the impact of home intervention programs on children's academic learning, perhaps due to the range of design and implementation features of various programs.

An important issue that parents and teachers ask about is whether parents of DLLs should use the home language with children exclusively or try to encourage more English use. Research and experience have established that children can learn more than one language, either simultaneously or sequentially, with no adverse effects.[25] In fact, in addition to the social and cultural benefits, there are potential cognitive advantages to growing up bilingual.[26] Yet many parents—and teachers—assume it is common sense that speaking more English at home will promote higher levels of English proficiency for children. Correlational studies do tend to corroborate these intuitions; use of any language at home is positively associated with children's learning outcomes in that language and negatively associated with outcomes in the other language. But findings are mixed: one study[27] found that increased use of English by Spanish-speaking mothers did not accelerate English growth by children—but it did decelerate Spanish vocabulary growth.

Bilingual language development need not be a zero-sum game, and parents should be reassured that use of the home language will not undermine children's English language development. Continuing to speak the native language can also be important for other reasons in addition to the cognitive and linguistic benefits, such as maintaining cultural and family values and communication. In sum, although more research is needed in this area, current research suggests that preschool educators should use children's native language where possible, apply specific strategies for building English language skills, and build bridges with families to support children's learning. □

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Lighting the Way

The Reading Panel Report Ought to Guide Teacher Preparation

ILLUSTRATIONS BY DANIEL BAXTER

By Robert Rickenbrode and Kate Walsh

People working to improve public education often wonder if we can borrow successful practices from other professions—an idea that, if adopted, would have an immediate positive and significant impact on student learning. These comparisons are typically framed as "education and teaching should become more like *this*."

We take a different tactic in this essay and argue that in several important ways, education is already very much like another profession: medicine.

In 2011, the Centers for Disease Control and Prevention (CDC) reported a remarkable medical triumph: central line infections in US intensive care units had fallen by 58 percent in just 10 years.[1] Central lines are catheters inserted into major veins; the infections they cause are always serious and sometimes fatal. The cause for this drop was not a miracle drug or wonder technology. Rather, it was a simple checklist:[2]

1. Wash your hands using soap or alcohol prior to placing the catheter.
2. Wear a sterile hat, mask, gown, and gloves, and completely cover the patient with sterile drapes.
3. Avoid placing the catheter in the groin, if possible (this has a higher infection rate).
4. Clean the insertion site on the patient's skin with chlorhexidine antiseptic solution.
5. Remove catheters when they are no longer needed.

This checklist was the result of the efforts of Dr. Peter Pronovost at Johns Hopkins University. He was inspired by the checklists present in the aviation industry, such as the one used by pilots and copilots before takeoff. This list covers an immense set of complex technological, social, and physical interactions that have potentially dire consequences if improperly completed. Pronovost saw an obvious parallel situation in hospitals, intensive care units, and operating rooms: complex tasks and potentially dire consequences.

But there was one big distinction: the differential impact the

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initial state of the "clients" has on potential outcomes. Passengers are typically healthy when they board an aircraft; assigning responsibility if they are harmed is straightforward. A very sick patient entering a hospital is less likely to respond to treatment, regardless of the knowledge, skill, or determination of the caregivers or scientific verity of the medical intervention. Thus, for hospitals, it's harder to assign responsibility for bad outcomes.

The fact that medical professionals cannot be held fully responsible for health outcomes makes it difficult to justify making changes in standards of care. Recognizing this, Pronovost wanted to reduce "preventable harm"—the injuries, complications, and infections caused by the quality, sequence, and comprehensiveness of the care provided by medical professionals. In short, hospitals must intervene, and with such interventions, there is always a risk of further complication and harm. He wanted to minimize that risk.

It would be easy to conclude that this is simply a case of getting the right information to the skilled and caring doctors and nurses in hospitals at the right time. And indeed, there was some of that: Pronovost notes that the five-item checklist is the distillation of a 120-page guidance document[3] from the Centers for Disease Control and Prevention regarding the prevention of central line infections. But that was relatively easy; convincing the physicians to follow the checklist for *each and every* line insertion was much more challenging.

Pronovost and his team uncovered two obstacles to implementation. First, the intensive care unit (ICU) where Pronovost was working was not designed around the checklist, so supplies were scattered around each room. This was solved by the creation of central line carts holding all the necessary supplies.

The second obstacle was oversight—moving from a model where physicians policed themselves to one where the nurses were empowered to require adherence to the checklist. This proved much more formidable, since hospital culture has firmly installed "infallible" doctors at the top of the hierarchy.

Pronovost and his team persevered, and, in his words, "the results were staggering." One year after nurses were required to ensure that every central line insertion followed the checklist, infection rates dropped to nearly zero, saving an estimated eight lives.[4]

Pronovost and his team built on this success to develop a model, Translating Research Into Practice (TRIP), that they used to develop checklists to reduce ventilator-associated pneumonia[5] and surgical site infections.[6]

But his earlier successes did not ensure automatic adoption of the subsequent checklists he developed through the TRIP process. For example, the surgical site infection checklist (based on rigorously researched guidance documents from the CDC and other professional organizations) recommends that the surgical site not be shaved because razor-based shaving nicks and damages the skin at the site, making the area more susceptible to postoperative infections. Instead, surgeons should use electric clippers to trim the hair (without taking it down to bare skin).

Pronovost recalls how, after resorting to removing razors from all of the operating rooms and ceasing all orders for razors, a "black market" in razors sprung up: nurses and doctors would collude to bring or conceal razors in the rooms to continue shaving. Pronovost saw this as strangely rational patient advocacy:[7]

> They wrongly believed that shaving lowered infection risk. This belief was based on information more than a decade old but also on their direct observation—when they used a razor they got a clean shave; when they used the clippers, some hairs remained and, theoretically, could fall into the wound. Surgeons reasoned, wrongly, that clean-shaved skin would have a lower infection risk than skin with stubble. If these doctors had a way to monitor their own infection rates, they would have known this assumption was wrong. Or if they had read the studies, published mostly in medical and infectious disease journals, they would have realized their assumption was wrong.

Indeed, Pronovost considers this initial attempt at a surgical site infection checklist a failure. His team was not able to achieve the reduction in infection they sought. But he learned that culture is critical. He realized that he needed to figure out how to foster cultural change in hospitals around the country.

In 2000, the National Reading Panel identified five core components of early reading success for children. This guidance was the anchor for our review.

Looking for "Preventable Harm" in Schools

We argue that guidance just like the CDC's for preventing central line infections already exists in education: *Teaching Children to Read*, the report the National Reading Panel (NRP) published in 2000.* This scientific meta-analysis of hundreds of experimental studies identified five essential core components of early reading success for children, which can serve as the basis for creating *and using* a Pronovost-style checklist. Here are the five components distilled to checklist length:

1. Phonemic awareness: the ability to distinguish and manipulate the 44 fundamental sounds (phonemes) that comprise spoken English. The NRP meta-analysis notes that explicit (and brief) instruction in phonemic awareness, through activities like rhyming, blending, or segmenting sounds, should be undertaken in preschool or kindergarten and is one of the best predictors of how readily children will learn to read in the first few school years.

2. Phonics: knowledge of the correspondence between the sounds (phonemes) and letters or combinations of letters

*To read the National Reading Panel report, visit www.nationalreadingpanel.org.

(graphemes) in English. The NRP meta-analysis recommends early, explicit, and systematic instruction in these correspondences, starting with the most frequently found sound-spelling combinations.

3. Fluency: the ability to accurately and rapidly read isolated and connected English text. If students do not achieve a level of reading automaticity (there are measures and explicit metrics),[8] the child's working memory is overwhelmed with decoding and comprehension suffers. The NRP recommends providing explicit fluency practice in the early elementary years and distinguishes between common instructional practices that develop fluency (guided oral reading) and those that don't (round-robin reading).

4. Vocabulary: oral vocabulary is important when children are first learning to read, but students must build their reading vocabularies to comprehend texts (which simply put, requires lots and lots of reading practice). The NRP recommends a variety of practices to develop children's vocabulary and notes that an assortment of practices leading to multiple exposures for vocabulary is optimal.

5. Comprehension: the ability to integrate new information with prior knowledge and to derive meaning from novel texts. The NRP reinforces the importance of building students' oral and reading vocabularies, and recommends that time be dedicated to explicit comprehension strategy instruction, such as using graphic organizers, summarizing, and asking and answering questions during reading.*

Like the Pronovost checklist, these five essential components represent the distillation of hundreds of scientific studies—they translate research into practice. Like the Pronovost checklist, each component summarizes a set of practices, procedures, and measures. And, like the Pronovost checklist, the five essential components are all required to reduce the risk of reading failure, to minimize "preventable harm."

Indeed, effective teacher instruction in all five components—and student mastery of the first three components—by the third grade is *critical* for long-term student outcomes. Students who do not get a strong start in reading skills, vocabulary, and comprehension risk the "downward spiral" described by reading researcher Joseph Torgesen.[9] Poor skills in phonics and phonemic awareness inhibit the development of fluent reading, which in turn leads to less reading practice, diminished vocabulary, less background knowledge, and a host of academic struggles when reading to learn becomes a requirement in the later elementary years. The majority of these children will remain poor readers through and beyond high school and are less likely than their peers to complete high school or attend college.[10]

Effective teacher instruction in all five components—and student mastery of the first three components—by the third grade is *critical* for long-term student outcomes.

As in the examples from aviation and medicine, these are truly dire consequences.

So, we have the equivalent of the Pronovost checklist for teachers: five essential components of reading instruction that experts credibly argue would have more than 90 percent of children[11] reading by third grade.

But before we can ask Pronovost's question—Are they using it?—we must ask: Do teachers know about it?

That is, do university-based elementary teacher preparation programs ensure that all teacher candidates receive significant training in the science of reading, taking into their classrooms a deep understanding of the research and a well-developed ability to translate it into effective, engaging instruction? Do they teach the early reading checklist?

NCTQ's Work

The National Council on Teacher Quality (NCTQ) has been attempting to answer those questions since we began work for our 2006 report, *What Education Schools Aren't Teaching about Reading and What Elementary Teachers Aren't Learning*.†

For that project, we developed a methodology in which expert teams, with knowledge of the research and instructional practices of effective early reading instruction, review the required

*However, the NRP report, like all meta-analyses, is limited to the areas investigated. Daniel T. Willingham, a psychology professor at the University of Virginia and the author of *American Educator*'s "Ask the Cognitive Scientist" column, has explained that such comprehension strategy instruction should be brief and that more time should be devoted to building students' background knowledge. For Willingham's review of the research on comprehension strategies, see "Ask the Cognitive Scientist: The Usefulness of *Brief* Instruction in Reading Comprehension Strategies," available at www.aft.org/pdfs/americaneducator/winter0607/CogSci.pdf. For Willingham's review of the research on background knowledge, see "How Knowledge Helps," available at www.aft.org/newspubs/periodicals/ae/spring2006/willingham.cfm.

†To read NCTQ's 2006 report, *What Education Schools Aren't Teaching about Reading and What Elementary Teachers Aren't Learning*, go to http://bit.ly/MkECln.

syllabi—which outline lectures and assignments—and textbooks for the reading courses prospective elementary teachers are required to take.

One team of experts reviewed the syllabi, examining lectures and elements of accountability (assessments, writing assignments, or actual teaching practice) dedicated to each of the five essential components. A separate team of experts examined the most current editions of relevant, required textbooks to determine which of the five essential components are addressed in a manner consistent with the current science of reading. The syllabus and textbook scores were then combined to form a course score for each of the five essential components.

The scoring construct permitted many possible pathways for a course to adequately address a component. Here are some ways a course could be considered to be addressing one of the five components:

- A single adequate text and two lectures;
- Two lectures and a quiz;
- A single adequate text and a quiz;
- A single adequate text and two practice teaching sessions; or
- Two lectures and at least two assignments.

In a typical 15-week course (often called something like Teaching Reading in the Elementary Grades or Early Literacy I), these are not strenuous requirements. (We implicitly assumed that the classroom instruction is adequate; if a component was on the syllabus or in the text, we took it as taught.) Further, these are minimalist requirements. It's hard to imagine something less than a text and a couple of lectures; indeed, it's easy to imagine much more being required for mastery of the research, assessments, and instructional practices appropriate to develop reading fluency in elementary-age children.

The highest score across *all courses* for any component became the *program* score for that component. Thus, the education school score was assembled from the best work we could find in any required reading course for the program.

We reported school scores on a five-point scale (0–4) proportional to the number of components adequately addressed by the school: a four means that all five components are addressed by the school, while a zero means that at most one component is addressed. We should point out that while this scale differentiated between schools based on the proportion of components addressed, the research notes that all five components are critical for reading success.

For the 2006 report, we used this methodology to evaluate 72 schools of education across the country. We found that only 15 percent of these institutions taught all five essential reading components to prospective elementary teachers.

In the years since, we have released a number of state-level reports, each one including an examination of early reading preparation. In all cases, our results were consistent with our national project sample: disappointing.

Then, we set out to do it everywhere.

NCTQ's *Teacher Prep Review*

In January 2011, we sent letters to the approximately 1,400 institutions of higher education housing initial teacher preparation programs (at the undergraduate and/or graduate levels) to announce our partnership with *U.S. News & World Report* in a comprehensive examination of teacher preparation across the country. We selected 1,130 institutions—representing 99 percent of teachers trained annually in traditional, college-based programs—to include in that work. A principal goal of the review was to provide comprehensive guidance to prospective teachers across the country.

Through our national and state projects, we had developed and piloted a number of standards to apply to elementary and secondary teacher preparation programs at the undergraduate and graduate levels. These standards address elements such as the selection criteria of the program, preparation in the content the teacher will teach (which includes a broad liberal arts background, early reading, and early mathematics in the elementary grades), and key facets of the clinical practice experience.

We found that only 18 percent of the 609 elementary teacher preparation programs reviewed address all five of the essential reading components.

We sought to evaluate 1,130 institutions; however, few provided data following our initial document request. We submitted open records requests to nearly 500 institutions and filed several fair use legal challenges to university claims of exemption through copyright protection. These strategies were reasonably successful with public institutions, but not private ones. Though approved by various government agencies to prepare public school teachers, private universities are not subject to open records laws; as a result, while more than 100 private institutions are included, they are underrepresented in this edition. Our 2013 report, the *Teacher Prep Review*, which was published this month on NCTQ's website (www.nctq.org), will be updated annually, with a goal of complete coverage by the third edition in 2015. There are 609 institutions in the first review.

As shown in Table 1 (on the next page), we found that only 111 programs (18 percent) address all five of the essential components and, therefore, provide adequate instruction in the science of reading to prospective elementary teachers. There is a bright spot in this news: we found such programs in 38 states, which means we can recommend accessible programs to prospective teacher candidates around the country.

Five of these programs also demonstrated "strong design." Not only do they meet our standard for the five essential components, they do so efficiently, with every course and text con-

Table 1: Percentage of Elementary Programs That Adequately Address NRP's Recommended Components

Number of NRP-Recommended Components	Percentage of Programs Adequately Addressing Components	
	In NCTQ's 2013 review (N=613 programs)	In NCTQ's 2006 review (N=72 programs)
5	18%	15%
4	11%	13%
3	13%	8%
2	13%	13%
1	15%	14%
0	30%	35%

Percentages may not sum to 100 due to rounding. Programs offer undergraduate or graduate elementary teaching degrees with initial certification at an institution.

tributing to the prospective teachers' understanding of the science of reading.

Despite having exemplars, including some that have become so since receiving lower scores in the 2006 national reading report, the field of teacher education as a whole does not appear to have moved much since we published that report. Now, as then, roughly one-third of the programs provide no instruction on the five essential components. Now, as then, almost one-fifth of the programs we reviewed provide adequate instruction—texts, lectures, assignments, teaching practice, or tests—in the five essential components. About half of the remaining programs we reviewed cover one to four of the components. While we distinguish among the number of components each program teaches, all five components were identified by the NRP meta-analysis, not three out of five or four out of five. In other words, a program that addresses three of the five components isn't "60 percent" as good as one that teaches all five; it's actually completely inadequate.

It's been 13 years since the NRP released its meta-analysis. How much longer do teacher preparation programs need to adjust their courses? Looking at the component coverage (shown in Table 2), there is much to be done to permeate the culture of teacher preparation. Instead of grasping onto the success of Pronovost's central line checklist, we seem to be following in the footsteps of those doctors and nurses sneaking around with razors—unwilling to read, accept, and follow research on best practices.

Just like Table 1, this summary of component coverage found in the 2013 teacher preparation review is similar to the 2006 results (the analogous data from 2006 are in terms of *courses* and thus are not directly comparable to the figures presented in Table 2). Now, as then, the most frequently overlooked components are phonemic awareness and fluency.

About half of the programs we examined meet our standard for phonics and vocabulary. Amid this sea of disappointing results, the relatively high percentage of programs adequately addressing phonics is promising. For decades, the "reading wars" raged over whether it is best to teach children to read with phonics or whole language. Research strongly supports phonics, but the whole language approach was long-lived. (To be fair, its emphasis on high-quality, engaging books is beneficial—but children must learn to decode, and for that they must learn phonics.) So we were surprised to see lots of phonics in our review. More surprisingly, one-fifth of the programs that adequately address only one component do address phonics. Are the wars ending?

We also found that comprehension is the most frequently addressed—more than half of the programs we examined do so. Digging deeper, we found that in programs that address only one component adequately, nearly two-thirds of the time it is comprehension—useful to children who *already* have some mastery of phonemic awareness, phonics, and fluency skills, and who are making strong progress in acquiring a broad academic vocabulary.

Fostering Cultural Change in Schools

To be clear, our *Teacher Prep Review* did not set out to explain the current state of teacher preparation; it set out to comprehensively catalog how well teacher preparation programs are performing against a set of standards.

Our intellectual forebear is Abraham Flexner, whose 1910 review[12] of the 155 medical schools of his day detailed such institutional characteristics as whether a high school diploma was required for admission (in many, it was not) and whether a laboratory and clinical facilities were available. We sought to do the same: give comprehensive details regarding teacher education programs on as many institutions as we could. The generally disappointing results and the challenges we faced collecting data complicate the search for an explanation.

But, let's start with the obvious. We found that in nearly 500 programs (80 percent of those we could review), prospective elementary teachers are not receiving even minimal preparation in all five components of early reading instruction. This is a tremendous challenge with consequences as potentially dire and life-altering as central line infections. The parallels between Pronovost's work and teacher preparation in early reading are striking and impossible to ignore:

Table 2: Component Coverage across Preparation Programs

Early Reading Component	Percentage of Programs in NCTQ's 2013 Review Adequately Covering This Component
Phonemic Awareness	31%
Phonics	47%
Fluency	32%
Vocabulary	46%
Comprehension	58%

1. Simply distilling and presenting guidance fueled by rigorous scientific research is not sufficient. Pronovost's team saw substantial declines in central line infections only after the ICU nurses were empowered to monitor and remind doctors about the checklist—having doctors monitor themselves was not sufficient.

   Likewise, there is substantial evidence in our results that the preparation programs, under the current hodgepodge of oversight and accreditation,[13] are not translating the research into professional preparation. Incidentally, this argues for an independent examination of teacher preparation—exactly like the one we undertook. Much more research along these lines could be done, and we welcome others to conduct similar work, including verifying and extending our review.

2. Even when presented with clear scientific evidence, some professional practitioners—be they doctors in hospitals, instructors in teacher preparation programs, or teachers themselves—may resist changes to practice because their personal experience indicates that what they are doing is effective. Pronovost's initial efforts to reduce surgical site infections were disappointing because his team underestimated the operating room culture, in which shaving *simply had to be more sanitary* because it had always been done (by very smart people, no less!) and no one could remember a string of infections that resulted from doing so.

   Similarly, because there is often a lag between actions taken (in teacher preparation and teaching) and eventual outcomes, it is difficult to determine cause and effect. Learning to read is a complicated process that is not influenced solely by events within a classroom, and teachers are typically assigned to a class for only one year. So the eventual outcomes of instruction are not known to earlier teachers (or the institutions that prepared those teachers) and are conflated with many other (often relevant) factors.

   While it is understandable to resist change based on personal experience, especially in instructional situations where the risks are high, that is all the more reason why instructional practices should be based on the strongest research available.

3. Culture is critical. Pronovost correctly diagnosed the reason the surgical site infection checklist was not as successful as his team had hoped: they underestimated the stability of the culture in the operating room at Johns Hopkins. He regrouped and realized that his checklist was just one-half of the solution to the puzzle. The other half was driving cultural change—making diverse groups of people in the same hospital, and in hospitals around the country, focus on the leadership, teamwork, communication, practices, and measurements necessary to drive improvements in patient safety. This realization, and the process and practices it spawned, eventually led to a project with more than 100 intensive care units across the state of Michigan, where central line infections *dropped to zero* within the 18 months of the study (and for four years thereafter).[14]

Education is regularly "aboil with some kind of 'change.'"[15] In fact, this constant agitation leads to a strangely adaptive culture where innovations—good or bad—are met with the cynical observation that "this too shall pass."

Thirteen years after the NRP report, the cultural changes necessary to drive adoption of the early reading checklist have barely begun. For the teaching profession to thrive, its members must be deeply familiar with the body of research-based knowledge about what will work to better educate children. The five early reading components are part of this knowledge. New teachers need to receive this expertise from the institutions charged with training them. Unless those institutions provide this training, it's hard to see how K–12 education can make its own strides in eliminating "preventable harm." □

The teaching profession will thrive when its members have research-based knowledge about what works to educate children.

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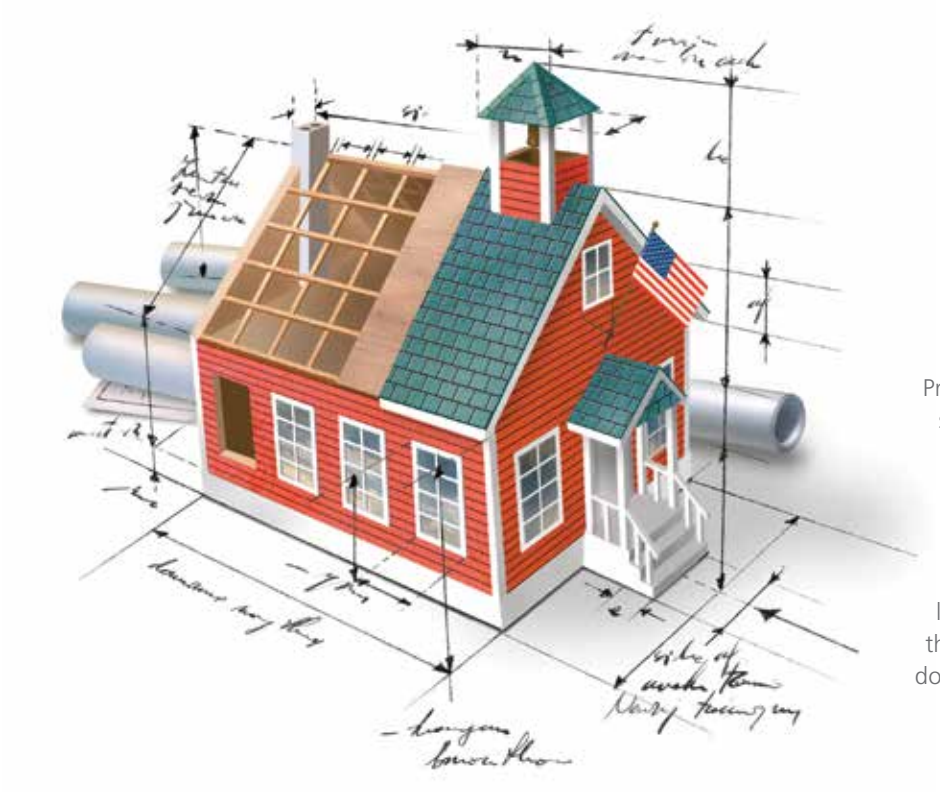
The Professional Educator

Six Steps to Effective Teacher Development and Evaluation



Professional educators—in the classroom, library, counseling center, or anywhere in between—share one overarching goal: ensuring all students receive the rich, well-rounded education they need to be productive, engaged citizens. In this regular feature, we explore the work of professional educators—their accomplishments and their challenges—so that the lessons they have learned can benefit students across the country. After all, listening to the professionals who do this work every day is a blueprint for success.

ILLUSTRATIONS BY NENAD JAKESEVIC

By Vicki Phillips and Randi Weingarten

Some see us as education's odd couple—one, the president of a democratic teachers' union; the other, a director at the world's largest philanthropy. While we don't agree on everything, we firmly believe that students have a right to effective instruction and that teachers want to do their very best.

Vicki Phillips is the director of Education, College Ready in the United States Program, for the Bill & Melinda Gates Foundation. Previously, she was the superintendent of the Portland Public Schools in Oregon. A former middle and high school teacher, she has served as the secretary of education and chief state school officer for Pennsylvania and as the superintendent of the Lancaster, Pennsylvania, school district. Randi Weingarten is the president of the American Federation of Teachers. Highlights from her career include serving as the president of the United Federation of Teachers, as an AFT vice president, and as a history teacher at Clara Barton High School in Brooklyn's Crown Heights. This article first appeared in the March 25, 2013, issue of the New Republic.

We believe that one of the most effective ways to strengthen both teaching and learning is to put in place evaluation systems that are not just a stamp of approval or disapproval but a means of improvement. We also agree that in too many places, teacher evaluation procedures are broken—unconstructive, superficial, or otherwise inadequate. And so, for the past four years, we have worked together to help states and districts implement effective teacher development and evaluation systems carefully designed to improve teacher practice and, ultimately, student learning.

While many factors outside school affect children's achievement, research shows that teaching matters more than anything else schools can do. Effective teaching is a complex alchemy—requiring command of subject matter, knowledge of how different children learn, and the ability to maintain order and spark students' interest. Evaluation procedures must address this complexity—they should not only assess individual teachers but also help them continuously improve.

Yet both of us have become increasingly concerned that states

and districts are doing evaluation quickly instead of doing it right, which could have serious adverse effects.

The Bill & Melinda Gates Foundation launched the Measures of Effective Teaching (MET) project in 2009 to identify effective teaching using multiple measures of performance. The foundation also invested in a set of partnership sites that are redesigning how they evaluate and support teaching talent.

And the AFT has developed a continuous improvement model for teacher development and evaluation that is being adapted in scores of districts to help recruit, prepare, support, and retain a strong teaching force.

From our research, and the experiences of our state and district partners, we've learned what works in implementing high-quality teacher development and evaluation systems:

1. Match high expectations with high levels of support.

Teacher evaluations should be based upon professional teaching standards that spell out what teachers should know and be able to do. Teachers should receive regular, timely feedback on their performance and support to get better. The responsibility for improving teaching shouldn't rest with teachers alone. Measures of effective teaching enable school systems to better support teachers' improvement needs and to determine if teachers have the tools and school environment conducive to good teaching. Sound measures help school systems know where to target professional development and whether those efforts work. The goal of the process should be to systematically improve teacher practice and increase student learning.

2. Include evidence of teaching from multiple sources.

Measures of student learning gains commonly based on end-of-year tests provide teachers with too little information too late and may not reflect the full breadth and depth of instruction. We know that a balanced approach works best (teacher observation, student work, and student assessments, for example), and both our organizations are conducting what could be called R&D in this area. The Gates Foundation's MET project (much but not all of which the AFT agrees with) has found that combining a range of measures—not placing inordinate weight on standardized test scores—yields the greatest reliability and predictive power of a teacher's gains with other students. And the AFT and its affiliates are exploring ways to accurately determine what measures best serve as a proxy for our work.

3. Use information to provide constructive feedback to teachers, as befits a profession, not to shame them.

The aim of evaluation should be to improve teacher practice, not to sort or shame. Districts such as Los Angeles and New York City have publicly released teacher rankings. Both the AFT and the Gates Foundation have criticized this practice. As Bill Gates, the cochair of the foundation, wrote in the *New York Times*, "Publicly ranking teachers by name will not help them get better at their jobs or improve student learning. On the contrary, it will make it a lot harder to implement teacher evaluation systems that work."

4. Create confidence in the quality of teacher development and evaluation systems and the school's ability to implement them reliably.

This means using a valid rubric for observing teacher practice; training and certifying raters to ensure they can observe classrooms fairly and consistently; and observing teachers multiple times, using multiple observers: administrators and peer or master teachers.

It also means preparing principals and others to give skilled feedback that can support teachers' growth.

5. Align teacher development and evaluation to the Common Core State Standards.

MET data show that most teachers are a long way from confidently handling the instructional shifts necessary to meet the Common Core State Standards. For example, while most teachers are adept at classroom management skills, teachers have long been taught to fit a lot of material in a short period of time, not to ask high-level questions or to engage students in rigorous discussions.

Luckily, this is also an area with huge, untapped potential. For example, Teach Live, developed by the University of Central Florida, enables teachers to practice new techniques in simulated classroom environments before trying them with real students. Tutor.com provides teachers with individualized, online coaching on how to teach concepts. And the AFT, with Britain's TES Connect, has developed Share My Lesson, an online community for US teachers to collaborate and share teaching resources and innovative ideas, with a significant emphasis on resources to guide teachers in implementing the Common Core.

Of course, school districts must also provide continuous and relevant professional development and growth for teachers that address their skills, knowledge, and needs.

6. Adjust the system over time based on new evidence, innovations, and feedback.

It's essential that states and school systems measure the extent to which new teacher development and evaluation systems are being implemented with fidelity, meeting their original purposes without creating unintended negative consequences. We fully anticipate the need to continuously update measures of effective teaching and the best ways to use them, as more research and experience become available.

Teacher development and evaluation must be a vehicle to achieve the mission of public schooling. And that mission must evolve from an outmoded model of education that exists in too many places to a new paradigm that will prepare students for life, college, and career. Teachers must have a system of professional growth that reflects the sophistication and importance of their work, and they must have a meaningful voice in that system. Just as we have high expectations for teachers, we must also for leaders. Officials must invest in these systems—it is more important to do it right than to do it cheap. And, lest anyone expect that teachers, single-handedly, can save public education, we must also focus on the accountability and responsibility that rest with school and government leaders to ensure that students and teachers have the opportunities and supports they need to succeed. ☐

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(Continued from page 11)

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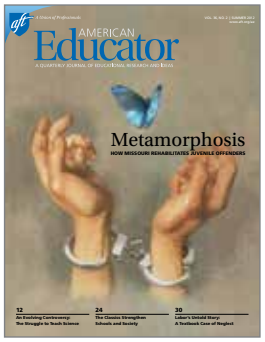

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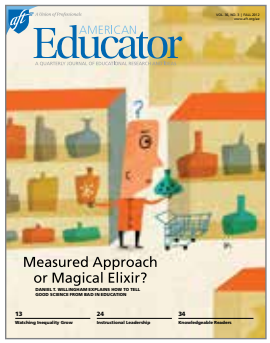

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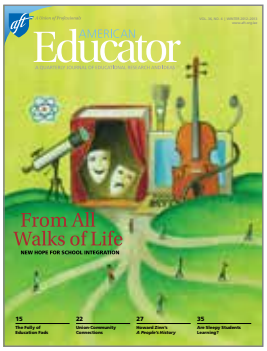

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