

Reading instruction for English language learners

Claude Goldenberg
Stanford University

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The number of students arriving at school not fully proficient in English has grown enormously over the past half-century. Forty years ago, the achievement of children from non-English-speaking homes was hardly a national issue. Today it is. The number of students limited in their English abilities has multiplied by 150% nationwide just in the past 15 years; the growth has been even more dramatic in some regions of the country. This demographic change has had a profound impact on schools. Teachers must adjust to the different needs of students from highly diverse backgrounds and with varying degrees of English proficiency. Federal and state accountability requirements since *No Child Left Behind* was signed into law in 2002 have raised the stakes ever higher, since schools cannot make "adequately yearly progress" unless all student subgroups meet targeted progress benchmarks. But no matter the pressures created by high-stakes testing (which in any case might change under a new presidential administration), the moral imperative to improve achievement and opportunities for this group of students grows as their numbers increase. The need for valid research-based knowledge of how to improve these students' literacy attainment has never been greater.

In this chapter I will first provide an overview of this population of students, currently referred to as English language learners (ELLs). Over the years, they have been designated--with varying degrees of accuracy--as bilingual students, English as a second language (ESL) students, non-English or limited-English speaking (LES/NES) students, and limited-English proficient (LEP) students. I will then provide a brief historical view of research on ELLs in the U.S. Most of the chapter will comprise an analysis of key findings and current trends that should be of greatest salience for educators and policy-makers concerned with putting into practice the best

research-based knowledge available. The chapter will conclude with implications for practice, policy, and future research.

ELLs in the U.S.

In 1990, approximately 2 million public school students—1 of every 20 in grades K-12—were ELLs, that is, spoke English either not at all or with enough limitations that they could not fully participate in mainstream English instruction. Today there are over 5 million ELLs—one in nine public school students in K-12. This 150% increase has occurred during a period when the overall school population has increased by only about 20%

(<http://www.ncela.gwu.edu/expert/faq/08leps.html>). Even states not typically associated with ELLs, e.g., South Carolina, North Carolina, Tennessee, Georgia, and Indiana, each saw an increase in the ELL population of 400% or more between 1993-94 and 2003-04

(http://www.ncela.gwu.edu/stats/3_bystate.htm).

ELLs in the U.S. come from over 400 different language backgrounds. Contrary to most people's assumptions, most ELLs were born in the U.S.; fewer than one-quarter of elementary-age ELLs and less than half of secondary-age ELLs are foreign-born (Capps, Fix, Murray, Passel, & Herwanto, 2005). By far the majority of ELLs--80%--are Spanish-speaking, and most of these are from Mexico and Central America. Although the Latino population in the U.S. is quite diverse--as is the U.S. immigrant population overall (see Tseng & Lesaux, 2009)--economic and educational levels tend to be lower than either the general population or other immigrants and language minority populations. For example, only 38% of adult immigrants from Mexico and Central America have a high school education, compared to 88% of U.S.-born adults, 85% of immigrants from Europe, and 87% of Asian immigrants. Consequently, most

ELLs in the U.S. are at risk for poor school outcomes not only because of language, but also because of socioeconomic factors.

Speakers of Asian languages (e.g., Vietnamese, Hmong, Chinese, Korean, Khmer, Hindi) comprise about 8% of the ELL population. In general, these populations tend to come from higher educational and economic backgrounds than the Latino population. However, Asians also comprise a highly diverse group with widely varying experiences and characteristics that differ by country and region of origin. For example, more than 50% of the Taiwanese, Indian, and Pakistani populations have college degrees; fewer than 10% of Japanese, Filipino, and Indians live below the poverty line; the median per capita income (in 1999 dollars) of the Taiwanese, Indian, and Japanese populations is greater than \$25,000. In contrast, half or fewer U.S. residents of Laotian, Cambodian, or Hmong descent have high school degrees; among Cambodians and Hmong, the poverty rate is 30% or higher and per capita income (in 1999 dollars) \$10,000 or lower. Table 1 illustrates the diversity in demographic and socioeconomic characteristics among Latino and Asian subgroups in the U.S. Note the table includes both foreign- and U.S.-born individuals.

insert Table 1 about here

Large Achievement Gaps between ELLs and English Speakers

Reading and language arts achievement among ELLs in the U.S. tends to be low, although, again, there is considerable variability. As a group, students who are learning English as a second language consistently underperform compared to their English-speaking peers. In California, for example, approximately 50 percent of students fluent in English score proficient

or advanced on the California Standards Test in English language arts. In contrast, among ELLs *who have been enrolled in school in the U.S. for at least a year*, the percent proficient or advanced in English language arts ranges from a high of 28% in 2nd grade to a dreadfully low 4% in 10th and 11th grades (star.cde.ca.gov/star2006). The national picture shows the same discrepancies. On the 2005 National Assessment of Educational Progress (NAEP), 4th grade ELLs scored 35 points below nonELLs in reading, a huge gap since 10 points is approximately equivalent to a grade level. Differences were somewhat smaller but still sizable in math and science. In 2007, the differences between ELLs and non-ELLs were nearly identical to what they were in 2005. Gaps between English-proficient students and ELLs are even larger, and have increased across all subject areas, among 8th and 12th graders (nces.ed.gov/nationsreportcard).

By definition, ELLs are limited in their English proficiency, so it is not surprising that they do more poorly than their English-speaking peers on tests written in English. Their poor test performance is undoubtedly at least partly due to lack of English proficiency. But low test scores might also be due to lagging content knowledge and skills and/or to other factors that interfere with test performance. Whatever the explanation, these achievement gaps should concern us all.

Achievement Differences among ELL Groups

There are also achievement differences among the different ELL groups, although they are very difficult to disentangle from socioeconomic factors known to influence academic outcomes. Kennedy and Park (1994) reported that among students who indicated they spoke a language other than English at home, Asian Americans from East (e.g., China, Japan) and Southeast (e.g., Vietnam, Cambodia) Asia had higher reading scores than Mexican Americans in a nationally representative sample of eighth graders. Kao and Tienda (1995) found similar achievement differences between Asian and Latino youth, although they did not report results by

home language use or students' language proficiency. Ima and Rumbaut (1989) found differences in reading achievement among different subgroups of ELL Asian students.

Explanations for such differences among language-minority groups are complex and largely elusive. As Schmid (2001) observed, “the relationship between socioeconomic class, cultural characteristics, social reception, and language proficiency has not been resolved” (p. 82). Schmid further noted research “has revealed that social class heavily influences the academic success” of this population of students (p. 82). Indeed, achievement differences are confounded with socioeconomic status and other dimensions of family life. For example, Kennedy and Park (1994) found that the Asian-origin students spent twice as much time on homework as the Mexican-origin students, which suggests one type of explanation for the achievement difference; but the two groups also differed in family socioeconomic status, which suggests another. Kennedy and Park could not distinguish between the two in their analysis.

Similarly, the relatively high scores among East Asians in Ima and Rumbaut (1989) are at least partly attributable to family socioeconomic status, in particular, parent education. The East Asian group “frequently includes children from ‘brain drain’ immigrant families (such as those headed by a Taiwanese engineer)” (p. 64). The high grade point averages of East Asian children and the “other immigrant” children in their study might reflect the selective migration pattern of families with highly educated parents. Even within the Southeast Asian group, there were differences: Vietnamese were the highest-achieving, followed by Khmer, Laotian, Chinese-Vietnamese, and finally Hmong. Once parent education, time in the United States, and age of student were taken into account, however, differences in reading achievement across the Southeast Asian subgroups disappeared. These findings reflect the population data reported in Table 1.

Past and Present Research on ELL Reading

The history of the *Handbook on Reading Research* mirrors the increased reality and awareness of linguistic diversity in U.S. schools and its significance for literacy education. The first *Handbook*, published in 1984, contained no chapters dealing explicitly with reading in relation to diverse languages and cultures. The second (1991) had two, Heath's analysis of historical and cross-cultural aspects of feeling "literate" and Weber's essay on linguistic diversity and reading in the U.S. The third *Handbook* (2000) had three—Bernhardt's assessment of scholarship on second-language reading, Au's multicultural perspective on policies to improve literacy achievement for cultural/linguistic groups traditionally underserved by U.S. schools, and Garcia's chapter on bilingual children's reading.

In the larger arena of reading research, ELLs were essentially invisible until late in the 20th century, since *the* issue that attracted virtually all attention and enormous controversy was language of instruction, the so-called "bilingual education" debate. As García (2000) observed in the third *Handbook*,

A problem in locating research on bilingual reading is that the topic historically has been ignored in the second-language field and only recently addressed in the reading field. ... researchers in the field of second-language acquisition historically had focused on oral language development, neglecting the study of [literacy] development. (p. 813)

García's observation is ironic, since our strongest findings regarding the achievement of ELLs are precisely about second language *reading* and not about second *language development*. (I discuss these in the next section.) But her larger point, that the study of literacy development among ELLs has been, until recently, relatively neglected, is valid. Research in this field has been traditionally dominated by the debate over bilingual education, that is, whether students

who are not proficient in English should be instructed in only English or in their home language as well as in English. This complex and both politically and ideologically charged debate, born of the 1960s Civil Rights movement and enmeshed in issues of identity, ethnicity, cultural self-determination, and more recently immigration, dominated the discourse in this area for many years, leaving little room for other issues (see, e.g., Carter, 1970; Carter & Segura, 1979; Crawford, 2004; Goldenberg, 1996).

This field has been evolving since the 1990s, with the pace greatly accelerated since 2000. We also now see much more research dealing with issues of improving literacy outcomes *regardless of language of instruction* (e.g., Calderón, Hertz-Lazarowitz, & Slavin, 1998; Carlo et al.; 2004; De La Colina, Parker, Hasbrouck, & Lara-Alecio, 2001; Echevarria, 1995; Escamilla, 1994; Gersten & Jiménez, 1998; Goldenberg & Gallimore, 1991; Gunn, Smolkowski, Biglan, Black, & Blair, 2005; Swanson, Hodson, & Schommer-Aikins, 2005; Vaughn, Mathes, et al., 2006; Vaughn, Linan-Thompson, et al., 2006).

Concurrent with this upsurge of research, three major national reviews conducted by teams of researchers have appeared over the past decade: August and Hakuta (1997), August and Shanahan (2006), known as the “National Literacy Panel,” and Genesee, Lindholm-Leary, Saunders and Christian (2006). All three addressed language of instruction, but went well beyond it to include other factors likely to be at least as important for the school achievement of this population of students, especially curriculum and instruction. As an indication of the increased attention literacy instruction and achievement among ELLs are receiving, practical and helpful articles for teachers now appear regularly in The Reading Teacher (e.g., Helman, 2005; Helman & Burns, 2008; Kieffer & Lesaux, 2007), including an ELLs "Department" that appeared in the October, 2007 issue.

Educators concerned with the school success of these students thus have some cause for optimism. The research activity we are seeing could lead to important insights, if not outright breakthroughs, and produce widespread improvements in the literacy achievement of ELLs.

Oral Language and Reading

García's (2000) observation pointed out a tension that has long existed between concern for oral language development (how well ELLs can speak and understand English) and achievement in academic content (reading, writing, and other areas of the curriculum). This tension is understandable, since language skills are so important for success in most areas of the curriculum, particularly reading and anything that involves reading. The fundamental challenge faced by teachers of ELLs, particularly if students are learning to read in an all-English context, is promoting development in two distinct, but related and complex domains—oral language and reading. Discussion of oral language instruction and development per se is beyond the scope of this chapter (interested readers should consult Saunders & O'Brien, 2006, and Saunders & Goldenberg, in press). However, the relationship between oral language and learning to read raises several important questions that cannot be answered with confidence.

One is whether there is some threshold of oral language proficiency ELLs must attain before reading instruction is productive. On the one hand, it stands to reason that until students know some level of English, teaching even rudimentary reading skills in English does not make sense. Not surprisingly, there is a positive association between oral English proficiency and reading achievement in English (Geva, 2006; Saunders & O'Brien, 2006), suggesting that very low levels of oral English proficiency are associated with very low levels of English reading achievement.

On the other hand, however, the fact that oral language proficiency and reading achievement are correlated says nothing about whether students must know English at some level before starting to learn skills and concepts related to English reading. Even a student who speaks no English might be able to learn the sounds of the language, how to segment words into smaller units (e.g., phonemes), how to associate sounds with letters, and how letters/sounds combine to form words. If so, and if instruction is done well and combined with vocabulary teaching and other types of second language instruction, instruction in the “alphabetic principle”—the idea that letters stand for sounds and that sounds can be encoded in letters—could make a positive contribution both to literacy and to oral language development before learners reach any particular oral language threshold. Indeed, a number of studies reviewed below suggest that students who are not proficient in English can still learn critical reading skills and concepts in English *as they learn English*. I know of no direct evidence to corroborate this hypothesis; however, there is a growing consensus, based on studies such as those reviewed here, that ELLs can be taught early literacy skills such as phonological awareness and decoding—and perhaps even more advanced skills—before reaching some specified oral English proficiency level (e.g., Genesee et al., 2006; Gunn et al. 2005).

A second question has to do with expectations for the literacy development (particularly in the earliest stages of learning to read) of students who are limited in their English. Are these students capable of learning at levels and rates comparable to English speakers, assuming they are provided with effective teaching? At first look, the question is puzzling, since it might appear obvious that being limited in English proficiency will, at a minimum, make learning to read more challenging and slower in comparison to the rate of learning for English-proficient students. However, if we consider (a) the evidence described below that instruction in fundamental aspects

of reading—phonological awareness, phonics, and decoding—can be just as effective with ELLs as with English speakers, coupled with (b) the growing consensus that reading instruction can proceed regardless of oral English proficiency, perhaps the suggestion that we can expect ELLs in the very early primary grades to make progress comparable to that of English speakers is not so unreasonable. A longitudinal study of Spanish-speaking ELLs by Manis, Lindsey, and Bailey (2004) found early English reading achievement (phonological skills, letter-word identification, passage comprehension) in grades K-2 to be around the 50th national percentile, far higher than might be predicted from the children's very low—3rd to 12th percentile—English oral language scores (memory for sentences and picture vocabulary).

In fact, a recent “Practice Guide” published by the U.S. Department of Education (Gersten et al., 2007) came to just such a conclusion: Assuming good instruction, we should expect early reading progress among ELLs to be comparable to that of nonELLs. Based on studies of ELLs “who receive their instruction exclusively in the general education classroom alongside their native-English-speaking peers,” Gersten et al. wrote,

... it is reasonable to expect that English learners can learn to read [in English] at rates similar to those of native speakers if they are provided with high-quality reading instruction. (p. 23)

There are, however, two issues readers should be aware of. The first is that we must distinguish between "rate of acquisition" of skills (phonological awareness, letter-sound mapping, and decoding) and "rate of reading," which requires integration of these skills to produce efficient, or fluent, reading. (My thanks to Sharon Vaughn for helping clarify this distinction.) Even if ELLs acquire discrete skills at the same rate as nonELLs (the first meaning of "rate"), we do not know whether they can process the information as efficiently (the “rate of

reading”). In fact, although teaching children who already speak English to become more fluent readers produces positive effects on reading development (National Reading Panel, 2000), to date the same has not been found among ELLs learning to read in English (Shanahan & Beck, 2006). One very informative study that compared ELLs and nonELLs on reading rate was reported by Lesaux and Siegel (2003). They found that ELLs were actually more efficient word readers (had higher reading rates) than their nonELL peers, as indicated by how many words and nonwords per minute they read from lists.

As informative as the Lesaux and Siegel study is, the problem is that it was conducted in Canada, where the ELL population is far different from that of the U.S. This is a more general problem with the conclusion reached by Gersten et al. With one exception, the studies Gersten et al. cite to support their conclusion that we can expect ELLs to “learn to read at rates similar to those of native speakers” are with ELLs in Canada. (The exception is a study comparing native Dutch and immigrant Turkish children in the Netherlands who had been matched for socioeconomic status.) We must be cautious about how we interpret these studies for the U.S. context. Canada has highly restrictive immigration policies and a very different immigrant population overall. As a result, Canadian ELLs come from families with much higher income and education levels than the U.S. ELL population. The economic and educational chasms between the ELL and English-proficient populations in the U.S. do not exist in Canada. A recent Canadian newspaper article reported that higher achievement levels among Canadian immigrant children, as compared to immigrant children in other countries, are at least partly due to Canada’s attracting “largely ... educated newcomers” (Mahoney, 2007; see “Immigrating to Canada” website at <http://www.cic.gc.ca/english/immigrate/index.asp> for more about Canadian immigration requirements).

In the Lesaux and Siegel (2003) study cited above, for example, the ELL population comprised children from a wide range of language backgrounds—Mandarin, Cantonese, Korean, Spanish, Persian, Polish and Farsi. There was a range of socioeconomic backgrounds, with no correlation between socioeconomic and ELL status. The ELL population was quite stable as well. Study attrition over three years due to changing schools was less than 5% total. Contrast this with typical ELL samples in the U.S., where children move or change schools at rates of 5%, 10%, or more per year (e.g., Goldenberg, Gallimore, Reese, & Garnier, 2001; Lindsey, Manis, & Bailey, 2000; Manis et al., 2004). (Curiously, the nonELL sample in Lesaux & Siegel had a very high attrition rate of nearly 25%.) Finally, the ELL sample in Lesaux & Siegel was probably not racially or linguistically isolated. The study included the entire kindergarten cohort in one Canadian district's 30 schools. Approximately 15% of these children were ELLs. Assuming they were roughly evenly distributed across the 30 schools, this represents far less concentration of language-minority students than is typical in the U.S., where more than half of ELLs attend schools that have an ELL population greater than 30% and tend to be lower in socioeconomic status than schools with fewer ELLs (August & Shanahan, 2006). In short, the Canadian ELL population has very different socio-demographic profile than the ELL population in the U.S., so we should be very cautious when drawing conclusions from Canadian ELL studies and applying them to ELLs in the U.S.

Comparing the Canadian and U.S. ELL experience does suggest an important insight that future research should pursue: Language limitations per se are not what explain achievement differentials between ELLs and English speakers; rather, the explanation resides in aspects of the social context, such as family economic and educational characteristics and the characteristics of the schools children attend. For the moment, however, we do not know with confidence whether

and under what conditions typical ELLs in the U.S. can make progress in their reading development comparable to that of English speakers (Leafstedt, Richards, & Gerber, 2004).

Key Findings and Current Trends

The current state of our knowledge about how to improve the literacy attainment of ELLs is growing but remains fairly modest. Some findings have been consolidated, and promising lines of inquiry have opened up. What can we conclude that is most likely to be useful to educators and policy-makers concerned about the futures of these students? I would draw three principal conclusions:¹ (a) Teaching students reading skills in their first language promotes higher levels of reading achievement *in English*; (b) what we know about good reading instruction for English speakers generally holds true for ELLs learning to read in English--to a point; and (c) when instructed in English, ELLs require additional instructional supports, primarily due to their limited English proficiency.

These three conclusions will frame this section of the chapter, which draws mostly on interventions and experimental studies testing the effects of various strategies, approaches, or programs on the literacy achievement of ELLs.

Teaching Students to Read in the First Language Promotes Higher Levels of Reading in English

We begin with the issue that has driven research—and a great deal of rhetoric and polemics—for most of the second half of the 20th century: Should ELLs be educated in English only or in some mix of English and the student's home language? Nearly three dozen experiments have been reported since the 1960s. These studies have compared the effects of reading instruction that uses students' home language (L1) and second language (L2) to reading instruction that immerses students in the L2 exclusively (which in the U.S. would, of course, be English). Five meta-analyses have been conducted on this topic (Francis, Lesaux, & August,

2006; Greene, 1997; Rolstad, Mahoney, & Glass, 2005; Slavin & Cheung, 2005; Willig, 1985).

All reached the same conclusion: *Teaching students to read in the L1 promotes reading achievement in the L2 in comparison to teaching students to read in the L2 exclusively.* The meta-analyses also concluded, not surprisingly, that primary language instruction promotes higher levels of literacy in the primary language.

An important insight provided by Slavin and Cheung (2006) was that many of the studies that demonstrated positive effects of primary language reading instruction used an approach in which students learned to read in their primary language and in English simultaneously--that is, concurrently but at different times of the day. The typical bilingual model has traditionally been sequential, where students learn to read in their L1 then transition to English reading.

Five meta-analyses on the same issue, conducted by independent researchers with diverse perspectives, is highly unusual. That they all reached essentially the same conclusion on a highly controversial issue is extraordinary; in fact, it is unique. The finding that primary language instruction confers benefits for both L1 and L2 reading achievement might in fact be one of the strongest in the entire field of educational research. We should be deeply troubled by the fact that in some states, e.g., California and Arizona, primary language instruction is, with few exceptions, proscribed as a matter of public policy. We are in an era when "scientifically-based practice" has been the preferred slogan of policy-makers and many educators, yet such policies are anything but scientifically based.

What explains the effects of L1 reading on L2 reading? Different explanations for these consistent findings are available. One is "transfer," that is, if a student learns something (e.g., how to decode or use text comprehension strategies) in one language, he or she will either already know it or can more easily learn it in a second. Another possible, subtly different,

explanation is that learning to read in one language contributes to what Riches and Genesee (2006) called “a common underlying reservoir of literacy abilities,” which then enables more proficient reading in the L2. Our knowledge of what exactly transfers to L2 when students learn to read in L1 (or vice versa) is imprecise. The basic research here is largely correlational, so it is nearly impossible to determine causal relations or distinguish “transfer” explanations from “underlying reservoir” explanations. (Interested readers are urged to consult Riches and Genesee (2006) and Part II, “Cross-linguistic relationships in Second-language Learners,” in August and Shanahan, 2006). While these and other fine points remain to be resolved, the experimental evidence shows quite clearly that at least at a global level, teaching reading in L1 promotes literacy development in L2.

However, teachers cannot assume that students will automatically use what they know in their L1 when learning to read in a new language. Students sometimes do not realize that knowledge or skills available in their L1 can be applied in their second (e.g., cognates such as *ejemplo* and *example*, decoding skills, reading comprehension strategies). Jiménez (1997) put it this way: “Less successful bilingual readers view their two languages as separate and unrelated, and they often see their non-English language backgrounds as detrimental” (p. 227). Mathes, Pollard-Durodola, Cárdenas-Hagan, Linan-Thompson, and Vaughn (2007) reported similar findings in their summary of four interventions with young struggling ELLs: “... at least with native Spanish speakers who are also struggling readers, transfer does not occur readily, and when it does, it is not sustained over time” (p. 269).

Another possible explanation for lack of transfer, in addition to Jiménez's suggestion that some students see no connection between reading their L1 and L2, is low language proficiency in the L2. That is, in order for knowledge about reading in L1 to transfer and be applied to reading

in English, the reader must have sufficient language skills in English to support the transfer (Durgunoglu, 2002). In any case, an implication from these findings is that teachers should be aware of what students know and can do in their primary language so they can help them apply this knowledge and these skills to tasks in English. Knowledge and skills that students possess in L1 should be seen as resources students (and teachers) can draw on to promote knowledge and skills in L2. But students must also receive instruction and opportunities to learn English and academic skills in English. Without these opportunities, English skills will be insufficient to support transfer into English.

Magnitude of effects on L2 reading of teaching students to read in L1. The effects of L1 reading instruction on L2 reading achievement are modest, according to the five meta-analyses cited above. The average effect size of primary language reading instruction is around .35-.40, with estimates ranging from about .20 to about .60. What this means is that teaching students to read in their L1 can boost achievement in the L2 by a total of about 12-15 percentile points (in comparison to students instructed only in English) over two to three years, the typical length of time for children in the studies. These effects apply to elementary as well as secondary students (although there are far fewer secondary studies). To provide some perspective, the National Reading Panel (2000), which reviewed experimental research on English speakers only, found that the average effect size of phonics instruction is .44, a bit larger than the likely average effect size of primary language reading instruction (studies of phonics instruction are also over a shorter period of time). Primary language reading instruction is clearly no panacea, just as phonics instruction is no panacea. But relatively speaking, it makes a meaningful contribution to ELLs' reading achievement *in English*.

The meta-analyses also found, not surprisingly, that bilingual education helps ELLs become bilingual and biliterate, which many would consider a desirable outcome. Bilingualism and biliteracy confer numerous advantages--cultural, intellectual, cognitive (e.g., Bialystok, 2001), vocational, and economic (e.g., Saiz & Zoido, 2005). Readers should note, however, that the populations studied by Bialystok, Saiz and Zoido, and other scholars who documented the various advantages of bilingualism are different from the language minority populations that are the subject of this chapter. Their findings did not necessarily draw from individuals who are bilingual by virtue of being language minorities and who receive bilingual schooling as discussed here.

Unresolved issues in primary language instruction. Many questions nonetheless remain about primary language reading instruction. For example: Is primary language instruction more beneficial for some learners than for others (e.g., those with weaker or stronger primary language skills; or weaker or stronger English skills)? Is primary language instruction more effective in some settings (e.g., schools in communities where more English is spoken) and with certain ELL populations (e.g., Spanish-speakers, Chinese-speakers, Khmer-speakers)? What should be the relative emphasis between promoting knowledge and skills in the primary language and developing English language proficiency? What level of skill in the students' primary language does the teacher need to possess in order to be effective? We presently cannot answer these questions with confidence, since we lack a body of studies that permit going beyond the general finding about the positive effects of primary language instruction on reading achievement in English.

We also cannot say with confidence whether there is an optimal period of time for students to receive instruction in their primary language. A key difference between two recent

syntheses of the research on ELLs, Francis et al. (2006) and Lindholm-Leary (2006), was their conclusion regarding the relationship between length of time students receive primary language instruction and achievement. Lindholm-Leary concluded that more primary language instruction over more years leads to higher levels of ELL achievement in English. This conclusion was based largely on studies and evaluations of “two-way bilingual education,” in which children from two language groups (e.g., Spanish and English) participate in a program designed to develop bilingualism and biliteracy in *both* groups. There are different two-way models, but they all involve some combination of L1 and L2 instruction throughout elementary school; some go through middle and high school.

Francis et al. (2006), in contrast, did not include these longer-term studies because they did not have adequate experimental controls. The studies Lindholm-Leary included did not assure that the achievement of children in contrasting programs (e.g., two-way bilingual and English immersion) was equivalent at the start of the study or that children in different programs had the same demographic characteristics (e.g., parental education and level of English use in the home). Francis et al. only included true experiments or very well-controlled quasi-experiments. All of these were relatively short term; consequently Francis et al. reached no conclusions about the impact of length of time in primary language instruction. Three of the other four meta-analyses—Greene (1997), Slavin and Cheung (2005), and Willig (1985)—were also unable to come to any conclusion about the impact of length of time in primary language instruction on English reading achievement because they also only included studies with the tightest experimental designs.

This already complex issue is complicated further by the question of what our goal is for these students. For promoting achievement only in English, one year in primary language

instruction might (or might not) be any better than three years or six years. However, six years of primary language instruction might be much more effective than one year if the goal is primary language development in addition to English academic competence—that is, full bilingualism. Perhaps this should be our educational goal for ELLs and, for that matter, for all students (see Gándara & Rumberger, 2006).

What we know about good reading instruction in general probably also holds true for ELLs learning to read in English—to a point

Primary language instruction is not an option for most ELLs in the U.S. This might be because of state policy (as in California, Massachusetts, and Arizona), district policy, lack of personnel qualified to provide instruction in students' L1, parental choice, or too many non-English languages to form a large enough primary language class. Whatever the reason, English instruction is what most students in the U.S. receive (Zehler, Fleischman, Hopstock, Stephenson, Pendzick, & Sapru, 2003). The research on instructing ELLs in English is not as solid as the research showing the benefits of primary language reading instruction. But the research we do have points to two important complementary conclusions (or hypotheses). The first one (discussed in this section) is that what we know about effective reading curriculum and instruction for students in general tends to be true for ELLs as well. The second (discussed in the following section) is that when instructed in English, ELLs require instructional modifications, or supports, primarily due to their limited proficiency in English.

In a comprehensive review of the instructional research, Shanahan and Beck (2006) concluded that ELLs learning to read in English, just as English speakers learning to read in English, benefit from explicit teaching of components of literacy. The National Literacy Panel (NLP) began with the components identified by the National Reading Panel (2000) as important

for literacy development among English speakers—phonemic awareness, phonics, reading fluency, vocabulary, and reading comprehension—then used these as a framework to synthesize the research with ELLs. (The NLP also reviewed the research on writing instruction for ELLs, but I do not address this topic here.) Although there are undoubtedly other important components, such as background knowledge and motivation, the NLP concluded that what has been identified as important for English speakers’ reading development is probably also important for ELLs. This conclusion represents a confirmation of what Fitzgerald (1995a, b) had concluded a decade before: Reading and learning to read in a L1 and L2 “are *substantively* the same... more alike than different” (Fitzgerald (1995a, p. 180). Fitzgerald found “a relatively good fit” between data on L2 readers and “the pre-existing native-language reading theories, models, and views” of reading among English-proficient students (pp. 180-181).

However, the NLP also found that the instructional benefits to ELLs were not the same for all components and not consistently comparable to the instructional benefits for English speakers. This too is consistent with Fitzgerald, who also found “evidence for the specialness of ESL readers’ processes” (p. 181), suggesting that views of reading based on English-proficient students are inadequate by themselves to guide reading instruction and policy for ELLs. I will return to this topic in the subsection on “instructional supports” that follows.

I must add one caution before reviewing studies of instruction on reading components. There is a danger in analyzing reading and reading instruction in terms of discreet components such as decoding, vocabulary, fluency, comprehension, and so forth. Although considerable evidence suggests that instruction on these components makes a contribution to reading overall, educators must always remember that competent reading is an integrative and functional act, that is, it requires successfully combining (integrating) a number of skills for the purpose of

accomplishing concrete goals (functions). It is certainly useful to think about specific reading components when planning and carrying out instruction; but educators should always be mindful that the payoff comes, ultimately, when they all come together to constitute skilled, informed, and motivated reading. (My thanks to Fred Genesee for reminding me of this crucial fact.)

Phonemic awareness and phonics. The role phonological aspects of reading should play in reading instruction has of course been contentious for a very long time. But the evidence is clear that knowledge or awareness of the sounds of language, how they map to letters, and how letters and sounds combine to form words are essential for successful reading (Adams, 1990; National Reading Panel, 2000). These are by no means the only things teachers need to address as students learn to read; but they are extremely important. They are probably especially critical for children who, for cognitive or experiential reasons, do not grasp the “alphabetic principle” readily.

A number of studies have shown the benefits of instruction for the development of these key early literacy skills and understandings among ELLs. In fact, the effects of instruction on these foundational skills appear to be comparable for ELLs and English speakers (Shanahan & Beck, 2006). A study in England, for example, found that Jolly Phonics had a stronger effect (effect size .46) on ELLs’ phonological awareness, alphabet knowledge, and their application to reading and writing than did a Big Books approach; effects were still significant a year later (Stuart, 1999). A study of Puerto Rican first graders found that oral phonemic segmentation training (either in English only or in Spanish then English), followed by instruction for transfer to letters, improved children's segmentation, decoding, and spelling skills; effect size was 2.82 (Larson, 1996, cited in Shanahan & Beck, 2006). An original and follow-up study by Gunn and colleagues (Gunn, Biglan, & Smolkowski, 2000; Gunn, Smolkowski, Biglan, & Black, 2002)

showed that supplemental instruction with a phonological and decoding emphasis (including development of reading fluency; see below) produced significant positive effects (effect sizes .29-.38) on the letter- and word-level skills, oral reading fluency, vocabulary, and comprehension of ELLs either with poor achievement or aggressive behavior.

More recent studies continue to provide evidence of the benefits of directly teaching phonological and decoding skills to ELLs, particularly as part of comprehensive approaches to boost early literacy among children at risk for reading problems (e.g., Mathes et al., 2007; Vaughn, Mathes, et al., 2006). We also have evidence that phonological awareness training can help middle school poor ELL readers improve literacy skills (Swanson et al., 2005), although these findings should be interpreted cautiously due to possible non-equivalence between treatment and comparison students.

Oral reading fluency. Reading fluently is not merely reading fast or turning the pages quickly. Reading fluently involves reading accurately, efficiently, and with comprehension, in other words, reading with appropriate speed so that what is being read actually makes sense. If readers cannot read fluently, comprehension is severely compromised. (See Samuels, 2007, for a recent statement on fluency.) While dozens of fluency studies have been conducted with English speakers, the NLP uncovered only two with ELLs. The results of these studies are generally consistent with the results of fluency research in general but are not as conclusive with respect to the role of fluency instruction in developing L2 reading proficiency. Denton (2000, cited in August & Shanahan, 2006), for example, found that fluency instruction for Spanish-speaking ELLs in grades 2-5 led to more rapid gains in oral reading fluency (including reading accuracy) but did not translate into improvement in comprehension. In another study, De La Colina et al., (2001) found that fluency instruction in Spanish for Spanish-English bilinguals led to

improvements in oral reading fluency and in reading comprehension. The results were measured in Spanish reading, however; there was no test of impact on English reading.

Other studies have included fluency training as part of comprehensive early intervention programs for ELLs either at risk for reading difficulties or already demonstrating poor reading achievement (Gunn et al., 2005; Mathes et al., 2007). These studies have found effects for reading fluency and reading comprehension, as well as for a range of other outcomes. Because these are multi-component interventions, however, it is very difficult to identify the effects of any one instructional component on any specific reading outcome.

Vocabulary. Vocabulary is of course very important for literacy development, since it is impossible to understand a text fully without understanding virtually all of the words. There is a long history of vocabulary research among English speakers, and the results are well established (Biemiller, 2004): Good vocabulary instruction has a strong effect on students' learning words, and it has a more modest, although still significant and meaningful, effect on reading comprehension. Studies of vocabulary instruction for ELLs, although far fewer, show the same thing: Students are more likely to learn words when they are directly taught, and in the case of students old enough to read, vocabulary instruction helps improve reading comprehension modestly. For English speakers and ELLs alike, word learning is enhanced when the words are taught explicitly, embedded in meaningful contexts, and students are provided with ample opportunities for their repetition and use.

A fifth-grade study (Carlo et al., 2004) showed the relative effectiveness of vocabulary instruction that provided explicit instruction of word meanings, used words from texts likely to interest the students, and provided exposure to and use of the words in numerous contexts, e.g., reading and hearing stories, discussions, posting target words, and writing words and definitions

for homework. The experimental program showed an impact on both word learning and, more modestly, reading comprehension, although the article provided insufficient information to compute effects sizes (Shanahan & Beck, 2006). The elements of this program were comparable in many respects to vocabulary instruction that has been found to be effective for English speakers (e.g., Beck, McKeown, & Kucan, 2002). Spycher (2009) reported a small pilot kindergarten study involving two classrooms that also used an instructional model derived from Beck et al. (2002). Spycher found that explicit teaching of science vocabulary helped both ELLs and English speakers learn more words (receptive vocabulary) over the course of a 5-week intervention, in comparison to the control condition where there was only implicit teaching and exposure to the words. The instructional model included saying and repeating words chorally; providing "student-friendly definitions," followed by students' echoing the definition; further explanations and examples; and short-answer questions to promote understanding and use. It was unclear whether the intervention produced an effect on productive vocabulary; there was no measure of comprehension.

Positive effects of vocabulary instruction on broader reading measures were reported in a third-grade study with Mexican-American students. Pérez (1981) found that daily oral instruction in word meanings (emphasizing compound words, synonyms, antonyms, and multiple meanings) led to improvement in oral reading and comprehension. Working with Spanish-speaking first graders, Vaughn-Shavuo (1990; cited in Shanahan & Beck, 2006) found that if students worked on words presented in meaningful narratives, dictated their own sentences using the words, and examined pictures that illustrated the words, they learned more than twice as many words as a group of children who were expected to learn words each presented in the context of a single

sentence. Both the Pérez and the Vaughn-Shavuo studies produced very large effect sizes, greater than 1.0.

Based on these few studies, the key seems to be explicit teaching of vocabulary words using instruction that goes beyond the traditional practice of giving a definition and using it in a sentence. Students certainly need definitions and illustrative sentences, but they also need multiple exposure to words in different contexts and opportunities to use them in different ways, what might be characterized as “rich” or “thick” instruction. But even “thin” instruction might help. Collins (2005) showed that Portuguese-speaking kindergartners acquired more vocabulary from storybook reading when the teacher explained new vocabulary. Children with higher initial English scores learned more words, but explaining new words was helpful for all children, regardless of how much English they knew.

Reading comprehension. Comprehension is of course what reading is about. We read to comprehend; everything else is a means to this end. But even if everything else is in place—decoding skills, reading fluency, vocabulary—comprehension is not assured. There are at least two additional factors to consider: reading strategies and background knowledge (Pressley, 2000).

First, readers can improve their comprehension by using comprehension strategies. Research on comprehension among English speakers shows reading strategies such as asking questions while reading, making predictions, summarizing, and monitoring comprehension improve reading comprehension. The effect sizes of some of these are as high as 1.0 (National Reading Panel, 2000). In contrast, the National Literacy Panel found the effects of comprehension strategy instruction on ELLs were very weak, perhaps non-existent. The research base is also very limited. In contrast to over 200 studies identified by the National Reading Panel

for English speakers, the NLP located only three published studies on reading comprehension strategies that explicitly included ELLs.

For example, Swicegood (1990; cited in Shanahan & Beck, 2006) trained third-grade ELLs to ask themselves questions as they read during their Spanish reading period. There were no effects on either Spanish or English reading. In a study by Shames (1998; cited in Shanahan & Beck, 2006), students receiving reading strategy instruction such as KWL (What I Know; Want to Know; What I Learned) outperformed other groups on a comprehension measure, but the differences were not significant statistically.

Saunders and Goldenberg (2007) reported the effects of “instructional conversations”—not strategy instruction, but rather an interactive discussion between teacher and a small group of students designed to promote comprehension. Students who participated in the instructional conversations demonstrated more sophisticated understanding of a key theme and story concept, compared to students who had received a “basal-type” lesson. On literal comprehension, Saunders and Goldenberg reported an interesting interaction: Among students rated by their teacher as high and medium in English reading and speaking, those in the instructional conversation condition showed higher literal comprehension (over 90% correct responses vs. over 70% for the control condition). Among students rated by the teacher as low in English reading and speaking, there was no difference in literal comprehension between the two conditions. The instructional conversation students actually scored lower than control students on literal comprehension, although the differences were not statistically reliable. If replicated, these results suggest that for lower achieving ELLs, the instructional conversation format might not provide as much support for literal comprehension as a traditional basal-type lesson that involves more recitation and questioning students about story contents.

In general, we lack a robust evidence base about the impact of strategy instruction on ELLs' comprehension. It seems highly likely that we can help ELLs improve their comprehension by teaching comprehension skills directly, although if done in English, the impact will probably depend on English proficiency level. There is no research with ELLs to corroborate this. A meta-analysis reported in Taylor, Stevens, & Asher (2006), however, shows that reading strategy training for L2 learners of all sorts—individuals learning any language, including English as a foreign or second language--is not effective with students in their first year of second-language learning and students in elementary grades, whereas reading strategy training is effective with older students and students with greater second-language experience.

The second factor related to comprehension is background knowledge. As with reading strategies, there is a great deal of research demonstrating the role of background knowledge in reading comprehension (American Educator, 2006; Hirsch, 2006; Pressley, 2000). But in contrast to the research on reading strategies, we have a more robust research base on the role of background knowledge in ELLs' reading comprehension specifically. This research is discussed below in "Instructional Supports in English."

"Complex" and other approaches. In addition to studies that addressed specific literacy components, such as phonics and comprehension, there are studies that address several components simultaneously. The NLP called these "complex approaches to literacy." They include a wide range of programs and approaches and are such a diverse group it is nearly impossible to come to any general conclusion about "what works," other than the conclusion suggested by the NLP "that we can enhance the literacy development of English-language learners with better instruction" (p. 447). This might appear to be a fairly banal point, but it

reinforces one of the principal themes of this chapter: What we know about effective instruction in general is also applicable when thinking about what constitutes effective instruction for ELLs.

The following is a sampling of these types of studies:

1. Success for All (Dianda & Flaherty, 1995), the most thoroughly researched whole-school reform model in the country, has demonstrated positive effects on various outcomes for ELLs, including Spanish reading and English word attack skills, although the effects have not been consistent from one study to the next.

2. A whole-school reform approach reported by Goldenberg (2004) showed a positive effect (compared to students in the rest of the district) on student writing and reading comprehension, in English and Spanish, in a heavily Latino ELL elementary school. This study's findings have been replicated, with stronger effects on ELL students' achievement, in a quasi-experimental study involving nine treatment and six comparison schools (Saunders, Goldenberg, & Gallimore, in press).

3. In another comprehensive elementary-level study, Tharp (1982) reported positive effects of a year-long program to enhance the reading achievement of first-grade native Hawaiian Creole speakers. The program consisted of increased time on comprehension instruction and instruction accommodated to the children's interactional styles. The study used a strong random-assignment design and found modest effects on reading comprehension.

4. Encouraging students to read has produced different results depending on age and the language in which students are encouraged to read. On the one hand, encouraging reading in the L1 has not been found to affect English literacy skills with older students (Schon, Hopkins, & Davis, 1982); one study in fact found negative effects (Schon, Hopkins, & Vojir, 1985).

However, with younger children (kindergarten and first grade) reading in the L1 with parents has produced positive effects on early literacy outcomes *in English* (Hancock, 2002; Roberts, 2008).

5. Encouraging reading in English after school hours has been found to produce positive effect on English reading achievement. Three studies, each with different ELL groups in different countries--Tudor and Hafiz (1989) with Pakistani ELLs in the U.K., Elley (1991) with Fijian speakers learning English (the school language), and Tsang (1996) with Cantonese students learning English in Honk Kong--found comparable results.

6. Tutoring and remediation studies reviewed by the NLP either did not report or did not find effects of remediation on English literacy skills. However, as described previously, more recent studies conducted by Gunn, Vaughn, Mathes, and others have found fairly strong effects, on both English and Spanish reading, of intensive small-group interventions for ELLs at risk for reading problems.

7. A cooperative learning study found positive effects on Spanish writing and English reading for early primary children (Calderón et al., 1998).

8. Saunders (1999) found that an enriched literacy curriculum (e.g., instructional conversations, assigned independent reading, literature logs, comprehension instruction) was associated with better English literacy achievement for ELLs who were transitioning from Spanish to English literacy instruction. However, pre-existing differences among students in the different groups make the results somewhat tenuous.

9. A study of middle school ELLs (Neuman & Koskinen, 1992) found that captioned TV helped students learn academic content more effectively than either (a) reading textbooks or (b) TV without captions. The effects were not general for all units, however, and pre-test differences noted might render the results questionable.

When Instructed in English, ELLs Require Additional Instructional Supports, Primarily Due to Their Limited Proficiency in English

As already discussed, a very important finding that emerged from the National Literacy Panel review was that for some of the components of literacy (most important, perhaps, reading comprehension) instructional impact seems to be weaker for ELLs than for English speakers. This is consistent with Fitzgerald's (1995a, b) conclusion that there are some differences between learning to read in a L1 and L2, even though they are "more alike than different" (see also Bernhardt, 2000, on L2 reading research). The differences Fitzgerald identified included: ELLs did reading tasks more slowly, used fewer metacognitive strategies, monitored comprehension more slowly, and preferred different text structures. The areas of difference Fitzgerald identified might help explain the NLP's findings that instruction targeted at reading comprehension had little or no impact on ELLs' reading (effects of fluency instruction on English reading development are unclear)--speed of processing information and completing tasks and subtasks are slower for students who lack proficiency in the language. Similarly, comprehension processes are more difficult since they rely on more advanced levels of language knowledge and language processing, particularly with respect to vocabulary, syntax, and text structures. Whatever the explanations, however, what seems evident is that ELLs learning to read in English probably need additional supports to make instruction more productive for them.

This is now a very active area, with many researchers and educators offering a wide range of recommendations (e.g., Echevarría, Vogt, & Short, 2008; Gersten & Baker, 2000; Hill & Flynn, 2006). The research basis for most of these, however, is thin. This section reviews briefly some of these recommended supports, broken out into two categories: instructional

supports in the primary language and instructional supports in English. Additional information about these strategies can be found in Goldenberg (2008b).

Instructional supports in the primary language. Although most of the research on primary language use in the classroom has focused on primary language *instruction*--that is, teaching children academic skills and knowledge in their primary language--another way to use the primary language is for *support*. In this case, instruction is essentially in English; however, the teacher can use students' primary language strategically to help students gain additional benefit from otherwise all-English instruction. Examples of primary language support include:

1. Clarifications and explanations provided by the teacher, classroom aide, a peer, or a volunteer in the classroom.

2. "Preview-review" (Ovando, Collier, & Combs, 2003), where the teacher introduces new concepts in the primary language, teaches the lesson in English, then afterward reviews the new content, again in the primary language. A study by Ulanoff and Pucci (1999) provided modest support for the effectiveness of this approach.

3. Pointing out similarities and differences between L1 and English. Examples include teaching symbol-sound similarities and differences between English and other languages that use the Roman alphabet; and pointing out true cognates (e.g., geography and *geografia*) and false cognates (embarrassed and *embarasada*). We do not know the effect of cognate instruction per se (Carlo, August, Fajet, Alfano, Massey, 2006).

4. Teaching reading strategies in the primary language, then having students apply them in English. Fung, Wilkinson, and Moore (2003) found that introducing reciprocal teaching strategies (Palincsar & Brown, 1984) in students' primary language improved reading comprehension in the L2. In contrast, Klingner and Vaughn (1996) did not provide any primary

language instruction support and did not find an effect from training special education ELL students on reciprocal teaching. Populations in the Fung et al. and Klinger and Vaugh studies were considerably different, so we must be cautious of inferences based on comparisons between the two.

Instructional supports in English. A number of supports have been suggested that make use only of English. All have as their goal making lesson content more understandable to ELLs. These include: (a) Graphic organizers (tables, charts, semantic maps), (b) Redundant key information presented visually, (c) Identifying, highlighting, and clarifying difficult words and passages, (d) The teacher, other students, and ELLs themselves summarize and paraphrase, (e) Providing extra practice to build automaticity and fluency, (f) Highly engaging extended interactions with teacher and peers, (g) Adjusting instruction and speech (vocabulary, rate, sentence complexity, (h) Targeting both content and English language objectives in every lesson, (i) Use of familiar content and linking new learning to student background and experience, and(j) Predictable and consistent classroom management routines.

The most common term for this group of strategies is "sheltered instruction." By far the most popular model of this type is the Sheltered Instruction Observation Protocol, or SIOP (Echevarría et al., 2008). The SIOP model has made clear and explicit a large number of instructional adjustments, such as those listed above, and integrated them into a coherent design for planning, delivering, and assessing instruction. To date, only one published study has examined the effects of the SIOP on student learning. These were very modest. Echevarria, Short, and Powers (2006) found a slight improvement in the quality of writing produced by middle-school ELLs whose teachers had received the SIOP training, compared with students of similar backgrounds (students were mostly low-SES; more than 50% Spanish-speaking but from

numerous other language and ethnic backgrounds). There have been no reported effects of SIOP training on student reading outcomes.

None of the instructional supports listed above appear to be specific to ELLs (except for possibly including an English language objective in each lesson, although even here many learners might benefit from this). That is, the list above comprises "generic" scaffolds and supports, generally regarded as effective strategies for many students, particularly those who need more learning support than is typically provided in school. Although we have little direct evidence that these supports promote the literacy development of ELLs per se—as opposed to being part of good instruction in general—there are several suggestive studies.

Roberts and Neal (2004) found that pictures helped Spanish-speaking preschoolers with low levels of oral English learn story vocabulary (e.g., dentist, mouse, cap). This finding will surprise no one, but it gains in importance when considered alongside the Collins (2005) study, reported earlier. Collins found that preschool ELLs benefit from informative explanations, just as English speakers do. But Collins also found that children who began with lower English scores learned less than children with higher English scores. That is, knowing less English made it harder to learn additional English words. The Roberts and Neal findings with children who had low language levels suggest that *visual representation* of concepts, not just language-based *explanations*, provided these children with additional support in learning the vocabulary words.

In Carlo et al.'s (2004) fifth-grade vocabulary and reading comprehension study, researchers began with an approach based on principles of vocabulary instruction found to be effective for children who speak English (as discussed above). Carlo et al. included additional elements: activities such as charades that got learners actively involved in manipulating and analyzing word meanings; writing and spelling the words numerous times; and selection of texts

and topics on immigration that were expected to resonate with the Mexican and Dominican immigrant students. (The program also included primary language supports such as previewing lessons using Spanish texts, providing teachers with translation equivalents of the target words, and using English-Spanish cognates, such as supermarket and *supermercado*.) Overall, the experimental program produced relatively strong effects on students' learning target vocabulary and smaller, but still significant, effects on reading comprehension. Particularly noteworthy is that the effects of the program were equivalent for ELLs and English-speaking students. Thus, although we cannot determine which (if any) of the extra ELL supports explain the program's impact on these students, Carlo et al.'s demonstration—that with additional supports English instruction can have a similar impact on both ELLs and English speakers—is very important.

The Vaughn, Mathes et al. interventions discussed previously also suggest that additional instructional supports help ELLs. The foundation for the interventions derived from research with English speakers—phonological training, phonics, decoding, fluency in word recognition and reading connected text, vocabulary, and text comprehension. The researchers then added an oral language component (to promote English oral language development) and a set of what they called "ESL techniques"—clear and repetitive language, repetitive routines, gestures, and high levels of student-teacher interaction. They also included "language support activities" to make sure students understood key vocabulary used in instructions and in connected texts students read. Since the entire intervention was offered as a package, it is impossible to separate out the effects of any component or group of components. The only way to do this would be to compare the results of intervention models with and without the "ESL techniques." It seems entirely reasonable that the ELL supports helped make the intervention successful. However, studies by Gunn and colleagues (Gunn et al., 2000, 2002, 2005) apparently did not include any ELL-

specific supports (the interventions were *Reading Mastery* and *Corrective Reading*; no ELL supports were reported), and these studies also showed that supplemental instruction with an emphasis on phonological knowledge, decoding, and fluency improved the reading skills of at-risk ELLs in early elementary school.

Another type of support was suggested by the National Literacy Panel review (Goldenberg, Rueda, & August, 2006)—literacy materials that are meaningful for students and connect with their backgrounds and experiences. Several ethnographic and experimental studies showed the benefits of building on students' knowledge and backgrounds. For example, in two participant observation studies, Kenner (1999, 2000) examined the biliteracy development of an ELL Gujarati (from northwest India) child who attended a London multilingual/multicultural preschool. Parents and children in the preschool were invited to bring literacy materials from home in the L1. These materials were placed in a “home corner” and a “writing area.” Parents and children were invited to write in the classroom in different languages and genres—cards, letters to relatives, posters, and travel brochures. Kenner (1999) illustrated connections children made between their home experiences and classroom literacy activities in both English and the L1. In a successor study, Kenner (2000) showed the likely adverse impact on the focal child's bilingual/biliterate development when she entered an all-English primary school where these types of connections were no longer encouraged by the teacher.

Several studies have also shown that familiar content in reading materials promotes comprehension. This is an important area since, as previously discussed, ELLs are likely to need additional supports in reading comprehension. For example, Abu-Rabia (1996) found that reading comprehension was higher when 15- to 16-year-old Druze (Arab) students (for whom Hebrew was a L2) read a story with Arabic content versus Jewish content; the Druze students

also rated stories with Arab content higher in interest value. Both stories were presented in Hebrew and were equal in length and academic difficulty.

There are two important qualifications to these findings relating content familiarity and comprehension. First, ELLs' proficiency in the language of the text influences comprehension much more than their familiarity with passage content (Abu-Rabia, 1996; Lasisi, Falodun, & Onyehalu, 1988); in other words, language proficiency is a more potent factor than content familiarity in influencing reading comprehension. Second, "familiar" does not necessarily mean "culturally familiar." It simply means that students have learned about or have had direct experiences with the content or materials being used. García (1991), for example, found that Hispanic children did as well as or better than non-Hispanic children on a reading comprehension test when the Hispanic children had at least as much background knowledge about the passage content as did the non-Hispanic children. García found two such passages: one about *piñatas* and one about polar bears. The important point is that reading about unfamiliar content (regardless of why it is unfamiliar) in a language that is also unfamiliar will interfere with comprehension. Providing instructional supports by accommodating to ELLs' different experiential bases is likely to be helpful to these students.

This relationship between content familiarity and text comprehension is not unique to any one group, of course. It has long been known that we all are more comfortable with and comprehend familiar material more readily. But given the formidable language challenges ELLs face, teachers should be aware of how they can help students experience additional success by providing familiar reading matter and building on students' backgrounds and experiences.

Implications for Practice, Policy, Theory, and Research

There are many issues in the education of ELLs where there is insufficient research to guide policy and practice. We can, however, lay claim to some things that matter. Chief among these is that (a) teaching children to read in their primary language promotes reading achievement in English; (b) in many important respects what works generally for teaching children to read also works for ELLs; and (c) when ELLs are instructed in English they will probably need additional instructional supports, primarily because of their language limitations.

Framework for Policy and Practice

Our current state of knowledge points to the following instructional framework for promoting high levels of literacy among ELLs:

1. Education policy should be aimed at making primary language instruction feasible for all ELLs. This is admittedly a tall order, since significantly expanding the pool of teachers who can provide instruction in childrens' L1s is not trivial. Moreover, there are some situations, e.g., schools where many languages are spoken among the students, where primary language instruction is probably not feasible. But this is nonetheless a worthwhile goal, given that primary language reading instruction develops L1 skills, thereby promoting bilingualism and biliteracy, and promotes reading in English. Primary language instruction can be carried out as children are also learning to read (and learning other academic content) in English, so it need not delay instruction in English academic language skills.

2. Although it is not clear whether more years of primary language instruction promotes greater achievement in English, longer-term instruction in the primary language will probably help maintain and develop the primary language, without sacrificing academic development in English.

3. Students should be taught to transfer what they know in their L1 to learning to read in English; teachers should not assume that transfer is automatic.

4. ELLs can learn literacy skills in English even before reaching some threshold of English oral language proficiency. Instruction must be well structured, explicit, and systematic.

5. In general, ELLs probably benefit from instruction in the same components of English literacy as do English speakers. However, because ELLs who are learning to read in English must simultaneously learn literacy skills in English and English oral language skills, instructional supports will almost certainly be necessary. There are many possible supports that teachers can provide, although we lack a robust research base that identifies which, or which types are most productive.

6. These supports will probably be necessary for several years until students are sufficiently proficient in English to permit successful participation in mainstream instruction; more complex learning might require more accommodations or for a longer period.

7. ELLs who exhibit signs of early reading difficulties (e.g., poor phonological awareness, lack of automaticity in letter-sound associations) should receive intensive interventions. The interventions should ideally be in a small-group setting and focus on phonological awareness, phonics, and fluent letter- and word-recognition. An oral English development component would probably also be helpful.

8. It is unclear to what extent limited English proficiency limits or slows down progress in learning to read. It is probably less of an issue in the beginning stages of reading, when the language demands are relatively modest ("learning to read") and much more of an issue as reading begins to require more advanced language skills and is increasingly used to learn new

content ("reading to learn"). In any case, educators should strive to help ELLs achieve at levels that are as comparable as possible to the achievement of English speakers.

Although beyond the scope of this chapter, readers should realize that ELLs need intensive and comprehensive oral English language development (ELD), particularly in "academic English." This refers to vocabulary, syntax, genres, and discourse that are essential for academic success, that is, more formal, abstract, and demanding forms of the language (Scarcella, 2003). A growing body of studies has been finding effective ways to teach language skills such as vocabulary (e.g., Carlo et al., 2004; Spycher, 2009) and discrete language functions (Norris & Ortega, 2006). However, we have very little data on what type of English language development instruction accelerates ELLs' progress, or even whether progress can be accelerated (Saunders & O'Brien, 2006; Saunders & Goldenberg, in press).

In addition, ELLs also need academic content instruction, just as all students do. Although ELD is crucial, it should not completely supplant instruction designed to promote content knowledge.² Content knowledge is essential for reading comprehension (and general academic success) beyond the beginning stages of reading development. Poor vocabulary and inadequate background knowledge create significant obstacles for all students (see, e.g., American Educator, 2006; Hirsch, 2006).

Theoretical and Research Considerations

A key set of issues researchers must address has to do with the similarities and differences among students learning to read in their (a) L1 when it is the dominant language of the society (i.e., English speakers learning to read in English), (b) L1 when it is a minority language of the society (i.e., ELLs learning to read in their L1), and (c) L2 when it is the dominant language of the society (i.e., ELLs learning to read in English).

By far the majority of the research we have addresses the first scenario--speakers of the majority language learning to read in that language. Are models of reading derived from this research adequate to understand the second and third scenarios, which is the situation for ELLs? Perhaps not entirely, but they are a very good starting point. We must then take into consideration: (a) knowledge and skills in students' L1 that can contribute to reading in the L1 and L2s, and (b) limitations in L2 knowledge and skills that can interfere with reading in the L2.

A fully elaborated model of reading development among ELLs would also take into account: (a) relationships among language and literacy development in the L1 and L2, (b) how (and whether) L1 and L2 factors play different roles at different points in literacy development and for different components of literacy, and (c) school, family, and community influences on language and literacy at different points in their development.

From a practical standpoint, the most important questions are what teachers can do to help ELLs take advantage of knowledge and skills in the L1 while helping them overcome challenges introduced by limitations in English. In other words, we need research on what can be done instructionally to (a) facilitate transfer from the L1 to English and (b) provide instructional supports for ELLs learning to read in English. At the moment, we have a number of worthwhile and potentially productive ideas, but relatively little research to support explicit guidance on these two crucial instructional issues. Some of the best research that has appeared over the past 5 years has developed and validated intensive early reading interventions for young ELLs at risk for reading difficulty. We must also turn our attention to what the regular classroom teacher can do to promote higher levels of literacy attainment among these children throughout the developmental span. As with reading research in general, by far the greatest attention has been

paid to the elementary grades, with attention (and research) dropping off sharply at the secondary level.

Additional research is obviously needed. But we also need to put into practice the results of research we have, such as findings about the contribution of primary language reading instruction to L2 reading achievement and the likely need for instructional supports when ELLs are learning to read in English. Policies that block use of the primary language and limit instructional accommodations for ELLs--such as those in California, Arizona, and Massachusetts--are simply not based on the best evidence available. These policies can create additional obstacles for students and teachers, which is unconscionable under any circumstance, but especially egregious in light of the intense accountability pressures these students and teachers face. There are useful starting points for renewed efforts to improve the achievement of ELLs. We must base policy and practice on the best evidence we have while pushing forward on what we have yet to understand.

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Footnotes

¹ See Goldenberg (2008a, b) for additional discussion, including more on practical applications.

² ELLs in Arizona are to spend 4 hours per day learning exclusively English (Kossan, 2007). This virtually guarantees they will not receive instruction to promote academic content knowledge, which is no less necessary than English proficiency for school success.