

CHAPTER 3

LITERACY: CROSSLINGUISTIC & CROSSMODAL ISSUES¹

Caroline Riches and Fred Genesee

Crosslinguistic relationships between the L1 and the L2 as well as crossmodal relationships between oral and written language provide a basis for discussing research on the reading and writing development of ELLs in this section. There are two fundamental and inescapable reasons why this is so. First of all, the learners under consideration, by definition, are acquiring literacy in English as a second language and have an ongoing developmental history in their first language. As a result, the relationship between their L1 and their L2 figures prominently in much of the research on reading and writing development in ELLs. In fact, relatively little research looks at L2 literacy development in ELLs without reference to their L1. Secondly, since reading and writing in any language implicate both oral and written modes of language, the relationship between oral and written language in the L1 and L2 of ELLs has also been a primary theme in much of the research reviewed here. The questions are: What is the relationship between oral and written language development? Is it the same for native speakers and second language learners, namely, ELLs? The following specific relationships are examined in the sections that follow:

1. L1 oral proficiency and the development of L2 literacy,
2. L2 oral proficiency and the development of L2 literacy,
3. specific component skills related to oral and written language and the development of L2 literacy, and
4. L1 literacy and the development of L2 literacy.

¹ In. F. Genesee, K. Lindholm-Leary, W. Saunders & D. Christian (2006) *Educating English Language Learners: A Synthesis of Research Evidence* (pp, 64-108). NY: Cambridge University Press.

The crosslinguistic and crossmodal relationships identified above are complex and interwoven. Consequently, a number of the studies reviewed focused on more than one of these issues. For example, Lanauze and Snow (1989) and Langer, Barolome and Vasquez (1990) examined the relationship between L1 and L2 literacy development and consider aspects of both L1 and L2 oral proficiency. Studies such as these are discussed in all of the relevant subsections.

Theoretical Background

A number of theoretical perspectives have served as the impetus or starting point for many of the studies reviewed here. They warrant some consideration before proceeding with our synopsis. The developmental interdependence hypothesis (Cummins 1981, 1991) recurs frequently in many studies (see MacSwan & Rolstad, 2003, for a critique of Cummins' hypothesis). This hypothesis defines the nature of the relationship between the L1 and the L2 of ELLs and in so doing distinguishes different types of language proficiency. On the one hand, some language skills are fundamentally interpersonal in nature and are used in contextualized situations of the type that characterize everyday social conversations and usage. These language skills are often implicated in oral uses of language, although not necessarily, and are acquired relatively quickly in the first language of all normal children. These language skills are thought to be language specific. On the other hand, other language skills serve more complex cognitive or academic purposes and are characteristically used in decontextualized ways, such as during educational instruction. These language skills are often associated with written forms of language, but not necessarily, since they can also occur during oral language use. They are prevalent in school settings where language is a medium of higher order thinking and learning. This academic language proficiency is posited to be part of "a common underlying proficiency" comprising knowledge and skills that once acquired in one language are potentially available for

the development of another (Lanauze & Snow, 1989; Royer & Carlo, 1991). Literacy-related proficiency falls into this latter category. While interpersonal communication skills and language skills for use in contextualized situations is often acquired relatively rapidly in a second language, research suggests that more time is needed to acquired proficiency in an L2 for academic and decontextualized uses – it is reported that 5 years or more may be required for ELLs to develop proficiency in English as a second language for academic purposes that is comparable to that of same-age native speakers (Collier, 1987; Cummins, 1981, 1992; Lindholm and Aclan, 1991).

An additional related theoretical construct that has been addressed in this corpus is the threshold hypothesis (Cummins, 1979, 1981, Toukoma & Skutnabb-Kangas, 1977; for example, Lindholm and Aclan, 1991, examine this issue). The threshold hypothesis posits that both language and cognitive development are enhanced if certain levels and types of proficiency are attained in either or both the L1 and the L2. Together, the interdependence and threshold hypotheses raise a number of theoretically and pedagogically important developmental issues concerning the crosslinguistic and crossmodal aspects of language and their crisscrossing effects on bi- and multilingual development. These issues continue to be at the forefront of research into the development of literacy in bilingual settings (Cummins 1997).

Echoing a contrastive analysis framework (Lado, 1957), some studies in this corpus have examined differences and similarities between ELLs' L1 and L2 and their effects on the development of reading and writing skills by ELLs. A contrastive analysis perspective is evident, for example, in studies that have examined similarities and differences in sound – letter correspondences in the L1 and the L2 and their effects on L2 writing development (e.g., Fashola, Drum, Mayer, & Kang, 1996; Zutell & Allen, 1988), and the effect of crosslinguistic cognates on

vocabulary development (e.g., Hancin-Bhatt & Nagy, 1994; Nagy, Garcia, Durgunoglu & Hancin-Bhatt, 1993). These effects are commonly referred to as positive and negative transfer. A number of studies in this review have sought to identify instances of positive and negative transfer from the L1 during L2 literacy development.

Other articles in this corpus are based on interlanguage principles (e.g., Cronnell, 1985; Tompkins, Abramson & Pritchard, 1999). Interlanguage theory postulates that second language acquisition is dynamic and characterized by a series of intermediary stages, from early to advanced, that reflect influences from the L1 and from developmental processes associated with the target L2. For example, Tompkins, Abramson and Pritchard (1999) identified patterns of L2 development that were similar to those of English L1 learners. Such effects are commonly referred to as developmental because they reflect developmental patterns that characterize native speakers of the language in question.

We now turn to a review of research related to each of the four developmental inter-relationships identified earlier. We have included a table in each section highlighting pertinent details of the studies reviewed.

L1 Oral Proficiency and L2 Literacy

Much contemporary theory on literacy education emphasizes the need to draw on students' socio-cultural experiences (e.g. Heath, 1983; Hudelson, 1994; Maguire & Graves, 2001) and their pre-existing knowledge about reading and writing, including emergent literacy skills (e.g. Sulzby & Teale, 1991), as a basis for the development of initial literacy skills in school. The same arguments have been made for students learning to read and write in their second language. According to this perspective, the critical early literacy-related and socio-cultural experiences that ELLs have developed in their L1, need to be drawn on during L2

literacy development. From a pedagogical perspective, this could involve direct instruction in the L1 (as in forms of bilingual education) or in English only with some kind of pedagogical recognition of the existing resources that ELLs have already developed in the L1. In contrast, others have argued that promotion of ELLs' L1 oral language proficiency detracts from their L2 development and especially the development of L2 literacy skills because it deprives these learners of valuable learning time in the L2 (Porter, 1990; Rossell & Baker, 1996). This is sometimes referred to as "the time-on-task" argument. This view assumes a sequential and "*mono-linguistic*" relationship between oral language proficiency and literacy development in a given language. Inherent in such a view is the notion that L2 reading and writing development proceed autonomously from any L1 proficiency. The studies reviewed in this section (see Table 1 for a summary of the included studies) examine the effects of L1 oral proficiency on L2 literacy with respect to general use of the L1 and with respect to more specific kinds of L1 usage. We begin with the former.

Insert Table 1 about here

The role that L1 oral proficiency plays in the development of L2 literacy has been examined in global ways in terms of the extent of L1 use outside of the school setting. A number of these studies used national data sources and multi-variate research designs and found that use of a language other than English at home had no or only a weak or indirect relationship with literacy achievement in school (Buriel & Cardoza, 1998; Fernandez & Nielsen, 1986; Kennedy & Park, 1994; Nielsen & Lerner, 1986). There are a number of exceptions to this general trend, but even the effects reported in these studies are circumscribed. More specifically, Buriel and

Cardoza (1998) compared three generations of Hispanic ELLs and found a significant negative relationship between L1 oral proficiency and L2 reading development in the 3rd generation cohort; but found no relationship between L1 proficiency and L2 reading development in the 1st and 2nd generation cohorts. Kennedy and Park (1994), comparing Hispanic and Asian background ELLs, found that speaking a language other than English at home had a negative relationship with standardized reading test scores in English for Asians, but not with other measures of reading achievement. Moreover, no such effects were reported for the Hispanic cohort. It is particularly noteworthy that, notwithstanding these exceptions, all of the large scale studies cited above found that other factors, such as socio-economic status, sense of control, aspirations, and amount of homework time, were more significant predictors of reading ability than was L1 use outside of school. In other words, L1 language use was generally less predictive of subsequent L2 reading development than other psycho-social factors. The link between L1 use and other factors outside of school and L2 literacy development in school is discussed more comprehensively in the Language of Instruction section in the following chapter.

Generally speaking, studies that have examined the link between more specific aspects of L1 oral proficiency or usage (e.g., emergent literacy skills, being read to at home) and L2 reading and writing development in school report “that early literacy experiences support subsequent literacy development, **regardless of language** (emphasis added); and time spent on literacy activity in the native language -- whether it takes place at home or at school -- is not time lost with respect to English reading acquisition, at least through middle school.” (Reese et al., 2000, p. 633). More specifically, Reese et al. (2000) found that family L1 literacy practices and L1 emergent literacy were significant predictors of L2 reading achievement in later grades. Following from this, a number of studies found that ELLs can draw on L1 experiences and

abilities to the benefit of their performance on L2 literacy tasks, especially when given explicit opportunities to do so. Langer et al. (1990), using rigorous qualitative analyses, found that ELLs successfully made use of competencies in their L1 to make sense of L2 reading tasks. Lanauze and Snow (1989) found that students who were orally proficient in their L1 but not their L2 as well as students who were proficient in both their L1 and L2 exhibited similar levels of complexity, sophistication, and semantic content in their L2 writing. Lanauze and Snow note that writing performance in the L2 can surpass oral proficiency in the L2 in some cases. Accordingly, they go on, if proficiency is developed in the native language (Spanish), those skills can transfer easily to the second language. In further support of the recruitment of the L1 in L2 reading, Saville-Troike (1984) reports (albeit descriptively) that the majority of top achievers on measures of L2 reading made use of their L1 during problem solving.

Summary

These findings suggest that, with some exceptions, measures of general L1 language proficiency or usage outside of school have not been found to relate consistently to the L2 literacy development of ELLs in school. Viewed differently, use of the L1 does not seem to detract from L2 literacy development of ELLs. Furthermore, it would appear that more specific measures of L1 oral language proficiency or usage – and, in particular, those that are related to literacy - can have a more significant and positive developmental relationship with L2 literacy than do general oral language proficiency measures. For example, ELLs with early L1 emergent literacy experiences appeared to be able to utilize these experiences in the continued development of literacy abilities in the L2. In addition, ELLs were able to draw on existing L1 oral skills, either in the absence of similar levels of proficiency in the L2 or in addition to similar levels of proficiency, in the service of L2 literacy tasks.

The role that L1 oral proficiency plays in L2 literacy should be considered in future research in more systematic ways, particularly with more direct measures of L1 oral proficiency. In the majority of studies reviewed here, L1 oral proficiency was assessed very generally, using self report, global indicators, or simply assumed. Since much of the research reviewed here suggests that certain levels and aspects of L1 oral proficiency are related to L2 literacy development than others, more attention to the precise nature of this relationship is needed if these relationships are to be explicated clearly.

L2 Oral Proficiency and L2 Literacy

Although a certain minimum level of general oral language proficiency in L2 is undoubtedly necessary for L2 literacy development, the relationship between L2 oral and L2 literacy development appears to be more complex than the relationship between L1 oral language and L1 literacy. As discussed in the previous section, L2 literacy often draws on knowledge and experiences linked to the L1; thus, L2 oral proficiency is likely to play a different role in the L2 literacy development of ELLs. In other words, the contribution that L2 oral proficiency makes to L2 literacy development in the case of ELLs may be composed of specific aspects of L2 oral proficiency which work in a complementary fashion with L1 oral proficiency (Perogy and Boyle, 1991). Research reviewed in this section (see Table 2) supports the notion that the development of L2 literacy can proceed with limited L2 oral proficiency if students have sufficiently developed abilities in their L1 (e.g., Lanauze & Snow, 1989; Reese, Garnier, Gallimore, & Goldenberg, 2000). In such cases, it appears that L1 oral proficiency and emergent literacy in the L1 can fill in gaps in L2 oral proficiency as it develops. This does not mean that L2 oral proficiency does not contribute to L2 literacy development since, as Reese et al. (2000) have noted, ELLs who begin school with well-developed L2 oral skills achieve greater success in

English reading than children with less well-developed L2 oral language skills. However, the findings from these studies underline the important contribution that L1 abilities can make to L2 literacy development when dealing with students with limited L2 oral proficiency. Furthermore, a consideration of the differential roles that L1 and L2 oral proficiency might play in relation to L2 literacy development could help to define more clearly a number of important constructs that are often used when investigating these issues; specifically the constructs of: developmental interdependence, common underlying proficiency, and the thresholds of oral proficiency necessary to promote L2 literacy development.

Insert Table 2 about here

Lindholm and Aclan (1991) sought to identify if there is a threshold level of bilingual proficiency that results in enhanced levels of L2 reading achievement, as proposed by the threshold hypothesis (Cummins, 1991). More specifically, they examined the relationship between high, medium and low levels of bilingual proficiency and English L2 reading achievement among grade 1 to 4 elementary school ELLs. Since the students' levels of bilingual proficiency varied primarily with respect to level of L2 proficiency (with L1 oral proficiency assumed), their study permits us to examine the link between L2 oral proficiency and L2 literacy. The authors report that all proficiency groups demonstrated gains in English reading development from grades 1 to 4 and that there was no difference between proficiency groups on reading measures in the earlier grades. However, by grade 3, the same year in which English reading instruction was introduced, differential effects of bilingual proficiency were evident with high levels of bilingual proficiency being significantly related to high levels of L2 reading

ability. By implication, these results suggest that high levels of L2 oral proficiency can enhance L2 literacy development to a significant extent. In support of the threshold hypothesis, they also found that only the highly proficient bilingual students reached grade level norms in English by grade 4. In concluding, Lindholm and Aclan (1991) emphasize the need to evaluate student achievement in bilingual education programs from a long term developmental perspective in order to determine the true effects of bilingualism on L2 literacy development (see also Cummins, 1992).

The remaining studies reviewed in this section focused on discrete aspects of L2 oral proficiency, to identify those specific features of L2 oral proficiency that contribute significantly to L2 literacy development. Studies that have addressed this issue have identified a differential relationship between L2 literacy achievement, on the one hand, and specific facets of L2 oral language proficiency, on the other hand, with L2 oral abilities that are linked to academic tasks being more highly related to L2 literacy than general L2 oral proficiency. Saville-Troike (1984) found that diversity of L2 vocabulary was significantly related to reading achievement whereas general oral proficiency and verbosity were not. In a multiple case study, Peregoy (1989) compared the L2 reading abilities of high, intermediate and low L2 oral proficiency groups. She found a general correspondence between levels of L2 oral proficiency and L2 reading comprehension, and evidence for differential effects of specific components of oral proficiency at different proficiency levels. Lack of vocabulary knowledge resulted in reading miscomprehension at all levels, but it was particularly detrimental for low level students, where lack of syntactic knowledge also impeded reading comprehension. Perez (1981) found that direct instruction in aspects of L2 oral competence specifically related to literacy (e.g., multiple word meanings, sentence patterns) resulted in significant improvements to the L2 reading scores

of third grade ELLs. In a study by Royer and Carlo (1991), L2 listening comprehension, as measured by performance on a sentence verification task, was a significant predictor of L2 reading performance, second in importance only to L1 or L2 reading scores.

Goldstein, Harris and Klein (1993) and Peregoy and Boyle (1991) both examined the relationship between L2 reading comprehension and L2 oral proficiency as measured by knowledge of surface structure elements versus deep structure elements. In particular, Goldstein, Harris and Klein (1993) used a story retelling task as a measure of L2 oral proficiency. The students' oral retellings were scored in two different manners, first for surface structure features and understanding and second for underlying story structure and in-depth understanding. They found that the results from the deep structure analysis were more highly related to L2 reading comprehension than were the results for the surface structure features. Peregoy and Boyle (1991) compared high, medium and low level reading proficiency groups on four oral proficiency measures, two that reflected relatively surface level linguistic abilities and two that reflected deeper cognitive-linguistic abilities. Their results provide some evidence for the differential effects of deep versus surface structure features insofar as the intermediate and high groups differed significantly on two of the four measures, including the deep structure feature of "informativeness".

These studies considered together provide evidence that certain features of L2 oral proficiency are more directly related to L2 literacy than others. However, since the specific aspects that have been examined are diverse, it is difficult to draw definitive conclusions about which types of specific features are consistently related to improvements in L2 reading and writing performance. Clearly, more research is needed to clearly identify those aspects of L2 oral proficiency that contribute more directly and reliably to L2 literacy development.

Summary

Findings from research in this and the preceding section on the link between L1 and L2 oral proficiency and L2 literacy development provide evidence for both crosslinguistic and crossmodal effects. In other words, it appears that aspects of both L1 **and** L2 oral proficiency are linked to L2 literacy development and that the relationship between oral and literacy development in ELLs is more specific and complex than might have previously been thought. The link between L2 oral proficiency and L2 literacy that is revealed by extant research points to a nuanced role for L2 oral language development with academic and literacy-related L2 oral proficiency being more important than general communicative competence in the L2. At the same time, the contribution of specific L2 oral language skills to L2 literacy development needs to be considered with reference to the linguistic knowledge and real world experiences that ELLs acquire through the medium of their L1. That is to say, it would appear that L1 oral language experiences and knowledge are critical developmental factors in ELLs' L2 literacy development, and that L2 oral proficiency may contribute in a complementary and specific manner. Furthermore, the relationship of oral proficiency in both the L1 and L2 needs to be considered more specifically in terms of how they might contribute to a common underlying proficiency

In the following section, we review research that focuses on discrete aspects of L2 literacy development, often referred to as component skills, such as phonological awareness and vocabulary development. Because these components are, arguably, more easily definable and measurable than other, more complex aspects of reading and writing development, they have yielded relatively clear results, and might serve as a basis for conducting further research on aspects of L2 literacy development that are more complex in nature.

Components of Literacy Development

The studies reviewed (see Table 3) in this section are diverse in their focus and approaches, but are considered together because all look at specific components of reading and writing. At issue is the extent to which L2 literacy development is influenced by common underlying language-related abilities that apply to virtually any language, as in studies dealing with phonological awareness or, conversely, by language-specific abilities that emanate from the L1 or the L2, as in studies dealing with spelling or cognate vocabulary.

Insert Table 3 about here

Phonological Awareness

Research on L1 reading has established that phonological awareness is a significant correlate of successful beginning reading development (Adams, 1990). The causal relationship between reading and phonological awareness has been shown to be bi-directional, with certain aspects of phonological awareness playing a fundamental role in facilitating early reading acquisition while reading acquisition itself facilitates the emergence of yet other, more sophisticated, aspects of phonological awareness (Adams, 1990, Snow, Burns & Griffin, 1998). The causal role of phonological awareness in reading acquisition is supported by intervention studies that show that children with difficulty learning to read their native language exhibit statistically significant gains in reading ability following training in phonological awareness (Torgesen, Alexander, Wagner, Rashotte, Voeller, & Conway, 2001) and also by research that shows that poor and good native language readers differ significantly from one another on tasks

that tap phonological awareness, suggesting that phonological awareness is a decisive factor (Wagner & Torgesen, 1987).

The research reviewed in this section examines phonological awareness in L1 and L2 and its relationship to L2 reading. A critical question at the heart of this research is whether phonological awareness and its relationship to reading acquisition is tied to a particular language or whether it is a meta- or common underlying linguistic ability that has crosslinguistic repercussions, as noted by Durgunoglu, Nagy and Hancin-Bhatt (1993, p. 454): “The ability to hear small components of spoken language may be highly correlated between languages.” The corpus of research reviewed here is small since our literature search was limited to studies that examined the link between phonological awareness and reading directly; that is to say, the study had to have measures of reading to be included (for a more comprehensive review of this issue, see August, in progress). Although few in number and diverse in focus, the studies reviewed here all point towards the same general conclusion; namely, that phonological awareness is a common underlying ability that is linked to oral language development and is shared cross-linguistically; that is to say, phonological awareness in one language (e.g., L1) supports phonological awareness in an additional language (i.e., L2) and, in turn, reading acquisition in that language. The results from instructional studies also suggest that phonological awareness in the L2 can be developed through direct intervention, even if L2 oral development is itself somewhat limited – adding further evidence that phonological awareness is a metalinguistic or common underlying proficiency.

That L2 phonological awareness is significantly related to L2 reading development, as L1 phonological awareness is linked to L1 reading development, is evidenced in research by Carlisle, Beeman, Davis, and Sparim (1999). They found that English L2 phonological

awareness contributed to English L2 reading comprehension. Durgunoglu, Nagy, and Hancin-Bhatt (1993) point to phonological awareness as fundamentally crosslinguistic in nature, based on their finding that Spanish L1 phonological awareness was a significant predictor of English L2 word recognition. The crosslinguistic interdependence of phonological awareness is supported further in a study by Roberts and Corbett (1997) that showed that instruction in English L2 phonological awareness significantly improved Hmong L1 phonological awareness. Evidence for the trainability of L2 phonological awareness comes from Roberts and Corbett (1997) and Terrasi (2000) who found that direct instruction in phonological awareness in L2 English significantly enhanced phonological awareness in that language. That phonological awareness can be promoted independently of general oral L2 proficiency is supported by Durgunoglu et al. (1993) who found that L1 phonological awareness was a more significant predictor of L2 word reading ability than were either L1 or L2 oral proficiency.

Orthographic Knowledge

While the findings from studies of phonological awareness argue for crosslinguistic influences that are common in learning any language, studies that have examined sound-letter correspondences and spelling report evidence for both language-specific and common developmental influences. Thus, on the one hand, it appears that L2 spelling is subject to contrastive L1-L2 effects in line with a contrastive analysis perspective – that is to say, differences in sound-letter correspondence in the L1 and L2 can result in negative transfer from the L1. On the other hand, ELLs' English spelling patterns have been shown to reflect developmental processes that are also exhibited by native English speakers.

Evidence of negative transfer in spelling comes from studies by Fashola, Drum, Mayer, & Kang (1996) and Zutell & Allen (1988) who found that Hispanic ELLs erroneously applied

Spanish L1 phonological and orthographic rules when asked to write selected words with contrastive English/Spanish spelling patterns. In a descriptive analysis of writing samples, Cronnell (1985) also identified L1 influences in L2 errors. In contrast, Tompkins, Abramson & Pritchard (1999) failed to find such negative transfer when they examined naturally occurring spelling errors in the writing journals of ELLs from different language backgrounds and English L1 children, and suggested that the ELLs may have avoided using words with contrastive patterns in order to avoid errors. The only errors differentiating the ELLs and English L1 students in the Tompkins et al. study were those involving inflectional endings, a finding also reported by Cronnell (1985). The students exhibited largely developmental patterns in their English spelling, patterns that were also exhibited by native English speakers. Such target-like error patterns argue for developmental language learning processes that characterize both native speakers and L2 language learners of the same language.

Research by Hsia (1992) which used both phonological and spelling measures to examine L1 transfer effects on L2 development suggests that such effects may be more likely in the early or beginning stages of development when learners lack knowledge of more appropriate, target-like features of the new language. More specifically, Hsia examined the influence of Chinese-background ELLs' knowledge of L1 Mandarin syllable segmentation patterns on their phoneme and syllable segmentation abilities in English and found that, although there was an initial Mandarin L1 effect, English native-like phonological constraints were subsequently and quickly acquired.

Cognate Vocabulary

Research on ELLs' recognition and use of the cognate relationship between L1 and L2 vocabulary has shown that ELLs can make use of L1 vocabulary knowledge to determine the

meaning of cognate vocabulary in L2 text. All of the research on this issue has examined ELLs of Hispanic background. More specifically, Nagy, Garcia, Durgunoglu, and Hancin-Bhatt (1993) and Jimenez, Garcia, and Pearson (1996) found that more successful L2 readers were better able than less successful L2 readers to explicitly recognize Spanish-English cognates and to make use of their knowledge of cognates during reading. These researchers, as well as Hancin-Bhatt and Nagy (1994), also found that the ability to translate cognates from L2 to L1 was linked to individual students' preference to speak Spanish and their level of bilingualism and, in particular, their knowledge of Spanish vocabulary, arguing, once again, that ELLs' L1 need not be a distracting but rather a facilitating factor in L2 literacy development. Finally, Nagy, Garcia, Durgunoglu, and Hancin-Bhatt (1993) and Hancin-Bhatt and Nagy (1994) have found that Spanish L1 ELLs are better able to make use of spelling than morphological similarities to recognize cognates, although use of morphological similarities increased with grade level. Thus, instruction in specific morphological similarities between cognates might contribute to the L2 literacy development of ELLs by enhancing their knowledge of these otherwise underused cognate relationships.

Summary

In sum, findings from research on specific components of reading and writing support the conclusion that L2 literacy development can be influenced by both common or meta-linguistic abilities as well as by features of language specific to the L1 or L2. Research focused on phonological awareness provides clear evidence that such awareness appears to emanate from a common underlying ability that can be developed either through the L1 or the L2 and is manifested in both L1 and L2 literacy development in virtually the same way. However, more crosslinguistic studies of metaphonological awareness are needed to ascertain to what extent and

in what ways this is true. Research also indicates that such metalinguistic abilities can be developed autonomously in the L2, even when learners have limited proficiency in the L2.

Research concerned with ELLs' orthographic development found evidence for influences from the L1 as well as from the L2 – in the latter case leading to developmental patterns that are similar to those of native-speakers of the L2. Research that has investigated cognate relationships between vocabularies in the L1 and the L2 provides a clear example of how ELLs can draw on knowledge that is specific to the L1 in developing vocabulary in the L2.

Research focused on orthographic patterns and cognate relationships between languages both suggest that ELLs can benefit from direct instruction about systematic functional and structural differences and similarities between languages, as such instruction enhances crosslinguistic facilitation. Arguably, the use of L1 language-specific knowledge or skills during L2 literacy tasks may serve to fill gaps in the learners' competence when they have not yet acquired target-appropriate knowledge of the L2. Learning patterns that echo those of native-speaking readers and writers seem to emerge as L2 learners advance in their L2 literacy development, as is to be expected.

Further research in these areas, especially with different language pairs, is needed to further our knowledge of the precise nature of putative common underlying abilities, as well as to determine how systematic relationships between the L1 and the L2 can be exploited by ELLs in their L2 literacy development.

L1 Literacy and L2 Literacy Development

Research on the effects of L1 literacy on L2 literacy development is the final issue in our survey of crosslinguistic/crossmodal relationships. Although the 'time on task' view of L2 development might oppose promotion of L1 literacy on the grounds that it reduces time that

ELLs have to devote to L2 literacy development or more directly as a source of interference or confusion, research such as that by Nguyen and Shin (2001) supports the view that competence in L1 literacy does not retard L2 literacy development. Much of the evidence concerning the effects of L1 literacy development on L2 literacy development comes from research on program comparisons, initial language of instruction, and various instructional strategies – all of which is reviewed in other chapters. These types of studies examine this relationship in relatively general terms by comparing students’ general levels of reading and writing achievement in both languages. What remains to be discussed in this section are more specific developmental relationships between the two literacies; that is, the specific ways in which L2 literacy develops in bilingual contexts. This is done by examining specific aspects of literacy and specific types of learners – e.g., successful and unsuccessful ELL readers/writers. A summary of the research included in this section of our synthesis is provided in Table 4.

Insert Table 4 about here

Effects of L1 Literacy On L2 Literacy Development

A number of studies mentioned previously with regard to the relationship between oral proficiency and L2 literacy also explored the effect of L1 literacy on the development of L2 literacy (e.g. Royer & Carlo, 1991; Reese et al., 2000; Langer et al., 1990). These studies found that the relationship between literacy in the L1 and the L2 is at least as significant as, if not more significant than, that between L2 oral development and L2 literacy. These findings, in turn, argue that developing literacy in the first language does not detract from literacy development in the L2, but rather supports it. To be more specific, Reese, Garnier, Gallimore and Goldenberg

(2000), discussed earlier, found that ELLs who were identified as the best L1 readers were deemed able to transition to English reading instruction earlier than other students and that early L1 reading abilities were a significant predictor of English reading abilities assessed eight years later. Additional evidence in support of the additive effects of L1 literacy development comes from Collier (1987) who, in a cross-sectional design, examined the link between length-of-residence and age-of-arrival on ELLs' English reading achievement. She found that late elementary grade ELLs with at least two years of L1 reading instruction reached grade level equivalence in English reading more rapidly than those with little or no schooling in the L1. Furthermore, older ELLs (who arguably face relatively cognitively-demanding L2 academic tasks) did not achieve grade level equivalence as quickly as younger ELL students despite the fact that the former had had more years of L1 literacy development, suggesting that the issue is also complicated by the nature and level of the reading tasks required of the learner. Royer and Carlo (1991) found that the L1 reading abilities of ELLs in grade five were the best predictor of their L2 reading achievement in grade six, thereby providing corroborative evidence for the supportive effect of the L1. These findings suggest that L1 literacy needs to develop to a certain level if it is to benefit L2 literacy development.

A number of studies that have looked at the acquisition and use of specific literacy skills across languages corroborate this general relationship. Buriel and Cardoza (1998), Lanauze and Snow (1989), Langer et al. (1990), Jimenez et al. (1996), and Jimenez (2000) have all found evidence for specific parallel skills across languages. For example, in a study of L2 writing among grade 4-5 Hispanic ELLs, Lanauze and Snow (1989) found that ELLs exhibited similar profiles with respect to the complexity, sophistication, and semantic content of their writing in both their L1 and L2; this was evident even for students who were not orally proficient in their

L2. These findings suggest that ELLs are able to apply proficiencies developed in their L1 to L2 literacy tasks. This pattern is further illustrated when the literacy profiles of successful and less successful readers are compared. Langer et al. (1990), Jimenez et al. (1996), and Jimenez (2000) found that ELLs who were successful readers were successful in both languages, and ELLs who were unsuccessful readers were unsuccessful in both languages. These studies all uphold the notion that successful literacy development in both languages appears to be supported by a common underlying reservoir of literacy skills and proficiency and that L1 literacy can contribute to the development of this reservoir of skills.

L1 and L2 Literacy Strategies

Research that has examined the strategies used by ELLs during L2 literacy tasks provides further insight into the nature of the additive relationship between L1 and L2 literacy. Research in this corpus has examined this issue in two ways: by comparing the strategies used by ELLs during both L1 and L2 literacy tasks; and by comparing the strategies used by ELLs during L2 English reading tasks with those used by native English speakers,

Research that has compared the strategies used by ELLs during L1 and L2 literacy tasks has found that successful and “unsuccessful” ELL readers/writers employ different strategies (Calero-Breckheimer & Goetz, 1993; Edelsky & Jilbert, 1985; Jimenez, 2000; Jimenez et al., 1996; Langer et al., 1990, Miramontes, 1987). More specifically, but perhaps not surprising, successful ELL readers/writers employ a number of effective strategies, such as using context and inferencing, monitoring comprehension, and invoking prior knowledge, whereas unsuccessful ELL readers employ a variety of ineffective or less sophisticated strategies (Padron & Waxman, 1988). They fail to draw or adjust inferences; they often invoke irrelevant prior knowledge; and they view completion as more important than comprehension (Jimenez et al.,

1996). Of perhaps more interest, this research also found that successful readers/writers demonstrate use of the same strategies during both L1 and L2 literacy tasks, and they view reading in the L1 and L2 as similar activities or processes with language specific differences. Jimenez et al. (1996) reported that successful ELL readers/writers were able to deploy a variety of effective 'bilingual' strategies, such as searching for cognates, judicious translation, or use of prior knowledge developed in the L1. In contrast, the less successful ELLs viewed reading in the L1 and the L2 as separate abilities and saw the L1 as a source of confusion. That the unsuccessful ELL readers/writers viewed L1 and L2 reading in these ways suggests that they had not developed an understanding of the commonalities in L1 and L2 literacy and, as a result, were unable to draw on similarities and connections between their two languages in the service of L2 reading and writing. Jimenez (2000) suggested that unsuccessful ELL readers may need opportunities to learn about similarities between the writing systems of their two languages and to become more aware of bilingual strategies that would encourage them to draw on knowledge resources in the L1 to enhance their literacy abilities and development in the L2 (see also Langer et al., 1990).

At the same time, research that has compared L2 (i.e., ELL) with L1 English readers/writers has found that their strategies differ. More specifically, L1 English readers have been shown to use significantly more and different strategies in general than ELL readers (Padron, Knight & Waxman, 1986; Knight, Padron & Waxman, 1985). Bean, Levine & Graham (1982) and Miramontes (1987, 1990) found that ELLs pay closer attention to textual features than L1 English readers. For example, Miramontes (1987, 1990) found that good Spanish readers paid significantly more attention to textual features such as graphic representation and grammatical structure in both L1 and L2 reading than good English readers. Although these

studies report no apparent loss in comprehension by ELLs, these researchers suggest that the strategies used by ELLs in their English reading are inappropriate because they are not the same as those employed by successful L1 English readers. However, the reading performance of the ELLs as reported in this study does not back up this claim. Rather, the pattern of strategies employed by successful ELL readers and writers may be more appropriately construed as an equally effective but different path to literacy development in comparison to that exhibited by L1 readers and writers.

An explanation of the differences between successful ELL and L1 readers can be offered in terms of the former's having access to a bilingual reservoir of literacy skills and strategies in contrast to the latter's monolingual pool of resources. Langer et al. (1990) and Jimenez et al. (1996) add support to this possibility by providing evidence that successful ELL readers maximize what they know by using their L1 to translate, elaborate, and hypothesize when making sense of English text. Edelsky and Jilbert (1985) have made a similar claim: "children's bilingualism increases their options for making meaning" (p. 69). Such a notion sees reading in an L2 as part of a larger, *bilingual* process. Such a process is also supported by the research discussed earlier with respect to L1 spelling patterns and cognate vocabulary in L2 literacy (see also Nagy, McClure & Mir, 1997, for evidence concerning L1 syntactic influences on determining unfamiliar word meanings in L2 reading). It follows that attempts to get ELLs to adopt strategies that are similar to those of monolingual English readers may be misguided because they fail to acknowledge and draw on the full capacities of bilingual learners, which necessarily encompass contributions and knowledge from two languages.

Other Issues: Text Types and Genre

In addition to issues of strategy use, our understanding of L2 literacy development needs to take into account different types and genres of literacy. More specifically, Jimenez et al. (1996) and Langer et al. (1990) note that some ELLs have difficulty with more academic or cognitively-demanding types of texts (e.g., they find reports more difficult to read and understand than stories). Jimenez et al. (1996) also noted, in comparing successful L1 English readers with successful ELL readers in English, that the two groups differed qualitatively in terms of their concern for detail and the types and level of sophistication of the connections they made during literacy tasks. Bermudez and Prater (1994) suggest the need to provide opportunities for ELLs to develop more sophisticated expertise in the use of persuasive discourse while Langer et al. (1990) observe that ELLs transitioning into English literacy have difficulty interpreting decontextualized reading comprehension questions, a finding also reported by Field (1996) in a descriptive study of ELLs who were transitioning into English literacy. Two studies that differ significantly in their focus, and due to the case-study nature need to be interpreted with caution, also support the notion that ELL readers/writers can develop social and critical aspects of L2 literacy in ways similar to that of English L1 readers/writers (Galindo, 1993; Samway, 1993; Urzua, 1987). Bringing these broader literacy issues back to a consideration of the construct of common underlying proficiencies, as Jimenez (2000) and Galindo (1993) suggest, ELLs need literacy development experiences that are connected to their bilingual abilities and bicultural status.

Summary

In summary, research that has sought to define the relationship between L1 literacy and L2 literacy has found that L1 literacy does not detract from L2 literacy development but rather

contributes to and supports its development. In effect, those ELLs with successful L1 literacy experience progress more quickly and successfully in their L2 literacy development. Research also provides evidence for parallel abilities across languages, thereby supporting the construct of a common underlying proficiency for L1 and L2 literacy. In brief, the evidence reviewed in this section indicates that there can be additive developmental effects of L1 literacy development on L2 literacy development

Research that has examined the strategies employed by ELLs in L1 and L2 literacy tasks provides further insight into the processes of L2 reading and writing. Studies show that successful ELL readers and writers use similar strategies in both languages whereas less successful ELL readers and writers do not, apparently not capitalizing on the commonalities of literacy across languages. Furthermore, successful ELLs also make use of effective strategies not available to successful monolinguals; strategies that draw on knowledge of and relationships between the L1 and the L2.

Finally, studies that have focused on the context and content of literacy activities suggest that more attention needs to be given to developing further ELLs' abilities with respect to deeper and more cognitively demanding aspects of literacy. Research has shown that certain text types, such as factual reports as opposed to narratives, pose more difficulty for ELLs, as do more decontextualized literacy tasks. Researchers suggest that development and success in these more demanding literacy tasks can be facilitated by drawing on ELLs' sociocultural knowledge, including their L1 as well as L2 experiences.

Clearly, the research reviewed in this section supports an additive effect of L1 literacy on L2 literacy development, and provides the basis and impetus for future research in this area. Research that investigates ELLs' parallel abilities and development in both languages, such as

the use of effective strategies support the construct of a common underlying proficiency. Further research is needed to determine the nature of such strategies as well as investigations concerning instructional methods. The body of research reviewed also suggests that the L2 literacy development of ELLs is unique in terms of specific bilingual abilities and knowledge bases. Further research is needed to further our understandings of these learners.

Summary

The various L1 and L2 as well as oral and written proficiencies discussed in this chapter contribute in different yet complementary ways to L2 literacy development. These contributions appear to contribute to the development of a common underlying proficiency that serves both L1 and L2 literacy and create an awareness of systematic relationships between languages, allowing ELLs to draw on existing L1 knowledge in the service of L2 literacy. Furthermore, it appears L2 literacy is, in a sense, more than the sum of its parts, as ELLs appear to have unique abilities that result from their bilingual status.

Research that has focused on the relationship between L2 literacy and oral language proficiency in the L1 and L2 reveals a relationship between oral and written language in ELLs that is specific and complex. In particular, research that has examined the influence of L1 oral proficiency on L2 literacy found that not only did L1 oral proficiency not detract from L2 literacy development, but that specific aspects of L1 oral language proficiency, such as L1 emergent literacy, were more influential in L2 literacy than general aspects of L2 oral proficiency. It also appears that ELLs make use of L1 oral proficiency to draw on prior knowledge and experience, either in the absence of or in addition to similar levels of L2 oral proficiency, in the service of L2 literacy tasks. Findings from research concerned with the relationship between L2 oral proficiency and L2 literacy development suggest that a certain level

of L2 oral proficiency needs to be attained for a significant relationship to be evident. Furthermore, as with L1 oral language, specific literacy-related aspects of L2 oral proficiency, such as diversity of vocabulary and in-depth text understanding, appear to be more highly related to L2 literacy abilities than do more general or surface-level L2 oral abilities. Moreover, it appears that L2 literacy development can proceed to some extent even with limited L2 oral proficiency, provided that consideration is given to linguistic and prior experiential knowledge that ELLs have already acquired through the medium of their L1. If future research supports this conclusion, it would follow that instructional consideration of aspects of both L1 and L2 oral proficiency could optimize L2 literacy development, arguably beyond what can be achieved through the L2 alone. In sum, L1 and L2 oral proficiencies can contribute to L2 literacy development in a complementary fashion.

Results from research that has examined specific components of reading and writing further define L2 literacy development to include a complex set of influences, including common underlying proficiencies, influences from the L1, the learners' knowledge of relationships between languages, and typical developmental processes linked to the L2. Research on phonological awareness finds such awareness to be a common underlying ability that, once acquired, is manifest in both L1 and L2 literacy development. The findings reviewed here suggest that phonological awareness can be developed through the L1 and applied to the L2 or developed through the L2, even in ELLs with limited L2 proficiency. The influence of the L1 is evident from research that has looked at the development of L2 spelling. Studies using L2 word lists that contrast spelling patterns between the L1 and the L2 show L1 influence or 'negative transfer' in ELLs' spelling errors. On the other hand, studies that examined spelling errors spontaneously produced by ELLs found that other types of errors also correspond to

developmental patterns specific to the L2, similar to those made by native speakers. Research that has looked at the effect of cognate relationships between the L1 and L2 on L2 literacy development provides specific evidence of how ELLs can utilize knowledge of the L1 in acquiring vocabulary in the L2. However, this same research suggests that knowledge of specific orthographic and morphological correspondences can be enhanced, suggesting that there is a potential for crosslinguistic facilitation that is underutilized in L2 literacy development.

Perhaps the most direct crosslinguistic relationship discovered in this review is that between L1 literacy and L2 literacy. Research on this relationship finds that L1 literacy supports L2 literacy development. ELLs with initial L1 literacy experiences, such as emergent and family literacy, as well as those with well developed L1 literacy experiences, progress more quickly and successfully in L2 literacy development. Research findings reviewed here also provide evidence for parallel abilities across languages, supporting the common underlying proficiency construct. These parallel abilities are evidenced quite consistently in studies that focus on the strategies used by ELLs in L1 and L2 literacy tasks, where ELLs who are successful in L2 literacy tasks use similar strategies in both their L1 and their L2, viewing literacy in either language as a similar event. Less successful ELL readers and writers use different and less effective strategies and see L1 and L2 literacy tasks as different. Furthermore, ELLs appear to utilize different yet effective strategies in L2 literacy tasks in comparison to monolinguals, strategies that appear to stem from their bilingualism. The final set of studies reviewed in this chapter calls attention to an additional set of issues related to the content and types of literacy tasks that ELLs confront in school. This research suggests that ELLs need more exposure to and instruction relevant to complex genres of literacy.

When considered together, the crosslinguistic and crossmodal influences on L2 literacy development that have been reviewed in this chapter form a complex yet coherent picture. At the same time, it is important to note that the picture is at best preliminary and considerably more research in most domains is required to draw stable and definitive conclusions.

References

- Adams, M. (1990). *Beginning to read*. Cambridge: MIT Press.
- Bean, Levine & Graham (1982). (1982). Beginning ESL readers' attention to the graphemic features of print. *Reading Improvement*, 18(4), 346-349.
- Bermudez, A. B., & Prater, D. L. (1994). Examining the effects of gender and second language proficiency on Hispanic writers' persuasive discourse. *Bilingual Research Journal*, 18(3-4), 47-62.
- Buriel, R., & Cardoza, D. (1998). Sociocultural correlates of achievement among three generations of Mexican-American high school seniors. *American Educational Research Journal*, 25(2), 177-192.
- Calero-Breckheimer, A., & Goetz, E. (1993). Reading strategies of biliterate children for English and Spanish texts. *Reading Psychology: An International Quarterly*, 14, 177-204.
- Carlisle, J., Beeman, M., Davis, L., & Sparim, G. (1999). Relationship of metalinguistic capabilities and reading achievement for children who are becoming bilingual. *Applied Psycholinguistics*, 20(4), 459-478.
- Collier, V. (1987). Age and rate of acquisition of second language for academic purposes. *TESOL Quarterly*, 21(4), 617-641.
- Cronnell, B. (1985). Language influences in the English writing of third-and sixth-grade Mexican-American students. *Journal of Educational Research*, 78, 168-173.
- Cummins, J. (1979). Linguistic interdependence and the educational development of bilingual children. *Review of Educational Research*, 49, 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: Los Angeles: National Dissemination and Assessment Center.
- Cummins, J. (1991). Interdependence of first and second-language proficiency in bilingual children. In E. Bialystok (Ed.), *Language Processing in Bilingual Children* (pp. 70-89). Cambridge: Cambridge University Press.
- Cummins, J. (1992). Empowerment through biliteracy. In J.V. Tinajero and A.F. Ada (Eds.), *The power of two languages: Literacy and biliteracy for Spanish-speaking students*. New York: McGraw-Hill.
- Cummins, J. (1997). Cultural and linguistic diversity in education: A mainstream issue? *Educational Review*, 49, 99-107.
- Durgunoglu, A., Nagy, W., & Hancin-Bhatt, B. (1993). Cross-language transfer of phonological awareness. *Journal of Educational Psychology*, 85(3), 453-465.
- Edelsky, C., & Jilbert, K. (1985). Bilingual children and writing: Lessons for all of us. *Volta Review*, 87(5), 57-72.
- Fashola, O., Drum, P., Mayer, R., & Kang, S. (1996). A cognitive theory of orthographic transition: Predictable errors in how Spanish speaking children spell English words. *American Educational Research Journal*, 33(4), 825-843.
- Fernandez, R. M. & Nielsen, F. (1986). Bilingualism and Hispanic scholastic achievement: Some baseline results. *Social Science Research*, 15(1), 43-70.
- Field, M. (1996). Pragmatic issues related to reading comprehension questions: A case study from a Latino bilingual classroom. *Issues in Applied Linguistics*, 7(2), 209-224.
- Galindo, R. (1993). The influence of peer culture on Mexican-origin bilingual children's interpretations of a literacy event. *The Bilingual Research Journal*, 17(3-4), 71-99.

- Goldstein, B., Harris, K., & Klein, M. (1993). Assessment of oral storytelling abilities of Latino junior high school students with learning handicaps. *Journal of Learning Disabilities*, 26(2), 138-143.
- Hacin-Bhatt, B., & Nagy, W. (1994). Lexical transfer and second language morphological development. *Applied Psycholinguistics*, 15(3), 289-310.
- Heath, S. (1983). *Ways with words*. Cambridge: Cambridge University Press.
- Hsia, S. (1992). Developmental knowledge of inter-and intraword boundaries: Evidence from American and Mandarin Chinese speaking beginning readers. *Applied Psycholinguistics*, 13(3), 341-372.
- Hudelson, S. (1994). Literacy development of second language children. In F. Genesee (Ed.), *Educating second language children: The whole child, the whole curriculum, the whole community* (pp.129-158). Cambridge: Cambridge University Press.
- Jimenez, R. T. (2000). Literacy and the identity development of Latina/o students. *American Educational Research Journal*, 37(4), 971-1000.
- Jimenez, R., 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.
- Kennedy, E., & Park, H. (1994). Home language as a predictor of academic achievement: A comparative study of Mexican- and Asian-American youth. *The Journal of Research and Development in Education*, 27(3), 188-194.
- Knight, S., Padron, Y., & Waxman, H. (1985). The cognitive reading strategies of ESL students. *TESOL Quarterly*, 19(4), 789-791.
- Lado, R. (1957). *Linguistics across cultures*. Ann Arbor: University of Michigan Press.

- Lanauze, M., & Snow, C. (1989). The relation between first- and second-language writing skills: Evidence from Puerto Rican elementary school children in bilingual programs. *Linguistics and Education, 1*(4), 323-339.
- Langer, J. A., Barolome, L., & Vasquez, O. (1990). Meaning construction in school literacy tasks: A study of bilingual students. *American Educational Research Journal, 27*(3), 427-471.
- Lindholm, K., & Aclan, Z. (1991). Bilingual proficiency as a bridge to academic achievement: Results from bilingual/immersion programs. *Journal of Education, 173*(2), 99-113.
- Maguire, M. H. & Graves, B. (2001). Speaking personalities in primary school children's writing. *TESOL Quarterly, 35*, 561-593.
- MacSwan, J., & Rolstad, K. (2003). Linguistic diversity, schooling, and social class: Rethinking our conception of language proficiency in language minority education. In C.B. Paulston and G.R. Tucker (Eds.), *Sociolinguistics: The essential readings* (pp. 329-340). Malden, MA: Blackwell.
- Miramontes, O. (1987). Oral reading miscues of Hispanic students: Implications for assessment of learning disabilities. *Journal of Learning Disabilities, 20*(10), 627-632.
- Miramontes, O. (1990). A comparative study of English oral reading skills in differently schooled groups of Hispanic students. *Journal of Reading Behavior, 22*(4), 373-394.
- Nagy, W., Garcia, G., Durgunoglu, A., & Hancin-Bhatt, B. (1993). Spanish-English bilingual students' use of cognates in English reading. *Journal of Reading Behavior, 25*(3), 241-259.
- Nagy, W. E., McClure, E. F., Mir, M. (1997). Linguistic transfer and the use of context by Spanish-English bilinguals. *Applied Psycholinguistics, 18*(4), 431-452.

- Nguyen, A., & Shin, F. (2001). Development of the first language is not a barrier to second language acquisition: Evidence from Vietnamese immigrants to the United States. *International Journal of Bilingual Education and Bilingualism*, 4(3), 159-164.
- Nielsen, F. & Lerner, S. (1986). Language skills and school achievement of bilingual Hispanics. *Social Science Research*, 15, 209-240.
- Padron, Y., Knight, S., & Waxman, H. (1986). Analyzing bilingual and monolingual students' perceptions of their reading strategies. *The Reading Teacher*, 39(5), 430-433.
- Padron, Y., & Waxman, H. (1988). The effect of ESL students' perceptions of their cognitive strategies on reading achievement. *TESOL Quarterly*, 22(1), 146-150.
- Peregoy, S. (1989). Relationship between second language oral proficiency and reading comprehension of bilingual fifth grade students. *NABE Journal*, 13(3), 217-234.
- Peregoy, S., & Boyle, O. (1991). Second language oral proficiency characteristics of low, intermediate and high second language readers. *Hispanic Journal of Behavioral Sciences*, 13(1), 35-47.
- Perez, E. (1981). Oral language competence improves reading skills of Mexican American third graders. *The Reading Teacher*, 35(1), 24-27.
- Porter, R. (1990). *Forked tongue: The politics of bilingual education*. New York: Basic Books.
- Reese, L., Garnier, H., Gallimore, R., & Goldenberg, C. (2000). Longitudinal analysis of the antecedents of emergent Spanish literacy and middle-school English reading achievement of Spanish-speaking students. *American Educational Research Journal*, 37(3), 633-662.
- Roberts, T., & Corbett, C. (1997). *Efficacy of explicit English instruction in phonemic awareness and the alphabetic principle for English learners and English proficient kindergarten*

- children in relationship to oral language proficiency, primary language and verbal memory.* (ERIC Document Reproduction Service No. ED 417 403).
- Rossell, C. H. & Baker, K. (1996). The educational effectiveness of bilingual education. *Research in the Teaching of English, 30*(1), 7-74.
- Royer, J., & Carlo, M. (1991). Transfer of comprehension skills from native to second language. *Journal of Reading, 34*(6), 450-455.
- Samway, K. D. (1993). This is hard, isn't it?: Children evaluating writing. *TESOL Quarterly, 27*(2), 233-257.
- Saville-Troike, M. (1984). What really matters in second language learning for academic achievement? *TESOL Quarterly, 18*(2), 199-219.
- Snow, C. E., Burns, M. S., & Griffin, P. (1998). *Preventing reading difficulties in young children.* Washington: National Academy of Sciences.
- Sulzby, E. & Teale, W. (1991). Emergent literacy. In R. Barr, M. Kamil, P. Mosenthal, & P. Pearson (Eds.), *Handbook of reading research*, (Vol 11. pp.727-758). New York: Longman.
- Terrasi, S. (2000). *Phonemic awareness skills in kindergarten students from English and non-English speaking homes.* (ERIC Document Reproduction Service No. ED 441 220).
- Tompkins, G.E., Abramson, S., & Pritchard, R.H. (1999). A multilingual perspective on spelling development in third and fourth grades. *Multicultural Education, 6*(3), 12-18.
- Torgesen, J. K., Alexander, A. W., Wagner, R. K., Rashotte, C. A., Voeller, K. S., & Conway, T. (2001) Intensive remedial instruction for children with severe reading disabilities: Immediate and long-term outcomes from two instructional approaches. *Journal of Learning Disabilities, 34*, 35-58.

Toukoma, P. & Skutnabb-Kangas, T. (1977). *The intensive teaching of the mother tongue to migrant children of pre-school age and children in the lower level of comprehensive school*. Helsinki: The Finnish National commission for UNESCO.

Urzua, C. (1987). You stopped too soon: Second language children composing and revising. *TESOL Quarterly*, 21(2), 279-303.

Wagner, R. K., & Torgesen, J.K. (1987). The nature of phonological processing and its causal role in the acquisition of reading skills. *Psychological Bulletin*, 101, 192-212.

Zutell, J., & Allen, V. (1988). The English spelling strategies of Spanish-speaking bilingual children. *TESOL Quarterly*, 22(2), 333-340.

TABLE 1

SUMMARY OF RESEARCH ON L1 ORAL PROFICIENCY AND L2 LITERACY

Authors	Sample Characteristics	Grade Levels	Comparison Groups	Outcome Measures	Results
Buriel & Cardoza (1998)	- Approx. 11,300 1 st , 2 nd , 3 rd , generation Hispanics - southwestern USA - various programs	high school sophomores /seniors	- correlations within groups and across group comparisons	Survey questionnaire: - educational aspirations - SPAN language background (4 pt scale for oral and written SPAN proficiency, home language and mother tongue) - SES variables - standardized reading test scores	- ANOVA showed 1 st and 2 nd generation had greater L1 oral proficiency and literacy skills than 3 rd generation - multiple regression analysis showed no relationship between language background and reading scores for 1 st and 2 nd generation; for 3 rd generation those with greater L1 oral proficiency had lower reading scores
Fernandez & Nielsen (1986)	- 16, 046 ENG monolingual Hispanics, bilingual Hispanics, ENG monolingual whites, Bilingual whites - various programs	high school	- within and across group comparisons	- reading and vocabulary test scores - self assessed ENG proficiency in reading and writing - self assessed SPAN or other language proficiency in reading and writing - use of other language	-Regression analysis showed proficiency in ENG and other language positively related to achievement
Kennedy & Park (1994)	- 1952 Hispanic-Americans; 1131 Asian-Americans - nationwide sample - various programs	8th	- correlations within groups and across group comparisons	- survey/questionnaire: ▪ home language background	- multiple regression analysis showed home language irrelevant to grades and standardized reading scores for Hispanics; speaking language other than ENG at home had a negative relationship with standardized test scores in

				<ul style="list-style-type: none"> ▪ social psychological variables ▪ student effort - self reported ENG grades - standardized reading test scores 	reading for Asians
Lanauze & Snow (1989)	<ul style="list-style-type: none"> - 38 SPAN L1 Hispanics - New Haven, CT - bilingual program 	4 th and 5 th	- language proficiency level group comparisons	<ul style="list-style-type: none"> - SPAN and ENG teacher-assessed language proficiency (oral, aural and reading skills combined, but based primarily on oral skills) – 2 point scale (good or poor). - picture description writing task scored for complexity, sophistication and semantic content 	<ul style="list-style-type: none"> - ANOVA showed children good in SPAN but poor in ENG scored similarly to those good in both languages, used more complex and sophisticated language than those poor in both languages - Correlations showed good in both group - writing skills independent; good in SPAN but poor in ENG transferred skills from SPAN to ENG; poor in both were not transferring skills
Langer, Barolome & Vasquez (1990)	<ul style="list-style-type: none"> - 12 Hispanics from bilingual homes - northern California - bilingual program 	5 th	- detailed ethnographic study – within group comparisons, case studies	<ul style="list-style-type: none"> - student interviews and school records to assess L1 and L2 proficiencies - classroom observation - Passage reading sessions <ul style="list-style-type: none"> ▪ 2 different genre/text type passages (story and report) ▪ during reading ‘envisionment’ questions ▪ post-reading ‘probing’ questions ▪ oral and written passage recall - oral L2 proficiency ratings 	<p><u>-Descriptive statistics and extensive qualitative measures showed students relied on knowledge of SPAN to support understanding of ENG text, increasingly so with more difficult texts</u></p> <ul style="list-style-type: none"> - competence in SPAN enriched reading in L1 and L2
Nielsen & Lerner (1986)	<ul style="list-style-type: none"> - large sample (approx. 1,000) of bilingual Hispanics - nationwide - various programs 	high school seniors	- within group comparisons	<ul style="list-style-type: none"> - national survey <ul style="list-style-type: none"> ▪ ENG reading and writing proficiency ▪ SPAN reading and writing proficiency ▪ SES, LOR 	<ul style="list-style-type: none"> - Factor Analysis showed language proficiency and reading ability not highly related. Other factors more significant. - Concluded no negative effect of bilingualism on school achievement

				- scores on reading and vocabulary tests	
Reese, Garnier, Gallimore, & Goldenberg (2000)	- 121 L1 SPAN ELLs - 107 in transitional bilingual program - Los Angeles CA area	followed from K to 7 th grade	- longitudinal within group correlations	- in-depth home interviews <ul style="list-style-type: none"> ▪ family literacy practices (parents use of ENG or SPAN literacy at work, reading aloud to child) - student achievement <ul style="list-style-type: none"> ▪ SPAN early literacy assessment (e.g. identify letters and corresponding sounds, oral comprehension on story read aloud, knowledge of print conventions) ▪ standardized reading tests in language of instruction (EABE, CTBS) and school records ▪ standardized tests of ENG reading performance in grade 7 - ENG language proficiency <ul style="list-style-type: none"> ▪ Bilingual Syntax Measure or IDEA Proficiency test - SPAN proficiency assumed	- path analysis showed family literacy practices predicted emergent SPAN literacy and ENG proficiency which in turn predicted grade 7 reading achievement
Saville-Troike (1984)	- 19 various L1 ELLs - all L1 literate - well educated family background - mainstream ENG, ESL and L1 instruction (30min/day).	2 nd to 6 th	- retrospective analysis - within group comparisons	- informal parent and teacher interviews <ul style="list-style-type: none"> ▪ home language and personality factors - interviews with students in ENG <ul style="list-style-type: none"> ▪ language use ▪ grammatical and content info - ESL classroom observations	- 3 out of 5 (narrative numbers) top achievers used native language to figure out

				<ul style="list-style-type: none">▪ language use▪ verbal interaction- Northwest Syntax Screening Test (ENG)- Functional Language Survey (ENG)- Bilingual Syntax Measure (ENG)- reading subtest scores of the CTBS	
--	--	--	--	--	--

TABLE 2

SUMMARY OF RESEARCH ON L2 ORAL PROFICIENCY AND L2 LITERACY

Authors	Sample Characteristics	Grade Levels	Comparison Groups	Outcome Measures	Results
Goldstein, Harris & Klein (1993)	- 31 Hispanic ELLs - currently in program for learning handicaps - 2 schools in 2 districts in southern California - bilingual education in earlier grades	7 th , 8 th and 9 th	- within group comparisons	- reading comprehension subtest of Peabody Individual Achievement Test - oral production subscale of Language Assessment Scale (standardized story retell task), 2 scoring methods: standard scoring procedure (surface – sentence structure and vocabulary use in dev of coherent storyline); story structure analysis (deeper - types of story structures)	- Correlational analysis showed significant positive correlation between adapted story structure analysis and reading comprehension - greater relationship between story telling ability and reading comprehension scores, than surface structure analysis and reading comprehension scores.
Lindholm & Aclan (1991)	- 249 students: 159 L1 SPAN;90 L1 ENG - northern California – 2-way SPAN/ENG immersion (initial reading instruction in SPAN)	1 st through 4 th	- comparison of High (L2H, L1H), Medium (L2M, L1M) and Low (L2L, L1H/M?) bilingual proficiency groups	- Bilingual proficiency, ENG and SPAN scores on Student Oral Language Observation Matrix - CTBS (reading)	- High group significantly outscored Medium and Low groups on reading scores at grade 3 level, - ENG reading instruction only started in grade 3 - by grade 4, High group performing at grade level average in ENG reading
Peregoy (1989)	- 6 L1 SPAN ELLs - transitional bilingual program	5 th	- across group comparisons of high, intermediate and low ENG reading proficiency level groups	- ENG oral language production measure – story telling from 4-frame picture sequence scored for fluency, semantic content, grammatical complexity and grammatical correctness - ENG reading comprehension measure – 4 reading passages ▪ 1 st read orally, 2 nd and	- high, intermediate and low ENG reading proficiency levels-correspond to initial placement in ENG reading instruction based in part on oral proficiency test score - descriptive statistics showed general correspondence between L2 oral proficiency and L2 reading comprehension - specifically limited vocabulary and syntactic knowledge impeded reading comprehension, however assistance provided facilitated reading comprehension for low group

				<p>3rd silently, followed by multiple choice comprehension questions</p> <ul style="list-style-type: none"> 4th read one line at a time, required to make interpretations and predictions after each line 	
Peregoy & Boyle (1991)	<p>- 57 Hispanic ELLs: 38 in bilingual ed.; 19 in mainstream ENG. (25 began reading instruction in ENG; 32 began in SPAN)</p> <p>- urban and semi-rural schools in northern CA</p>	3 rd	<p>- within and between reading performance group (high, intermediate, low) comparisons</p>	<p>- auditory vocabulary and word reading subtest of Stanford Diagnostic Reading Test</p> <p>- oral and silent reading of appropriate passages</p> <p>- multiple choice questions, and explanations for choice</p> <p>- L2 oral proficiency assessed through individual administration of simulated science lesson</p>	<p>- L2 oral transcripts coded for surface (gram. Complexity and well-formedness) and deep (informativeness and comprehension) aspects of L2 oral proficiency</p> <p>- significant difference on all measure between low and high reading groups.</p> <p>- significant differences on well-formedness and informativeness between intermediate and high group</p>
Perez (1989)	<p>- 75 Hispanics (majority L1 SPAN)</p> <p>- 75 member control group</p> <p>- Texas public schools</p> <p>- program unspecified</p>	3 rd	<p>- Instructional Intervention and Control group</p> <p>- pre and post tests</p> <p>Instructional Intervention:</p> <p>- oral language activities related to reading</p>	<p>- Prescriptive Reading Inventory pretest</p> <p>- experimental students participated in teacher led, oral language activities related to concepts in readers</p> <p>- posttest</p>	<p>- experimental group showed significant improvement on Reading Inventory compared to controls</p>
Reese, Garnier, Gallimore, & Goldenberg (2000)	<p>- 121 L1 SPAN ELLs</p> <p>- 107 in transitional bilingual program</p> <p>- Los Angeles CA area</p>	followed from K to 7 th	<p>- longitudinal within group correlations</p>	<p>- in-depth home interviews</p> <ul style="list-style-type: none"> family literacy practices (parents use of ENG or SPAN literacy at work, reading aloud to child) student achievement SPAN early literacy assessment (e.g. identify letters and corresponding sounds, oral comprehension on 	<p>- path analysis showed family literacy practices predicted emergent SPAN literacy and ENG proficiency which in turn predicted grade 7 reading achievement</p> <p>- greater oral ENG proficiency highly predictive of reading performance in grade 7</p>

				<p>story read aloud, knowledge of print conventions)</p> <ul style="list-style-type: none"> ▪ standardized reading tests in language of instruction (EABE, CTBS) and school records ▪ standardized tests of ENG reading performance in grade 7 <p>- ENG language proficiency</p> <ul style="list-style-type: none"> ▪ Bilingual Syntax Measure or IDEA Proficiency test <p>- SPAN proficiency assumed</p>	
Royer & Carlo (1991)	- 49 SPAN L1 ELLs	followed from grades 5 to 6	- longitudinal comparisons	<p>- L1 and L2 listening comprehension scores</p> <p>- L1 and L2 reading comprehension scores</p>	<p>- correlational and regression analyses showed SPAN reading comprehension at grade 5 to be best predictor of ENG reading comprehension at grade 6</p> <p>- ENG listening skills second best predictor of ENG reading</p>
Saville-Troike (1984)	<p>- 19 various L1 ELLs</p> <p>- all L1 literate</p> <p>- well educated family background</p> <p>- mainstream ENG, ESL and L1 instruction (30min/day).</p>	2 nd to 6 th	<p>- retrospective analysis</p> <p>- within group comparisons</p>	<p>- informal parent and teacher interviews</p> <ul style="list-style-type: none"> ▪ home language and personality factors <p>- interviews with students in ENG</p> <ul style="list-style-type: none"> ▪ language use ▪ grammatical and content info <p>- ESL classroom observations</p> <ul style="list-style-type: none"> ▪ language use ▪ verbal interaction <p>- Northwest Syntax Screening Test (ENG)</p> <p>- Functional Language Survey (ENG)</p> <p>- Bilingual Syntax</p>	<p>- language test scores did not predict achievement on reading subtest</p> <p>- number of different vocabulary items used in oral ENG production (interview data) significantly correlated with reading achievement, verbosity did not.</p>

				Measure (ENG) - reading subtest scores of the CTBS	
--	--	--	--	--	--

TABLE 3

SUMMARY OF RESEARCH ON COMPONENT SKILLS OF L2 LITERACY DEVELOPMENT

Authors	Sample Characteristics	Grade Levels	Comparison Groups	Outcome Measures	Results
Carlisle, Beeman, Davis, Sparim (1999)	- 57 total L1 SPAN ELLs - Chicago - maintenance bilingual program	1 st , 2 nd , 3 rd	- Fall and Spring testings - within group comparisons	- SPAN and ENG receptive vocabulary tests (PPVT-R/TVIP) - Test of Auditory Analysis Skills (TAAS) in ENG - Listening comprehension & letter-word identification tests in ENG - ENG phonological awareness - ENG and SPAN vocabulary definition task (formal and informal definitions) (Snow, 1990) - ENG reading comprehension (subtest of CAT)	-Regression Analysis showed significant portion of variance in Reading Comprehension explained by extensiveness of vocabulary in L1 and L2 and Phonological awareness - Phonological awareness significantly correlated with ENG vocabulary
Cronnell (1985)	- 170 L1 SPAN ELLs - Los Angeles, California - some bilingual classes.	3 rd , 6 th	- within group and grade level comparisons	- ENG spelling errors in writing samples	- descriptive statistics showed a significant portion of errors can be attributed to SPAN, interlanguage or Chicano ENG
Durgunoglu, Nagy & Hancin-Bhatt (1993)	- 27 L1 SPAN ELLs - Transitional Bilingual program	1st	- within group comparisons and intercorrelations	- letter naming ability test - SPAN phonological awareness test - SPAN & ENG oral proficiency tests (pre-LAS) - SPAN and ENG word recognition tests - transfer (SPAN to ENG word recognition) tests	-Correlational Multiple Regression Analysis showed SPAN phonological awareness a significant predictor of both SPAN and ENG word recognition - SPAN and ENG oral proficiency did not correlate with word recognition or phonological awareness
Fashola, Drum, Mayer, & Kang (1996)	- 38 L1 SPAN ELLs - 34 L1 ENG - southern California	2 nd , 3 rd , 5 th , 6 th	- within and across group comparisons	- 40 common ENG words selected for ENG/SPAN contrastive spellings	-ANOVA showed significant difference between SPAN and ENG, and younger and older students on predicted (SPAN to ENG contrastive analysis)

	- program unspecified			- ENG spelling test	errors
Hancin-Bhatt & Nagy (1994)	- 196 L1 SPAN ELLs - large Midwest city - bilingual classrooms	4 th , 6 th , 8 th	- within and between group comparisons	- background questionnaire - language use questionnaire - ENG to SPAN cognate and non-cognate translation task - SPAN yes/no vocabulary test (recognition) - ENG-SPAN systematic suffix relationship matching task	-ANOVA showed developmental trend in recognition of cognates compared to non-cognates - limited knowledge of SPAN – EN systematic relationships between suffixes Multiple regression analysis showed knowledge of SPAN cognates accounted for significant amount of variance in translation task; relationship between cognate translation ability and language background/use factors
Hsia, Sophie (1992)	- 15 L1 ENG Ks - 15 L1 Mandarin Ks - 15 L1 Mandarin 1st graders - greater Boston area - middle, upper-middle class - all Mandarin L1s attended Chinese language weekend school - American preschools and Ks	Kindergarten and 1st	- within and between group comparisons - 2 testing session - 6 months apart	- reading readiness test - children's invented spellings - Mandarin phoneme segmentation task - ENG sentence segmentation task	- ANOVA found no significant main effects - over time native-like constraints acquired
Jimenez, Garcia & Pearson (1996)	- 11 Hispanic ELLs: 8 successful ENG readers; 3 marginally successful ENG readers - 3 monolingual ENG successful ENG readers - 3 schools in 2 school districts - some bilingual schooling	6 th and 7th	- within and across group comparisons	- prior knowledge assessment background questionnaire - teacher and standardized test categorization into successful and unsuccessful readers - prompted/unprompted think aloud strategy assessment - text retellings - student interviews	- cognate searching strategy and translating used by all 8 Hispanic successful readers
Nagy, Garcia, Durgunoglu, Hancin-Bhatt (1993)	- 74 L1 SPAN ELLs - 2 urban elementary schools - ELLs in 1 school enrolled in bilingual	4 th , 5 th , 6 th	- within group comparisons	- multiple choice test of target cognates - SPAN and ENG yes/no vocabulary tests of target/non-target cognates	-MANOVA showed significant difference in cognate over non-cognate recognition multiple regression analysis showed transfer of SPAN lexical knowledge transfer to ENG, dependent on meta-linguistic awareness of

	education - ELLs in other school in ENG only			and non-cognates - ENG reading comprehension	recognizing words as cognates – could be enhanced with morphological training
Roberts & Corbett (1997)	Intervention Group: - 16 L1 Hmong ELLs - 13 L1 ENG students Matched control group - 17 L1 Hmong; 1 L1 Laos ELLs - 11 L1 ENG - 2 additional comparison classes - suburban northern California - program unspecified	Kindergarten	- Intervention and control group comparisons - pre and post tested Intervention: - specific phonological instruction in ENG	- classroom observation, interviews, family literacy interviews - ENG phonological awareness tasks - for ELLs – Pre-LAS ENG proficiency test	-Multivariate Analysis showed ELLs in intervention group scored significantly higher on some measures of phonological awareness than ELLs in control group. Not significantly different than either L1 ENG group - significant improvement in Hmong rhyming, segmenting and blending for Hmong L1s
Terrasi (2000)	- 40 primarily Hispanic ELLs - 227 L1 ENG students - urban schools, south of Boston - program unspecified	Kindergarten	- within and across group comparisons - pre and post tested Intervention: - specific phonological instruction in ENG	- 6 ENG phonological awareness subtests	- descriptive statistics showed significant gains for both groups - larger gains for ELLs
Tompkins, Abramson & Pritchard (1999)	- 40 L1 SPAN, Hmong, Lao, Khmer ELLs - 10 L1 ENG - central California - 2 schools, low income and affluent - program unspecified	3 rd and 4 th	- within and across group comparisons (language background, grade and school)	- ENG spelling errors in journal writings	-ANOVA showed: similar spelling patterns regardless of language group; significant differences between schools - qualitative analysis showed errors to be largely interlanguage developmental
Zutell & Allen (1988)	- 108 L1 SPAN ELLs - large urban mideastern schools - bilingual program	2 nd , 3 rd , 4 th	- within group comparisons	- 5 word categories selected for SPAN ENG contrasting sound-letter name relationships - ENG spelling test	-Descriptive statistics showed no differences when grouped by grade - When grouped according to test success – less successful students produced more predicted SPAN influenced spellings

TABLE 4

SUMMARY OF RESEARCH ON L2 LITERACY AND L2 LITERACY

Authors	Sample Characteristics	Grade Levels	Comparison Groups	Outcome Measures	Results
Bean, Levine & Graham (1982)	- 16 L1 ENG gifted - 14 L1 ENG Remedial - 18 L1 SPAN intermediate ESL - 12 beginner ESL - Los Angeles, CA - ESL program	junior high	- between group comparisons	- graphemic identification task	- ANOVA showed beginning ESL students paid significantly more attention to graphemic level of reading
Bermudez & Prater (1994)	- 37 L1 SPAN ELLs: 18 in ESL; 19 already mainstreamed into ENG - 2 inner city schools in Southwest	4 th	- within and between group analyses	- essay samples, written in response to standard prompt designed to elicit persuasive writing	- ANOVA showed no difference in groups, suggesting that mainstreamed ELLs do not have a higher level of persuasive discourse needed to develop as writers
Buriel & Cardoza (1998)	- Approx. 11,300 1 st , 2 nd , 3 rd , generation Hispanics - southwestern USA - various programs	high school sophomores /seniors	- correlations within groups and across group comparisons	Survey questionnaire: - educational aspirations - SPAN language background (4 pt scale for oral and written SPAN proficiency, home language and mother tongue) - SES variables - standardized ENG reading test scores	- multiple regression analysis showed 3 rd generation students with greater SPAN literacy skills scored higher on reading test

Calero-Breckheimer, Goetz (1993)	- 26 L1 SPAN ELLs - major Texas city - bilingual education program	3 rd and 4 th	- within group comparisons	- line by line reading of ENG and SPAN texts on computer (reading time and lookbacks recorded) - after reading free reporting of strategy use - strategy use checklist	- ANOVA and correlational analysis showed students used same number of strategies regardless of language, strategy types highly correlated - more strategies in E positively correlated with higher scores on MC; more strategies in S, positively correlated with more gist recall
Collier (1987)	- 1,548 ELLs from 75 different language backgrounds - large public school system on East Coast - ESL program	- grades 4, 6, 8, 11 - ages 5 to 15	- cross-sectional data source - age of arrival, length of residence and grade level comparisons	- age of arrival - ENG proficiency upon arrival - literacy skills upon arrival - number of years of schooling in ENG - SRA test in reading	- minimum of 2 years of schooling in L1 for most rapid progress in academic development of L2 - age 8-11 achieved grade level norms most rapidly - in addition older students (age 12-15) experience greatest difficulty with academic aspects of L2 – probably due to more complex subject matter
Field (1996)	- 10 L1 SPAN ELLs - Santa Barbara, CA - transitional bilingual classroom	4 th	- qualitative description of students	- written answers to reading comprehension questions - video-taped/audio-taped group discussion in ENG and SPAN	- qualitative analysis showed students had difficulty inferencing, and correctly interpreting pragmatics of comprehension questions
Galindo (1963)	- 4 L1 SPAN L1 ELLs - urban setting in Southwest - bilingual Kindergarten	1 st	- qualitative descriptions	- observation, audio recordings of classroom literacy events - dialogue journals between writing partners	-students interpreted literacy events in terms of their own interests and in a manner to meet teacher's requirements
Jimenez (2000)	- 84 L1 SPAN ELLs - 1 L1 ENG Hispanics - midwestern city - transitional bilingual education / moved to mainstream ENG	4 th , 5 th , 6 th	- classroom and focal student qualitative analyses Intervention: bilingual strategic reading instruction	- classroom observations - teacher interviews - student think-alouds during reading - student interviews	- emergent findings showed increased awareness of literacy and basic cognitive operations related to test processing - support for linguistically sensitive, culturally relevant and cognitively challenging instruction which helps students view dual language background as a strength
Jimenez, Garcia & Pearson (1996)	- 11 Hispanics: 8 successful ENG readers; 3 marginally successful ENG readers - 3 monolingual ENG successful ENG readers	6 th and 7 th	- within and across group comparisons	- prior knowledge assessment background questionnaire - teacher and standardized test categorization into successful and unsuccessful readers - prompted/unprompted	- cognate searching strategy and translating used by all 8 Hispanic successful readers

	- 3 schools in 2 school districts - some bilingual schooling			think aloud strategy assessment - text retellings - student interviews	
Lanauze & Snow (1989)	- 38 SPAN L1 Hispanics - New Haven, CT - bilingual program	4 th and 5 th	- language proficiency level group comparisons	- SPAN and ENG teacher-assessed language proficiency (oral, aural and reading skills combined, but based primarily on oral skills) – 2 point scale (good or poor). - picture description writing task scored for complexity, sophistication and semantic content	- ANOVA showed children good in SPAN but poor in ENG scored similarly to those good in both languages, used more complex and sophisticated language than those poor in both languages - Correlations showed good in both group - writing skills independent; good in SPAN but poor in ENG transferred skills from SPAN to ENG; poor in both were not transferring skills
Langer, Barolome & Vasquez (1990)	- 12 Hispanics from bilingual homes - northern California - bilingual program	5 th	- detailed ethnographic study – within group comparisons, case studies	- student interviews and school records to assess L1 and L2 proficiencies - classroom observation - Passage reading sessions <ul style="list-style-type: none"> ▪ 2 different genre/text type passages (story and report) ▪ during reading ‘envisionment’ questions ▪ post-reading ‘probing’ questions ▪ oral and written passage recall - oral L2 language proficiency ratings	-ANOVA showed significant main effects for genre (better understanding of stories over reports) and language (SPAN over ENG); and type of question - better readers provided more abstract and decontextualized responses; poorer readers examples and explanations - those students with good meaning making strategies used these strategies in both languages - good strategies rather than ENG proficiency differentiated good and poor readers - competence in SPAN enriched reading in L1 and L2
Miramontes (1987)	- 40 Hispanics: 10 good ENG readers; 10 good SPAN readers; 10 ENG and 9 SPAN reading disabled. - 4 schools in large urban school district in California - SPAN/ENG bilingual program	4 th , 5 th , 6 th	- within and across group comparisons	- Miscue reading inventory - graded reading selections - miscue analysis and retellings	- ANOVA, Scheffe and factor analysis showed: - both groups of SPAN readers adhered significantly more closely to the text - good SPAN readers consistently used decoding strategies which adhered more closely to text in both languages. - learning disabled in SPAN reading group did not retain meaning of text in ENG, suggesting general lack of ENG proficiency – not reading disability

Miramontes (1990)	<ul style="list-style-type: none"> - 40 Hispanics: 10 good ENG readers (ENG at home, initial literacy in ENG); 10 good SPAN readers (initial literacy SPAN); 20 Mixed-dominance (L1 SPAN at home, ENG at school) - 2 large urban school districts in the Southwest - SPAN-ENG full bilingual program 	4 th , 5 th , 6 th	- within and between group analyses	<ul style="list-style-type: none"> - Oral reading sessions- - Miscue analysis - retelling 	<ul style="list-style-type: none"> - ANOVA, Scheffé, correlational and factor analyses showed: - Good SPAN readers significantly paid more attentions to form of text in both languages - Unique profile, successfully used SPAN reading strategies used ENG reading - different from good ENG and Mixed Dominance groups, but equally effective in comprehension - Good SPAN readers had significantly lower scores in retelling, but may be result of more limited oral ENG proficiency
Nagy, McClure, Mir (1997)	<ul style="list-style-type: none"> - 41 L1 SPAN ELLs in bilingual program, - 45 L1 SPAN in ENG mainstream program - 15 L1 ENG - urban school district 	7 th and 8 th	- within and across group comparisons	<ul style="list-style-type: none"> - language background questionnaire - ENG reading proficiency, TABE - SPAN reading proficiency (bilingual program only) - multiple choice –meaning of nonsense words in ENG context 	<ul style="list-style-type: none"> - ANOVA and correlational analyses support hypothesis that bilinguals are influenced by L1 syntactic knowledge when guessing meaning of unfamiliar words in ENG reading context
Nguyen & Shin (2001)	<ul style="list-style-type: none"> - 170 L1 Vietnamese ELLs - program unspecified 	5 th to 8 th	- within group comparisons	<ul style="list-style-type: none"> - self report questionnaire (likert scale, 16 Qs) of L1 and L2 competence, preference, attitudes. - Stanford Achievement Test (reading and language combined) scores 	<ul style="list-style-type: none"> - rank order correlation of SAT scores and self report competence in L1 literacy showed near zero correlation - no evidence that competence in L1 holds back ENG L2 literacy development
Padron, Knight & Waxman (1986) Knight, Padron & Waxman (1985)	<ul style="list-style-type: none"> - 23 L1 SPAN, 15 L1 ENG students - Houston, Texas - program unspecified 	3 rd and 5 th	- within and across group comparisons	<ul style="list-style-type: none"> - San Diego quick assessment graded word list - think alouds while reading passages from Ekwall reading inventory 	<ul style="list-style-type: none"> - monolingual students used significantly more strategies than bilinguals - groups used different strategies - monolinguals used concentrating, searching for details and self-generating questions significantly more - teacher expectations most often cited by bilinguals
Padron & Waxman (1988)	<ul style="list-style-type: none"> - 82 L1 SPAN ELLs - small industrial town 	3 rd , 4 th , 5 th	- pre and post testing	- Stanford diagnostic reading test	- multiple regression analysis showed 2 negative strategies to be negatively associated with reading

	near major southwestern city - ESL program			- 14 item reading strategy questionnaire	gains - less successful students used less sophisticated and inappropriate strategies
Reese, Garnier, Gallimore, & Goldenberg (2000)	- 121 L1 SPAN ELLs - 107 in transitional bilingual program - Los Angeles CA area	Followed from K to 7 th grade	- longitudinal within group correlations	- in-depth home interviews <ul style="list-style-type: none"> ▪ family literacy practices (parents use of ENG or SPAN literacy at work, reading aloud to child) - student achievement <ul style="list-style-type: none"> ▪ SPAN early literacy assessment (e.g. identify letters and corresponding sounds, oral comprehension on story read aloud, knowledge of print conventions) ▪ standardized reading tests in language of instruction (EABE, CTBS) and school records ▪ standardized tests of ENG reading performance in grade 7 - ENG language proficiency <ul style="list-style-type: none"> ▪ Bilingual Syntax Measure or IDEA Proficiency test - SPAN proficiency assumed	- path analysis showed family literacy practices predicted emergent SPAN literacy and ENG proficiency which in turn predicted grade 7 reading achievement - best SPAN readers earliest to transition to ENG reading instruction
Royer & Carlo (1991)	- 49 SPAN L1 ELLs - Holyoke, Mass. - transitional bilingual program	- followed from grades 5 to 6	- longitudinal comparisons	- L1 and L2 listening comprehension scores - L1 and L2 reading comprehension scores	- correlational and regression analyses showed SPAN reading comprehension at grade 5 to be best predictor of ENG reading comprehension at grade 6 - ENG listening skills second best predictor of ENG reading
Samway (1993)	- 9 ELLs - large school district in upstate New York	4 2 nd graders; 1 3 rd grader; 2 4 th grader; 2	- qualitative analysis - within and across group comparisons	- classroom observation - audio-taped writing conferences	- qualitative analysis showed students had awareness of many facets of writing evidenced through their evaluations of writing

	- pull-out ESL classes	6 th grader.		- informal interviews - children's evaluation of peer and own stories	
Urzua (1987)	- 4 Southeast Asian ELLs - transitioned to mainstream	4 th and 6 th	- observational study	- audio-taped process writing sessions, feedback etc. - dialogue journal writing	- ELLs develop skills areas of a sense of audience, voice and power of language similar to native ENG speaking children