

**Second-Language Issues in
Early Literacy and Instruction**

by

Elizabeth S. Pang and Michael L. Kamil

Stanford University

2004

Publication Series No. 1

[Editor's note: A version of this report is scheduled to be published as a chapter in the forthcoming volume *Language Policy and Early Literacy Education*, edited by Olivia N. Saracho and Bernard Spodek, being published by Information Age of Greenwich, CT.]

The work reported here is supported in part by the Institute for Education Sciences of the U.S. Department of Education through a contract to the Laboratory for Student Success (LSS) established at the Temple University Center for Research in Human Development and Education. The opinions expressed do not necessarily reflect the position of the supporting agencies, and no official endorsement should be inferred.

Second Language Issues in Early Literacy and Instruction

Elizabeth S. Pang and Michael L. Kamil

Demographic trends indicate that in the 21st century, second-language issues in early literacy development will remain a pressing concern. According to the 1990 U.S. census, over 6.3 million children between the ages of 5 and 17 spoke a language other than English at home (Crawford, 2001). This number has grown to over 9.7 million as estimated from data reported in the 2000 U.S. Census (Crawford, 2001; U.S. Census Bureau, 2000). In terms of school enrollment data reported by the National Clearinghouse for Bilingual Education (NCBE), in the decade 1990–2000, the number of limited-English-proficient (LEP) students is projected to have grown 104.3% compared to the projected growth of 13.6% in overall K–12 student enrollment (NCBE, 1999). The importance of learning English and of being literate in English is not the issue. What is at stake is how we educate students who do not speak English natively beyond the submersion approach that has characterized much of the educational experience of language minorities in this country. The combination of changing demographics and limited funding for bilingual education and ESL (English as a Second Language) programs means that mainstream teachers need to be informed about second-language (L2) issues in reading development. This publication seeks to assess the state of current research on L2 reading instruction and teacher preparation, and to determine the implications for instruction, teacher education, and future research.

Differences Between L2 and ESL

Learning to read in a second language can mean different things in different situations and settings. For instance, the situation of a bilingual child learning to read English as a second language is qualitatively different from that of a college student learning to read a second language in a foreign language class, or that of an adult ESL learner learning to read English for

academic purposes. The instructional strategies to be used in these settings are, not surprisingly, different as well. When we speak of L2 reading, conceptually, we are referring to literacy in *any* second language, not just English. In this publication, we will be focusing on the reading of children who speak two languages, or who are in the process of acquiring a second language. In the literature, we encounter different terms for describing children who are developing literacy in more than one language, for example: “bilingual students,” “English language learners (ELL),” “language minority students,” “English-as-a-second-language students,” “second-language learners,” “limited-English-proficient students,” and “limited-English-speaking (LES) students.”

The diverse nature of the database on L2 literacy (i.e., reading and writing), necessitates different ways of synthesizing the research findings. Fitzgerald (1995a, 1995b) reviewed studies on the cognitive processes of ESL reading and ESL reading instruction. In both reviews, Fitzgerald chose to focus only on studies on ESL conducted in the United States. She also combined the research findings on children and adults learning English as a second language. Bernhardt (1991, 2000) and Garcia (2000) provided more comprehensive reviews of the literature by including studies conducted outside the United States. This current publication reviews the findings on young children (K–3) learning to read in two languages and, like Bernhardt (1991, 2000) and Garcia (2000), includes studies in which L2 is not restricted to English. When research on young children is not available, we will examine the research findings based on studies conducted with older children (Grades 4–8). The research literature on older readers is relevant in the study of L2 reading because beginning reading in L2 can occur at different ages, whereas beginning reading in a first language (L1) usually means the early elementary grades.

Taking a cross-linguistic approach as opposed to an ESL-only approach to the study of L2 issues in early reading development enables us to derive general principles of L2 reading acquisition. For instance, studies conducted outside the United States on children learning to read in a second language other than English often can and do provide additional evidence to confirm or refute hypotheses about L2 reading. The bulk of L2 reading research on bilingual children in

the United States is based on Spanish–English bilinguals; hence, there is much that we can learn from studies conducted with children who speak a diverse range of native languages. Although two thirds of U.S. school-aged children who speak a language other than English are Spanish speakers (Garcia, 2000), in many classrooms linguistic diversity beyond Spanish is a fact of life.

Basic Issues in L2 Reading

Much of the research on reading pertains to the reading of monolingual speakers of English, that is, L1 reading. Nonetheless, this body of research provides a starting point for thinking about what is important to understanding L2 reading. There is a high degree of convergence on the fundamental components in beginning reading in L1, such as alphabets (phonemic awareness and phonics), fluency, vocabulary, and comprehension (National Reading Panel [NRP], 2000; Rand Reading Study Group, 2002; Snow, Burns, & Griffin, 1998). These topics are also relevant to the study of L2 reading but with the added complexities of a second-language learner's knowledge of two languages. First, there is the complexity of teaching reading when the learner is not natively proficient in the language. Since the language of written texts maps onto oral language, L2 learners need to develop some proficiency in the target language (Alderson, 1984). They also need to become aware of the implicit cultural knowledge and norms associated with literate language use shared by native speakers of a language. Second, the L2 learner has access to knowledge and skills unavailable to the monolingual speaker, including enhanced metalinguistic awareness, code-switching, translation, and, if L1 and L2 are linguistically related languages, knowledge of cognates. Third, for learners who are already literate, some skills can transfer to reading in the second language. Finally, sociocultural and sociopolitical factors often play a mediating role in the education of L2 learners and their reading development.

In what follows, we will first examine the cognitive aspects of learning to read in L2. The topics in this part of the discussion parallel those found to be significant in L1 reading. Then we

proceed to discuss the sociocultural factors that affect L2 reading and their instructional implications.

Metalinguistic Awareness

Metalinguistic awareness refers to the ability to reflect on the structure and properties of language. Learning a second language usually involves a conscious and deliberate effort, which promotes a level of linguistic awareness in a bilingual that is qualitatively different from that of a monolingual (Garcia, Jimenez, & Pearson, 1998; Vygotsky, 1962). One of the most robust findings on bilingual children is their enhanced metalinguistic awareness. This awareness can be demonstrated in various ways, such as sensitivity to word shapes and word length, onset-rime awareness, and knowledge of sentence grammaticality. In a number of studies, bilingual children consistently outperformed monolingual children on tasks measuring metalinguistic awareness (Bialystok, 1997, 2001). Bilingual children seem to have a heightened awareness of the symbolic nature of language as encoded in text, and they seem to be able to transfer this knowledge from one language to another (Bialystok, 1997). Considerable research shows that bilingual children younger than 6 outperform monolingual children on isolated metalinguistic tasks (Garcia, 2000). Only one study, by Miramontes (1990), documented a metalinguistic advantage in older U.S. bilingual readers. Why the metalinguistic advantage for bilinguals seems to disappear after age 6 is unclear (Garcia, 2000). Garcia et al. (1998) suggest that this could be due to the tendency to school bilingual children in predominantly one language, which inhibits continual bilingual development.

Bialystok's (2001) analysis of the research on monolingual and bilingual differences in metalinguistic ability suggests that bilingual children excel in the control of attention when presented with misleading information. She also found that tasks that are high in their demands for analysis of representations are not necessarily solved better by either monolinguals or bilinguals (Bialystok, 2001). Young children will probably benefit from instruction that builds on

their superior performance in tasks requiring attentional control, such as symbol substitution, judging grammaticality of sentences, and phoneme segmentation (Bialystok, 2001). Instruction for young L2 learners should be different than that for older students, although both may be at beginning stages of L2 reading acquisition, because the metalinguistic advantage is less pronounced beyond age 6.

Phonological and Phonemic Awareness

Phonological awareness is a general term that refers to sensitivity to the different sound components within speech, while phonemic awareness refers specifically to an awareness and ability to manipulate individual phonemes in the speech stream. For alphabetic languages such as English and Spanish, the ability to manipulate individual sound units occurs at the lexical and sub-lexical level. Children who have phonological skills are able to segment words into syllables, onset-rime units, and phonemes. In English, the mapping of speech to written language occurs at the level of phonemes. Phonemic awareness refers to the ability to segment speech into individual phonemes and to blend phonemes to form syllables or words. Hence, phonemic awareness is a key component of many tests of general phonological awareness skills.

Research on monolingual children has consistently shown that phonemic awareness is one of the best predictors of learning to read and spell (NRP, 2000). In particular, many studies have shown strong correlations between phonemic awareness skills and word recognition. Efficient word recognition in turn enables skilled readers to read more and, by reading more, increase their vocabulary and knowledge. Another compelling finding is that phonemic awareness is a stronger predictor of reading achievement than traditional measures of intelligence or reading readiness (Juel, Griffith, & Gough, 1986). Phonemic awareness instruction for monolingual children leads to gains in reading achievement, but this appears to be effective only in the early grades (NRP, 2000).

The importance of phonological and phonemic awareness in L2 reading is less well established. Nonetheless, a number of studies in recent years have provided some suggestive evidence. Durgunoglu, Nagy, and Hancin-Bhatt (1993) investigated the factors influencing the word identification performance of Spanish-speaking beginning readers. They found that phonological awareness in Spanish was significantly correlated not only with the number of common English words read but was also highly correlated with performance on two transfer tests, English-like pseudoword reading and English decoding. Interestingly, neither Spanish nor English oral proficiency correlated with performance on the transfer tasks. The authors concluded that there was evidence of cross-linguistic transfer of phonological awareness, and that this helped in second-language word recognition. Cisero and Royer (1995) also found evidence of cross-linguistic transfer of phonological awareness skills among kindergarten and first-grade English- and Spanish-speaking students. Furthermore, their data indicated a developmental progression from simpler to more complex skills—that is, from syllable awareness to onset-rime awareness to phonemic awareness. Studies on other bilingual populations with different native and second languages—for example, Turkish and Dutch (Verhoeven, 1994), English and French (Comeau, Cormier, Grandmaison, & Lacroix, 1999)—also showed a significant relationship between phonological awareness in one language and word recognition or word reading skills in another. This even held true for students learning English whose first language had a nonalphabetic orthography such as Cantonese (Gottardo, Yan, Siegel, & Wade-Woolley, 2001).

The research on phonological awareness suggests that, for L2 students who are already literate, reading instruction should build on their existing phonological knowledge, and does not have to be delayed until they are highly proficient in L2. L2 reading instruction should seek to take advantage of students' knowledge of L1 literacy, when it exists, because phonological knowledge appears to transfer across languages. The degree of transfer is likely to be variable, depending on factors such as individual differences, as well as the amount of overlap in the linguistic and orthographic systems of the bilingual child's two languages.

Vocabulary

Vocabulary knowledge is crucial to reading comprehension in L1 (NRP, 2000), and there is evidence that it is equally crucial to reading in L2. Garcia (1991) found that unfamiliar English vocabulary was the major linguistic factor that adversely affected the reading test performance of fifth- and sixth-grade Spanish-speaking students. In the case of bilinguals, how conceptual and word knowledge (vocabulary) is represented in memory is still not well understood. Young bilingual children growing up in dual-language homes are able to separate their two languages by age 3 (Arnberg & Arnberg, 1992). It is believed that words in each language are stored in separate lexical systems but that concepts are stored in a representation common to both languages (Kroll & Sholl, 1992). Some evidence suggests that vocabulary knowledge does not transfer well for kindergarten students learning dissimilar languages, such as Turkish and Dutch (Verhoeven, 1994). For older Spanish-speaking children (Grades 4–6), Nagy, Garcia, Durgunoglu, and Hancin-Bhatt (1993) found that a knowledge of cognates can facilitate comprehension in the second language. Their study investigated the relationship between Spanish vocabulary knowledge, the ability to recognize cognates, and English reading comprehension. They found a significant transfer between knowledge of Spanish vocabulary and performance on the English comprehension task. More important, there was an interaction between Spanish vocabulary knowledge and recognition of cognates. Performance on English multiple-choice items was highest in those cases in which the student both knew the word in Spanish and recognized the English cognate.

The few studies on vocabulary transfer suggest that we should include instruction in bilingual strategies for resolving unknown vocabulary, such as the use of translation, cognate searching, and word substitution (Nagy et al., 1993; Garcia et al., 1998). The study by Nagy et al. (1993) showed that students underutilized their knowledge of cognates. Instruction in cognate recognition shows much potential as a means for enhancing Spanish-speaking children's reading comprehension in English. Instruction could highlight not just the concept of cognates for

Spanish-speaking children but also other properties of cognates—notably, the degree of orthographic similarity, false cognates, and a knowledge of derivational morphology of both English and Spanish (Nagy et al., 1993). For children whose L1 is a non-cognate of English, there is not a substantial body of research. We suggest that, in addition to word substitution and translation strategies, explicit vocabulary instruction should also be emphasized. L1 research has shown that explicit vocabulary instruction leads to gains in reading comprehension (Nagy & Scott, 2000; NRP, 2000).

Comprehension

Current views of reading conceptualize comprehension as a complex cognitive process whereby a reader actively interacts with a text to construct meaning (e.g., Harris & Hodges, 1995). Meaning is therefore influenced by the text and the reader’s prior knowledge. Prior knowledge constitutes the “unseen” in reading (Bernhardt, 1991) because it is highly complex and notoriously difficult to assess. Prior knowledge can be highly idiosyncratic and based on an individual’s personal experiences, but it can also be shared knowledge, such as the implicit cultural and cultural-historic knowledge of particular groups (Bernhardt, 1991; Gee, 2000). Content or subject matter knowledge is another aspect of a reader’s prior knowledge, and all of these overlap and interact during the reading process.

In general, U.S. researchers have found that bilingual children tend to know less about topics included in second-language texts (Garcia, 1991; Jimenez, Garcia, & Pearson, 1996). The same was true for a study conducted in the Netherlands, which found that Turkish and Moroccan third-grade students performed significantly worse than Dutch children on texts emphasizing Dutch culture (Droop & Verhoeven, 1998). Reading instruction needs to take into account that L2 learners have rich sources of knowledge but different linguistic or lexical representations of this knowledge. Instruction should seek to build on L2 children’s knowledge and experiences—for

instance, by making connections between school and community-based knowledge sources (Moll, 1994).

Comprehension Strategies

In addition to vocabulary, L1 reading research has highlighted the importance of reading strategies and strategy instruction (NRP, 2000). In reading strategies as in vocabulary, we know more about older bilingual children and adults than about younger children. The likely reason for this trend is the tendency to not focus on teaching comprehension in the early grades, a tendency that also applies to L1 reading instruction. At the middle-school level, Jimenez, Garcia, and Pearson (1996) found that successful bilingual students used a range of reading strategies, of which a few were identified as unique to bilinguals. They studied 11 bilingual and 3 monolingual students, and concluded that the successful bilingual readers (a) actively transferred information across languages; (b) translated from one language to another, but more often from Spanish to English; and (c) openly accessed cognate vocabulary when reading, especially in their less dominant language. The less successful bilingual readers used fewer and less sophisticated strategies. Although both successful and less successful readers encountered more words that were difficult compared to the monolingual readers, the successful readers had more effective ways of resolving these problems.

There is evidence of cross-linguistic transfer of knowledge and strategies in L2 reading comprehension. Jimenez, Garcia, et al. (1996) reported that the successful bilingual readers had a unitary view of reading in their two languages. However, knowing how to transfer knowledge and strategies across languages is not an automatic outcome of being bilingual (Chamot & O'Malley, 1996; Garcia et al., 1998). The implication for instruction is the increased use of modeling and instructional scaffolding. Garcia (1998) reported that instructional scaffolding heightened 13 Mexican-American fourth graders' knowledge and use of transfer strategies in their English and Spanish reading. There have also been encouraging results in studies with small groups of low-

literacy Latina/o middle-school students (n=5), with an explicit focus on strategies, modeling, teacher–student interaction, and teacher scaffolding through the use of a modified think-aloud approach and culturally relevant text (Jimenez & Gamez, 1996; Jimenez, 1997).

Furthermore, instruction in metacognitive reading strategies helps L2 learners to comprehend better. Muniz-Swicegood (1994) reported that third-grade bilingual students, who were randomly assigned (receiving instruction in metacognitive reading strategies), improved in reading performance in both Spanish and English. The children were taught to use self-generated questioning strategies during the Spanish reading period. Although the instruction was in Spanish, this had a positive effect on both Spanish and English reading test scores.

Research in L1 comprehension instruction favors the teaching of multiple reading strategies to develop readers who can use their knowledge strategically and flexibly to understand texts (NRP, 2000). Taken together, these findings from L1 and L2 research suggest that multiple strategies, including transfer and metacognitive strategies, should be taught, with an emphasis on modeling and teacher scaffolding, and in the context of materials that engage students' knowledge and interest.

Sociocultural Factors in L2 Reading Development

Sociocultural and sociopolitical factors have a direct impact on L2 learning and reading development. These include majority-language/minority-status issues, disparate classroom and home discourse patterns, as well as the problem of discontinuity between home and school, or community and school perspectives with respect to literacy. For instance, Hornberger (1992) did a comparative analysis of biliteracy in Puerto Rican and Cambodian communities in Philadelphia, and concluded that the students needed to be supported along three continua:

- (i) macro–micro continuum (political and economic factors which support the development and acceptance of biliteracy);

- (ii) monolingual–bilingual continuum (the use of both languages in school and societal contexts);
- (iii) oral–literate continuum (the use and support of oral and written language by the school and community).

The children’s use of their native language and communication skills were adversely affected in the absence of one or more of the above conditions.

Ethnographic studies such as that by Valdes (1996) also shed light on the different expectations of what it means to be literate in different communities. Valdes’s account of 10 Mexican families living in the U.S.–Mexico borderlands showed that the parents and teachers did not share the same expectations of what constituted important knowledge about alphabetic and phonological processing in beginning reading. While American teachers emphasize the recitation of the alphabet and knowledge of the letter names for the English alphabet in beginning reading instruction, Mexican parents tend to see the knowledge of key syllables as more important. Moreover, the Mexican mothers found it extremely hard to follow the progress of their children, because they had little knowledge of what the letter grades and categories (e.g., uses phonics skills) meant in the report cards that the children brought home.

Literacy is also defined as situated social practices (Gee, 2000). In this conception of literacy, ways of using language are intimately connected with particular sociocultural groups. Au and Kawakami (1994) reported that culturally responsive instruction led to improved learning opportunities for students of diverse backgrounds. For instance, acceptance of students’ home language and structuring of interactions consistent with the students’ home values led to positive results. Moreover, teachers who are outsiders to a culture can be prepared to teach in a culturally responsive way (Au & Kawakami, 1994).

The Role of Oral Proficiency and L1 Literacy in L2 Reading

The relationship between oral language and literacy is less straightforward for bilinguals than for monolinguals. It has been hypothesized that the relationship between children's L1 and their readiness to begin L2 reading instruction centers on a common underlying proficiency. Cummins (1979) suggested that basic interpersonal communication skills (BICS) alone were not sufficient for children to acquire cognitive academic language proficiency (CALP) in their L2. Instead, children needed to achieve a threshold level of cognitive language proficiency, usually in their L1, before they can benefit from L2 instruction (Cummins, 1979). Although this need is often cited as a reason to support bilingual education, Cummins' threshold and interdependence hypotheses are problematic as pointed out by a number of researchers (e.g., Bernhardt & Kamil 1995; Edelsky, Hudelson, Flores, Barkin, Altwerger, & Jilbert, 1983; Genesee, 1984; Troike, 1984). Furthermore, they are conceived so broadly that they cannot be tested empirically. Although there is some interdependence between a bilingual's L1 and L2, the nature of that interdependence has not been clearly established.

Recent research has shown that children can be taught to read in their L2 even as they are developing L2 oral language proficiency (Geva, 1995). Moreover, a measure of oral proficiency alone is often not enough to indicate children's readiness to learn to read. For instance, Durgunoglu et al. (1993) found in their study of beginning readers that Spanish oral proficiency had no relationship to Spanish word recognition, and English oral proficiency did not correlate with the number of common English words read. August and Hakuta's (1997) review of the literature also concludes that there is insufficient evidence to prove that ESL oral proficiency is a good predictor of reading ability. While positive correlations have been established for children at higher grade levels, the same cannot be said of children at lower grade levels nor across different first-language groups. One reason could be that traditional oral proficiency measures do not accurately measure a child's receptive linguistic knowledge.

A related question is the role of L1 literacy in L2 reading development. Undoubtedly, being literate in L1 is helpful in learning to read in L2 because reading-related knowledge and a number of reading-related skills can be transferred across languages, such as phonological awareness, concepts of print, orthographic knowledge, and background knowledge. However, what is not clear, particularly for young children, is the question of how much L1 literacy is needed in order for transfer to occur. Much of the evidence supporting L1 literacy development comes from correlational studies that relate variables such as age of arrival or length of residence to L2 reading achievement (e.g., Cummins, 1981). Typically, these studies do not control for factors such as socioeconomic status, maturity, and motivation. Evaluation studies on bilingual education also suggest that L1 literacy benefits L2 reading development. For instance, Ramirez, Yuen, and Ramey (1991) reported that the students in their longitudinal study who had the most opportunity to develop their Spanish between kindergarten and sixth grade increased their standardized English reading test scores at a greater rate than students who received much less Spanish instruction.

Although studies have shown that L1 and L2 literacy are highly correlated, they cannot determine that L1 literacy per se, or specific components of L1 literacy skills, leads to better L2 reading. Research on adult learners using regression techniques shows the contribution of L1 literacy to be between 14% and 21%, while the influence of L2 ability (grammatical knowledge) is estimated to be about 30% (Bernhardt & Kamil, 1995). There is little or no data on young bilinguals. The implication for instruction is that, for older students with developed L1 literacy skills, we can expect transfer of skills and knowledge of up to 20% (Bernhardt & Kamil, 1995). For younger children, there is the potential for transfer as well, especially in the areas of phonological knowledge and metalinguistic ability. However, this potential does not mean that instruction for younger children should only focus on isolated skills. Instruction that consists of both meaning-based instruction (whole language) and explicit skills teaching has been found to be successful with bilingual students (e.g., Perez, 1994). Au (2000) also cautions against the

overemphasis on low-level skills at the expense of higher order thinking and meaning making, particularly in the early grades, in which systematic instruction in word identification is necessary but not sufficient to develop fluent readers.

L2 English Reading Instruction: An Overview

We have made some suggestions for instruction in the preceding discussion. However, it is important to point out that the research base is very diverse and somewhat uneven, with typically a few studies addressing only some aspects of L2 reading. In the area of early L2 reading development, we have quite a lot of information pertaining to phonological awareness but relatively little on early vocabulary development and still less on comprehension. The field of L2 reading is interdisciplinary in nature and is informed by research in second-language acquisition, L1 reading research, cognitive studies on bilingual memory and processing, sociocultural studies on literacy, and evaluation studies on bilingual education. The complexity of reading in general, and of L2 reading in particular is great. What follows is our attempt to characterize the types of English reading instruction for L2 learners in U.S. classrooms. There are four prevailing models or approaches that represent a set of underlying principles and philosophy regarding the L1–L2 relationship in literacy development, and each may advocate a variety of strategies.

Model 1: Develop L2 oral proficiency before introducing L2 literacy

This model, also known as the L2 threshold model, is by far the most common approach to teaching L2 learners. The main emphasis in this model is the development of oral proficiency and listening skills in L2. A typical view found in many reading methods texts is that “students should learn to listen, understand, and speak English in a natural way before they learn to read and write it” (Lapp & Flood, 1986, p. 320). This approach is largely derived from the standard approach to teaching reading in one’s first language, whereby oral reading is emphasized so that what is decoded orally can be mapped on to a child’s oral language. The logical extension of this

to L2 learners is that children need to develop oral proficiency in L2 first before they can be taught to read and write in their L2. In many elementary classrooms, it has been observed that virtually no teaching of reading and writing in L2 occurs while oral and listening skills are emphasized (e.g., Durgunoglu, 1998). The focus on oral language in the early elementary grades is also evident in the basal reading materials that are commonly used in instruction (Garcia, Montes, Janisch, Bouchereau, & Consalvi, 1993). Furthermore, oral language proficiency is usually used as the main criterion for redesignating a student in transitional bilingual programs.

It might be counterintuitive to propose teaching reading to children who are not yet able to speak the language, but the situation is somewhat different for children who are already literate in their L1 or minimally have had some print exposure and literate experiences in L1. However, research has not been able to determine the degree to which children need to be literate in their L1 before they can benefit from L2 reading instruction while they are developing L2 oral proficiency. While oral proficiency does affect reading in *any* language, we do not know what level of oral proficiency is needed before children can benefit from L2 reading instruction. What we do know is that a single measure of oral proficiency by itself is not a sufficiently accurate indicator of readiness to read in the target language (L2). Researchers have found that other variables, such as phonological awareness and word recognition skills, are better predictors of young children's reading in either L1 or L2 (Durgunoglu et al., 1993; Geva, Wade-Woolley, & Shany, 1993; Verhoeven, 1994). One possible reason is that it is difficult to measure accurately young children's receptive linguistic knowledge.

Model 2: Support L1 literacy while developing L2 skills

The second model grows out of the literature on language transfer and is often referred to as the knowledge transfer model. It is believed that teaching children to read, write, and learn content in L1 will help them develop cognitively, as they are developing L2 skills. Late exit bilingual education programs normally adopt this approach. This model of instruction, like the

first, is still predicated on transitioning children to L2 eventually. The main difference is that children's content and conceptual knowledge is being developed through their dominant language (L1) while they are in the process of acquiring their L2. The rationale for this is that providing continuing instruction through students' native language will ensure that they do not fall behind their English-speaking peers in subject matter knowledge. Their English-speaking peers are in fact continuously developing more language skills and acquiring new knowledge. It is believed that once students develop English proficiency, concepts and skills learnt in L1 can be transferred. However, Chamot and O'Malley (1996) point out that such transfer may not take place automatically without instruction. Many programs place more emphasis on developing L2 oral proficiency than on L2 literacy skills. In fact, L2 oral proficiency is often used as the main or only criterion for exiting a student. In this respect, this model resembles the first model described above.

Model 3: Maintain L1 while developing L2 language and literacy

This model is also known as the interdependency model. In this model, most aptly exemplified by the two-way immersion bilingual program, the emphasis is on maintaining L1 language and literacy skills while developing L2 skills. The underlying premise is that there is an interdependent relationship between L1 and L2 language and literacy (Bernhardt & Kamil, 1995; Cummins, 1979; Verhoeven, 1994). Instruction is given in both languages throughout the program, with balanced bilingualism as the ultimate goal—that is, proficiency in both L1 and L2. Some researchers (e.g., Cazabon, Nicoladis, & Lambert, 1998) have called this type of education a case of additive bilingualism, as opposed to subtractive bilingualism, whereby children's L1 is gradually replaced by their L2, which is usually the dominant language of society. It is argued that additive bilingualism leads to better academic achievement because it gives due recognition to children's native language and culture, and in so doing, strengthens their self-concept and sense of achievement (see Lambert, 1974). The French immersion programs in Canada, where

English-speaking children are given instruction primarily in L2 (French), are normally characterized as additive bilingualism. The reason is that the children's L1, English, is the dominant and prestige language of the wider society. Hence, it is in no danger of being replaced by the L2. In one study of U.S. bilingual education (Thomas & Collier, 1997), the authors concluded that two-way bilingual programs were more likely to lead to long-term academic success than other types of bilingual programs. They analyzed the data for children from middle-income and low-income homes separately, and found similar trends for both groups.

Model 4: Develop L2 literacy explicitly

This approach, a modified version of the interdependency model, mainly provides explicit and systematic instruction in reading skills, and builds on children's knowledge, bilingual ability, and L1 literacy skills. Padron (1994) noted in a comparative study of reading instruction in elementary schools with predominantly Hispanic/LEP students and other inner-city schools that the major activities taking place in both settings were watching and listening. Passive instruction in whole-class settings was observed in both settings; but in the predominantly Hispanic/LEP schools, the students did more watching and listening than in the other inner-city schools with ethnically diverse students. She also noted that students in the observed reading classes did very little reading. An ethnographic (Valdes, 2001) study of middle-school bilingual students learning English also noted that little reading took place during reading instruction.

What does systematic and explicit instruction mean? It means teaching by focusing on those skills and knowledge that all children need in order to learn how to read, and to teach them in meaningful contexts (Delpit, 1995). In addition to focused and contextualized instruction, attention needs to be paid to the teaching and modeling of cross-linguistic strategies, such as cognate recognition, translation, and code-switching. We know that these are skills that are unique to bilinguals and that good bilingual readers use them (Jimenez, Garcia, et al., 1996). In essence, instruction seeks to utilize students' linguistic and literacy knowledge in L1 as resources

for L2 reading acquisition. This approach has parallels with approaches developed for bidialectal speakers of English, where educators use students' home language as a resource for the acquisition of Standard English (LeMoine, 1999).

Anderson and Roit (1996) developed a set of suggestions based on six instructional issues they had identified from observations of lessons with a high percentage of minority language students (Grades 1–8). These instructional suggestions aimed to build on students' primary language, cognitive strengths, and social skills—e.g., sharing reading, expanding contexts, questioning, sharing strategies, and using culturally familiar informational texts (Anderson & Roit, 1996).

Another approach, the Cognitive Academic Language Learning Approach (CALLA), is based on the integration of content area instruction with language development and explicit instruction in learning strategies (Chamot & O'Malley, 1987; 1996). Designed for upper elementary and secondary students at intermediate or advanced levels of ESL, the program aims to provide explicit instruction in learning strategies, including cognitive (e.g., note-taking, summarizing), metacognitive (e.g., monitoring comprehension, self assessment), and affective strategies (e.g., cooperation, self-talk). However, systematic program evaluation and information about the effects of CALLA on student achievement are currently not available (Chamot & O'Malley, 1996). Clearly, more research is needed to investigate the effectiveness of these instructional methods, particularly with young children.

Related Issues in Instruction

Instructional Materials

Researchers who have analyzed teaching materials conclude that teachers are not given the information they need to work effectively with bilingual students (e.g., Bernhardt, 1994). Garcia et al. (1993) reviewed journal articles published on L2 reading instruction as well as the basal reading teacher manuals and supplementary materials published for Grades 1, 4, and 6 of

the regular classroom. They noted that these materials tended to focus on developing oral language rather than literacy. They expressed concern that teachers were not given ready access to information they needed in the teacher manuals about reading instruction for L2 learners. Another problem was that the materials did not provide specific grade-level information.

Having access to literature and culturally rich material is important for reading development for L2 learners. However, a number of researchers have noted the shortage of multicultural children's literature in English, Spanish, and other languages (e.g., Alok, 1993; Nieto, 1993), and even of simple Spanish reading materials for preschool students (Goldenberg, 1994). Additionally, because learning about text genre is an important aspect of literacy, instruction should make use of information texts in addition to fiction (Kamil & Bernhardt, 2001). Information texts can enable children to use their world knowledge to aid comprehension. Although the general perception is that stories are easier for children to understand, research with young monolinguals has shown that children enjoy information texts as much as stories (Pappas, 1993). Although there is as yet no solid research base for the use of information texts in L2 reading instruction, we recommend the use of such texts as part of an overall strategy of providing diverse and content-rich materials.

Assessment Instruments

The issue of how difficult it is to measure accurately bilingual children's receptive language skills has been raised above. Oral proficiency measures of L2 alone do not accurately predict a young child's reading ability. Furthermore, standardized tests tend to underestimate L2 learners' ability. In a study of fifth- and sixth-grade Hispanic students, Garcia (1991) found that their test scores seriously underestimated their reading comprehension potential. Specifically, she noted that unfamiliar test topics and vocabulary adversely affected the children's test performance. Furthermore, the children's interview responses showed that they understood more about the test passage than their scores revealed. Fernandez, Pearson, Umbel, and Oller (1992)

found that the word order difficulty on the *Peabody Picture Vocabulary Test – Revised, Form L* (1981) and its Spanish version (1986) differed substantially for Cuban preschoolers in Miami compared to the norming samples in English and Spanish. They cautioned that the use of a single-language vocabulary test does not capture what children know in their other language.

Limbos and Geva (2001) examined the accuracy of teacher assessments in screening for reading disabilities among first-grade ESL and native-English speakers. They concluded that teacher rating scales and nominations had a low sensitivity in identifying reading disability in either group as determined by a standardized reading score. The main implication of these findings is to caution against relying solely on a standardized test score for assessment and placement purposes. Instead, alternative assessments should be considered, such as think-aloud protocols, clinical interviews, and retellings (Garcia et al., 1998). Where test scores are used, they should be interpreted with the knowledge that these instruments do not measure L2 students' other cognitive and linguistic abilities.

Issues in Teacher Education for L2 Reading

The Research Base

Recent developments in education have highlighted the importance of teacher education and its impact on learning outcomes (NRP, 2000). The NRP analysis of teacher education and L1 reading instruction shows that inservice professional development produced significant effects for both teachers and students. It was not possible to determine the effect of teacher education on student achievement in the preservice studies, but there were clear effects in terms of teacher outcome behaviors (NRP, 2000). Most of these studies included teachers in the elementary grades. Although the research base is somewhat limited, it is clear that teacher education in L1 reading instruction leads to teacher change and, in those few studies that measured student outcomes, student achievement as well. Teacher education for L2 reading instruction is much less well researched.

In an extensive search and review of the literature on teacher education and reading instruction published in peer-reviewed journals in the last 30 years, we found 39 experimental/quasi-experimental studies, and 143 descriptive studies, yielding a total of 182 studies. Of these, only one dealt explicitly with teacher education and the literacy learning of ESL students (Jackson & Paratore, 1999). Two more articles, based on the same 4-year study, reported on two schools with the district's highest number of Chapter 1-eligible students (55% and 50% of the total enrollment in each school), including limited-English-speaking children (Stallings & Krasavage, 1986; Stallings, Robbins, Presbrey, & Scott, 1986F). A few studies focused on students described as 'at risk' for reading failure or students referred for special-education services or students of diverse backgrounds, but the researchers did not report separately on L2 learners.

In a separate search of the ERIC, PsycINFO, LLBA, and MLA databases using the keywords "limited English," "language minority," "bilingual," "second language," "English language learner," or "ESL" in addition to "teacher education," "preservice," "inservice," and "reading," 22 additional journal articles were found. It appears that the main body of research on teacher education and reading instruction does not distinguish between L1 and L2 learners. Of the teacher-education studies dealing with L2 learners, an extremely wide range of topics, concerns, and educational contexts are represented, including adult learning of English in adult basic education; teaching of Native American, Alaskan, and Hawaiian children; as well as the teaching of bilingual children in countries as diverse as Bolivia and Brunei.

Reading Methods Texts

In an effort to ascertain, albeit indirectly, what preservice and inservice teachers have been taught about L2 reading instruction, Bernhardt (1994) undertook an extensive survey of reading methods textbooks and professional journals published between 1980 and 1993. She concluded that teachers were not provided sufficient information on L2 learners and that reading methods textbooks did not always accurately reflect current research. With the exception of

chapters written by L2 specialists, most methods textbooks (63%) treated L2 learners as analogous to dialect speakers, while some (31%) placed L2 learners in a catchall category that included the handicapped and gifted. Both methods textbooks and professional journals do highlight L2-related issues in reading instruction but to varying degrees. What is often not discussed is the role of first-language literacy, or the lack thereof for children from nonliterate cultures, and culturally mediated conceptions of literacy (Bernhardt, 1994). For instance, in some cultures, literacy is permitted for some groups only (generally male), while in others, verbal displays of knowledge are not deemed appropriate. What is also lacking in the methods textbooks are strategies that build on the interdependent relationship between a bilingual's two languages (Bernhardt, 1994).

Outcomes-Based Studies Of Professional Development

In the literature, there are generally two types of teacher-education studies: outcomes-based studies and descriptive studies of teacher development. Outcomes-based studies measure the effect of teacher education by examining teacher behaviors and student achievement data. Fifield and Farmer (1976) described how relatively untrained Navajo teacher aides were prepared to provide supplementary instruction to Navajo children experiencing difficulties in reading. The training program was specific in its use of materials, modeling, drills, monitoring, and reinforcement. In this quasi-experiment, the children who had the greatest difficulty in language and reading were assigned to supplementary instruction delivered by Navajo teacher aides. These children made gains in word-recognition skills compared to a control group, and qualitative data on the teacher aides and the children's attitudes showed positive results. The researchers concluded that relatively untrained teacher aides can be prepared to deliver supplementary instruction to help Navajo children experiencing difficulty in language and reading (Fifield & Farmer, 1976).

Studies of two projects reported that teachers improved in their instructional skills, while students made significant gains in reading. One project (designed to improve instruction and classroom management) included a control group, but the students were not randomly assigned. Results showed that the limited-English-speaking (LES) students benefited from the program, Madeline Hunter's Instructional Theory into Practice (Stallings & Krasavage, 1986; Stallings, Robbins, et al., 1986). The LES students gained more each year in reading and math than the other children in the study (Stallings, Robbins, et al., 1986). However, by the fourth year of the project, 7 out of the 10 teachers' implementation scores had dropped, and the students' reading and math scores also dropped significantly in the fourth year, compared to the control group. Still, the LES children gained more than the English-speaking children (Stallings & Krasavage, 1986).

The second project was a small-scale early intervention project emphasizing readable stories, rereading of familiar books, and phonological awareness. The results were modest, with 5 out of 11 mostly ESL students achieving a 90% accuracy score as measured by performance on the Reading Recovery Level 9 primer text (Jackson & Paratore, 1999). The teachers implemented most of the components of the intervention, but segmenting sounds using word frames and guided writing were not well implemented. Although the intervention failed to bring all of the second graders severely delayed in reading to or near grade level, it did create conditions in which they met success.

Description of Effective Professional Development

Various instructional strategies were reported to be effective for different populations in a wide range of teacher education contexts. Overall, a trend in teacher preparation favors a balanced approach, integrating reading and writing, as well as skills and meaning-based instruction. For instance, Perez (1993) examined the successful literacy practices of four bilingual whole-language teachers with the purpose of including these best practices in bilingual teacher education programs. A number of exemplary instructional behaviors emerged. These included

talking about literacy; learning about code and other skills; writing/reading and meaning-making; and the creation of successful social interactions among students and between students and text (Perez, 1993). In general, the teachers felt that the one factor contributing to the children's success was their own expectation that the children develop specific "skills" (Perez, 1993). Perez concluded that the integration of skills and meaning-based approaches was important for prospective teacher education. Other approaches that have been successful in preservice education include integrated reading and writing programs (e.g., Hao & Hartley-Forsyth, 1993), family literacy programs (e.g., Liu, 1996), and the language experience approach.

The Future of L2 Reading Research and Instruction

The issues in L2 reading and instruction are highly complex in terms of cognitive processing as well as sociocultural considerations. Some earlier reviews of the literature on ESL reading instruction concluded that learning to read in L2 is much like learning to read in L1, with many of the processes transferable from the first to the second language. While it is true that many of the cognitive processes are shared in L1 and L2 reading, a key finding that has emerged in the present review is that transfer does not take place automatically, at least not for many struggling L2 readers. A body of research is being accumulated on specific areas of transfer, such as metalinguistic and phonological awareness. These studies investigated a range of different native and second languages (e.g., Turkish–Dutch, Cantonese–English, English–French, and Spanish–English). Some research has been conducted on vocabulary transfer strategies, such as cognate searching. Obviously, there is a continuing need for research in vocabulary and vocabulary acquisition.

A critically neglected research issue is the role of instruction in facilitating the transfer of knowledge, skills, and strategies from L1 to L2. Currently, the research base in this area is uneven, involving only a handful of studies with small populations of students, which makes it difficult to draw strong conclusions about instruction. Another area where we do not have much

systematic research is the developmental aspect of L2 reading. There is substantially more research on older students and adults learning to read in a second language, usually in the foreign-language classroom context, but there are far fewer studies on school-age L2 students in bilingual education, ESL, or mainstream classrooms. Despite the fact that researchers always find a need for more research, this is clearly a case where there *is* a need to fund more research projects to answer the remaining important questions.

Fortunately, L2 research has become a federal research priority. Research initiatives sponsored by the National Institute for Child Health and Human Development are now investigating many aspects of early reading instruction for second-language students. The Institute for Education Sciences is funding a project (the National Literacy Panel) to synthesize the extant literacy research base with language minority children in a systematic manner. These efforts are ongoing and hold great promise.

Research is also needed to investigate the uses of computer technologies for L2 reading instruction. Much progress has been made in the use of computers as an aid to improve teaching of L1 reading. Work in L2 reading computer-assisted teaching should follow. Bernhardt (in press) has suggested the need for assessing vocabulary use in L2 reading assisted by computerized dictionaries. Such an assessment is clearly an area that could have immediate practical applications. Given the central importance of vocabulary in learning to read, both in L1 and L2, we endorse this call.

Finally, the importance of teacher preparation in L2 reading instruction needs to be emphasized because much of the research on teacher education currently does not address this topic. Moreover, ongoing professional development of teachers dealing with L2 learners tends to be done on an informal basis. Thus, there is great potential for expanding teacher education programs that deal systematically with the literacy needs of L2 learners. There is also a compelling need to address the problems revealed in Bernhardt's (1994) work described above. There is a critical need to improve the content of teacher manuals and textbooks, so that current

research on L2 reading and methods can be widely disseminated. Teacher manuals and methods textbooks need to draw on a growing database of research that addresses both the cognitive and social aspects of L2 reading development. Teachers are and will remain the key to successful change in schools.

The future needs in L2 reading are substantial. Researchers need to look to practitioners for promising interventions, and practitioners need to work with researchers to verify the effectiveness of those programs.

REFERENCES

- Alderson, J. C. (1984). Reading in a foreign language: A reading problem or a language problem? In J. C. Alderson & A. H. Urquhart (Eds.), *Reading in a foreign language*. London: Longman.
- Aloki, E. M. (1993). Turning the page: Asian Pacific American children's literature. In V. J. Harris (Ed.), *Teaching multicultural literature in grades K-8* (pp. 109-135). Norwood, MA: Christopher-Gordon.
- Anderson, V., & Roit, M. (1996). Linking reading comprehension instruction to language development for language-minority students. *Elementary School Journal*, 96(3), 295-309.
- Arnberg, L. N., & Arnberg, P. W. (1992). Language awareness and language separation in the young bilingual child. In R. J. Harris (Ed.), *Cognitive processing in bilinguals* (pp. 475-500). Amsterdam, The Netherlands: Elsevier.
- Au, K. H. (2000). A multicultural perspective on policies for improving literacy achievement: Equity and excellence. In M. L. Kamil, P. B. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research*, (Vol. 3, pp. 835-851). Mahwah, NJ: Lawrence Erlbaum Associates.
- Au, K. H., & Kawakami, A. J. (1994). Cultural congruence in instruction. In E. R. Hollins, J. E. King, & W. Hayman (Eds.), *Teaching diverse populations: Formulating a knowledge base* (pp. 5-23). Albany, NY: State University of New York Press.
- August, D., & Hakuta, K. (Eds.). (1997). *Improving schooling for language minority children: A research agenda*. Washington, DC: National Academy Press.
- Bernhardt, E. B. (1991). *Reading development in a second language: Theoretical, empirical and classroom perspectives*. New Jersey: Ablex Publishing Corporation.
- Bernhardt, E. B. (1994). A content analysis of reading methods texts: What are we told about the nonnative speaker of English? *Journal of Reading Behavior*, 26(2), 159-189.
- Bernhardt, E. B. (2000). Second-language reading as a case study of reading scholarship in the 20th century. In M. L. Kamil, P. B. Mosenthal, & P. D. Pearson (Eds.) *Handbook of reading research*, (Vol. 3, pp. 813-834). Mahwah, NJ: Lawrence Erlbaum Associates.
- Bernhardt, E. B. (in press). New Directions in Research: Literacy in a multilingual world. *Reading Research Quarterly*.
- Bernhardt, E. B., & Kamil, M. L. (1995). Interpreting relationships between L1 and L2 reading: Consolidating the linguistic threshold and linguistic interdependence hypotheses. *Applied Linguistics*, 16(1), 15-34.
- Bialystok, E. (1997). Effects of bilingualism and biliteracy on children's emerging concepts of print. *Developmental Psychology*, 33(3), 429-440.
- Bialystok, E. (2001). Metalinguistic aspects of bilingual processing. *Annual Review of Applied Linguistics*, 21, 169-181.

- Cazabon, M. T., Nicoladis, E., & Lambert, W. E. (1998). *Becoming bilingual in the Amigos Two-Way Immersion Program*. Santa Cruz, CA: Center for Research on Education, Diversity & Excellence.
- Chamot, A. U., & O'Malley, J. M. (1987). The cognitive academic language learning approach: A bridge to the mainstream. *TESOL Quarterly*, *21*(2), 227–249.
- Chamot, A. U., & O'Malley, J. M. (1996). The cognitive academic language learning approach: A model for linguistically diverse classrooms. *Elementary School Journal*, *96*(3), 259–273.
- Cisero, C. A., & Royer, J. M. (1995). The development and cross-language transfer of phonological awareness. *Contemporary Educational Psychology*, *20*, 275–303.
- Comeau, L., Cormier, P., Grandmaison, E., & Lacroix, D. (1999). A longitudinal study of phonological processing skills in children learning to read in a second language. *Journal of Educational Psychology*, *91*(1), 29–43.
- Crawford, J. W. (2001). *Census 2000: A guide for the perplexed*. Retrieved April 29, 2002 from <http://ourworld.compuserve.com/homepages/JWCRAWFORD/census02.htm>
- Cummins, J. (1979). Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research*, *49*(2), 222–251.
- Cummins, J. (1981). The role of primary language development in promoting educational success for language minority students. In *Schooling and language minority students: A theoretical framework* (pp. 3–49). Los Angeles, CA: Department of Education, Evaluation, Dissemination, and Assessment Center.
- Delpit, L. (1995). *Other people's children: Cultural conflict in the classroom*. New York: New Press.
- Droop, M., & Verhoeven, L. (1998). Background knowledge, linguistic complexity, and second-language reading comprehension. *Journal of Literacy Research*, *30*(2), 253–271.
- Durgunoglu, A. Y. (1998). Acquiring literacy in English and Spanish in the United States. In A. Y. Durgunoglu & L. Verhoeven (Eds.), *Literacy development in a multilingual context: Cross-cultural perspectives*. Mahwah, NJ: Lawrence Erlbaum Associates.
- Durgunoglu, A., Nagy, W. E., & Hancin-Bhatt, B. J. (1993). Cross-language transfer of phonological awareness. *Journal of Educational Psychology*, *85*, 453–465.
- Edelsky, C., Hudelson, S., Flores, B., Barkin, F., Altwerger, B., & Jilbert, K. (1983). Semilingualism and language deficit. *Applied Linguistics*, *4*, 1–22.
- Fernandez, M. C., Pearson, B. Z., Umbel, V. M., & Oller, D. K. (1992). Bilingual receptive vocabulary in Hispanic preschool children. *Hispanic Journal of Behavioral Sciences*, *14*, 268–276.
- Fifield, M. & Farmer, L. (1976). Teacher aides provide direct instruction. *Journal of American Indian Education*, *16*(1), 13–18.

- Fitzgerald, J. (1995a). English-as-a-second-language learners' cognitive reading processes: A review of research in the United States. *Review of Educational Research*, *65*, 145–190.
- Fitzgerald, J. (1995b). English-as-a-second-language reading instruction in the United States: A research review. *Journal of Reading Behavior*, *27*, 115–152.
- Garcia, G. E. (1991). Factors influencing the English reading test performance of Spanish-speaking Hispanic children. *Reading Research Quarterly*, *26*(4), 371–392.
- Garcia, G. E. (1998). Mexican–American bilingual students' metacognitive reading strategies: What's transferred, unique, problematic? *National Reading Conference Yearbook*, *47*, 253–263.
- Garcia, G. E. (2000). Bilingual children's reading. In M. L. Kamil, P. B. Mosenthal, & P. D. Pearson (Eds.) *Handbook of reading research*, (Vol. 3, pp. 813–834). Mahwah, NJ: Lawrence Erlbaum Associates.
- Garcia, G. E., Jimenez, R. T., & Pearson, P. D. (1998). Metacognition, childhood bilingualism, and reading. In D. J. Hacker, J. Dunlosky, & A. C. Graesser (Eds.), *Metacognition in educational theory and practice* (pp. 193–219). Mahwah, NJ: Lawrence Erlbaum Associates.
- Garcia, G. E., Montes, J., Janisch, C., Bouchereau, E., & Consalvi, J. (1993). Literacy needs of limited-English proficient students: What information is available to mainstream teachers? In D. J. Leu & C. K. Kinzer (Eds.), *Examining central issues in literacy research, theory, and practice: Forty-second yearbook of the National Reading Conference* (pp. 171–177). Chicago: National Reading Conference.
- Gee, J. P. (2000). Discourse and sociocultural studies in reading. In M. L. Kamil, P. B. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research*, (Vol. 3, pp. 195–207). Mahwah, NJ: Lawrence Erlbaum Associates.
- Genesee, F. (1984). On Cummins' theoretical framework. In C. Rivera (Ed.), *Language proficiency and academic achievement* (pp. 20–27). Clevedon, England: Multilingual Matters.
- Geva, E. (1995). Orthographic and cognitive processing in learning to read English and Hebrew. In I. Taylor & D. R. Olson (Eds.), *Scripts and literacy* (pp. 277–291). The Netherlands: Kluwer Academic Publishers.
- Geva, E., Wade-Woolley, L., & Shany, M. (1993). The concurrent development of spelling and decoding in two different orthographies. *Journal of Reading Behavior*, *25*, 383–406.
- Goldenberg, C. (1994). Promoting early literacy development among Spanish-speaking children: Lessons from two studies. In E. H. Hiebert & B. M. Taylor (Eds.), *Getting ready right from the start* (pp. 171–199). Boston: Allyn & Bacon.
- Gottardo, A., Yan, B., Siegel, L. S., & Wade-Woolley, L. (2001). Factors related to English reading performance in children with Chinese as a first language: More evidence of cross-language transfer of phonological processing. *Journal of Educational Psychology*, *93*(3), 530–542.

- Hao, R. N., & Hartley-Forsyth, P. (1993). Reading and writing across the preservice curriculum. *Kamehameha Journal of Education*, 4, 97–104.
- Harris, T. L., & Hodges, R. E. (Eds.). (1995). *The literacy dictionary: The vocabulary of reading and writing* (p. 39). Newark, DE: International Reading Association.
- Hornberger, N. H. (1992). Biliteracy contexts, continua, and contrasts: Policy and curriculum for Cambodian and Puerto Rican students in Philadelphia. *Education and Urban Society*, 24(2), 196–211.
- Jackson, J. B., & Paratore, J. R. (1999). An early intervention supporting the literacy learning of children experiencing substantial difficulty. *Learning Disabilities Research and Practice*, 14(4), 254–267.
- Jimenez, R. T. (1997). The strategic reading abilities and potential of five low-literacy Latina/o readers in middle school. *Reading Research Quarterly*, 32(3), 224–243.
- Jimenez, R. T., & Gamez, A. (1996). Literature-based cognitive strategy instruction for middle school Latina/o students. *Journal of Adolescent and Adult Literacy*, 40(2), 84–91.
- Jimenez, R. T., Garcia, G. E., & Pearson, P. D. (1996). The reading strategies of bilingual Latina/o students who are successful English readers: Opportunities and obstacles. *Reading Research Quarterly*, 31(1), 90–112.
- Juel, C., Griffith, P. L., & Gough, P. B. (1986). Acquisition of literacy: A longitudinal study of children in first and second grade. *Journal of Educational Psychology*, 78(4), 243–255.
- Kamil, M. L., & Bernhardt, E. (2001). Reading instruction for English-language learners. In M. Graves, C. Juel, & B. Graves. *Teaching reading in the 21st century*, Second Edition (pp. 460–503). Boston: Allyn and Bacon.
- Kroll, J. F., & Sholl, A. (1992). Lexical and conceptual memory in fluent and nonfluent bilinguals. In R. J. Harris (Ed.), *Cognitive processing in bilinguals*. (pp. 191–204). Amsterdam, The Netherlands: Elsevier.
- Lambert, W.E. (1974). Culture and language as factors in learning and education. In F.E. Aboud & R.D. Mead (Eds.), *Cultural factors in learning and education*. Bellingham, WA: Fifth Western Washington Symposium on Learning.
- Lapp, D., & Flood, J. (1986). *Teaching students to read*. New York: Macmillan Publishing Company.
- LeMoine, N. (1999). *English for your success: A language development program for African American children*. Maywood, NJ: The Peoples Publishing Group.
- Limbos, M., & Geva, E. (2001). Accuracy of teacher assessments of second-language students at risk for reading disability. *Journal of Learning Disabilities*, 34(2), 136–151.
- Liu, P. (1996). Limited English proficient children's literacy acquisition and parental involvement: A tutoring/family literacy model. *Reading Horizons*, 37(1), 60–74.

- Miramontes, O. (1990). A comparative study of English oral reading skills in differently schooled groups of Hispanic students. *Journal of Reading Behavior*, 22, 373–394.
- Moll, L. (1994). Literacy research in community and classrooms: A sociocultural approach. In R. B. Ruddell, M. R. Ruddell, & H. Singer (Eds.), *Theoretical models and processes of reading* (4th edition). Newark, DE: International Reading Association.
- Muniz-Swicegood, M. (1994). The effects of metacognitive reading strategy training on the reading performance and student reading analysis strategies of third-grade bilingual students. *Bilingual Research Journal*, 18, 83–97.
- Nagy, W. E., Garcia, G. E., Durgunoglu, A., & Hancin-Bhatt, B. (1993). Spanish–English bilingual children’s use and recognition of cognates in English reading. *Journal of Reading Behavior*, 25(3), 241–259.
- Nagy, W. E., & Scott, J. A. (2000). Vocabulary processes. In M. L. Kamil, P. B. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research*, (Vol. 3, pp. 269–284). Mahwah, NJ: Lawrence Erlbaum Associates.
- National Clearinghouse for Bilingual Education. (1999). *State K–12 LEP Enrollment and Top Languages*. Retrieved April 29, 2002 from <http://www.ncbe.gwu.edu/ncbepubs/reports/state-data/index.htm>
- National Reading Panel (2000). *Teaching children to read: An evidence-based assessment of the scientific research literature on reading and its implications for reading instruction* (NIH Publication No. 00-4769). Washington, DC: U.S. Government Printing Office.
- Nieto, S. (1993). We have stories to tell: A case study of Puerto Ricans in children’s books. In V. J. Harris (Ed.), *Teaching multicultural literature in grades K–8* (pp. 171–201). Norwood, MA: Christopher-Gordon.
- Padron, Y. (1994). Comparing reading instruction in Hispanic/limited-English-proficient schools and other inner-city schools. *Bilingual Research Journal*, 18, 49–66.
- Pappas, C. (1993). Is narrative “primary”? Some insights from kindergartners’ pretend readings of stories and information books. *Journal of Reading Behavior*, 25, 97–129.
- Perez, B. (1993). The bilingual teacher (Spanish/English) and literacy instruction. *Teacher Education Quarterly*, 20(3), 43–52.
- Perez, B. (1994). Spanish literacy development: A descriptive study of four bilingual whole-language classrooms. *Journal of Reading Behavior*, 26(1), 75–94.
- Ramirez, D. J., Yuen, S. D., & Ramey, D. R. (1991). *Longitudinal study of structured English immersion strategy, early-exit and late-exit transitional bilingual education programs for language-minority children. Final report* (Vols. 1–2). Washington, DC: Department of Education.
- Rand Reading Study Group. (2002). *Reading for understanding: Towards an R&D program in reading comprehension*. Santa Monica, CA: Rand.

- Snow, C. E., Burns, S. M., & Griffin, P. (Eds.). (1998). *Preventing reading difficulties in young children*. Washington, DC: National Academy Press.
- Stallings, J., & Krasavage, E. M. (1986). Program implementation and student achievement in a four-year Madeline Hunter follow-through project. *Elementary School Journal*, 87(2), 117–138.
- Stallings, P., Robbins, P., Presbrey, L., & Scott, J. (1986). Effects of instruction based on the Madeline Hunter model on students' achievement: Findings from a follow-through project. *Elementary School Journal*, 86(5), 571–587.
- Thomas, W., & Collier, V. (1997). *School Effectiveness for Language Minority Students*. (NCBE Resource Collection Series, No. 9). Washington, DC: National Clearinghouse for Bilingual Education.
- Troike, R. C. (1984). SCALP: Social and cultural aspects of language proficiency. In C. Rivera (Ed.), *Language proficiency and academic achievement* (pp. 44–54). Clevedon, England: Multilingual Matters.
- U.S. Census Bureau. (2000). *Census 2000 Supplementary Survey*. Retrieved April 29, 2002 from <http://www.census.gov/c2ss/www/Products/Profiles/2000/index.htm>
- Valdes, G. (1996). *Con respeto: Bridging the distances between culturally diverse families and schools: An ethnographic portrait*. New York: Teachers College Press.
- Valdes, G. (2001). *Learning and not learning English: Latino students in American schools*. New York: Teachers College Press.
- Verhoeven, L. T. (1994). Transfer in bilingual development: The linguistic interdependence hypothesis revisited. *Language Learning*, 44, 381–415.
- Vygotsky, L. (1962). *Thought and language*. Cambridge, MA: MIT Press.