demonstrated that book-reading interactions enhance children's vocabularies (Ninio, 1983; Senechal, LeFevre, Hudson, & Lawson, 1996), provide children with knowledge of language in and talk about books, expose children to print and literacy conventions (Dickinson, De Temple, Hirschler, & Smith, 1992; Snow & Ninio, 1986), and stimulate metalinguistic awareness (Bus, van IJzendorn, & Pelligrini, 1995).

With regard to how parents structure book-reading interactions, investigators have found that when reading to their young children, parents set up joint routines (Ninio & Bruner, 1978). Within these routines, parents ask a high percentage of questions (Anderson-Yockel & Haynes, 1994), adjust their teaching strategies as their children become more proficient in participating in the interactions (Ninio & Bruner, 1978; van Kleeck, Gillam, Hamilton, & McGrath, 1997), and produce more abstract utterances and questions when their children become preschool age (Pellegrini, Perlmutter, Galda, & Brody, 1990; van Kleeck et al., 1997). Although this research provides us with insights about early literacy activities, it is limited in that it has focused on the styles and behaviors of the mothers and children from the white middle class, which may or may not describe what occurs in families from other socioeconomic and cultural groups. The work that has been conducted on families from diverse backgrounds has focused on low-income families. This research, however, has primarily employed samples that consisted of (1) white, low-income children; (2) white and black children combined; or (3) children whose race/culture was not specified. Relatively few investigations have examined the practices of specific minority groups. Research on specific cultural groups, however, is essential, because we cannot assume that cultural differences do not occur between low-income families. In the following section, we review the literature on the book-reading practices of families from African American and Hispanic cultures. Specifically, we discuss how children's experiences differ from the white, middle-class children's experiences, experiences that complement interactions that take place in children's classrooms and address the impact these differences may have on children's learning in school.

The Quantity of Children's Book-Reading Experiences

Research on the quantity of children's book-reading experiences generally supports the conclusion that children from low-income homes and multicultural families are read to less frequently than white, middle-class children (cf. Anderson-Yockel & Haynes, 1994; Hammer, 2001). The Federal Interagency Forum on Child and Family Statistics (1999) found that 41% of families living below the poverty level read to their preschoolers on a daily basis as opposed to 61% of the families whose incomes were at or above the poverty level. Forty-four percent and 39% of African American and Hispanic families, respectively, read daily to their preschoolers as compared with 64% of the white families, demonstrating a clear difference between the mainstream culture and minority cultures.

The Quality of Children's Book-Reading Experiences

Book-Reading Experiences of African American Children

Like their white, middle-class counterparts, African American mothers provide a general interactional structure when looking at books with their children; however, variations in their styles were observed. Three studies have been identified in the literature that have investigated this area. The first study was conducted by Heath (1983), who demonstrated that children's preschool home experiences may differ greatly from the white, middle-class culture. Unlike the nearby mainstream community, the rural, African American families studied by Heath treated literacy activities as a group event. Texts were typically read out loud by adults to others in their group. The meanings of the texts were then jointly constructed as the group members discussed what was read. Children typically had no books, nor were they read to or taught how to read by adults. Rather, they were embedded in a world of environmental print. Adults exposed children to and expected them to tell oral narratives that were "fictionalized" truths or stories that were based on a real event but which emphasized the strengths of the storyteller. This also was found in the narratives told by African American 5-year-old children in a more recent study of African American children in the South (Vernon-Feagans, 1996). She also found sophisticated stories that were jointly created by children of different age levels and skills.

The next studies discussed demonstrate more subtle differences in the book-reading styles of African American mothers. Hammer (2001) described four book-reading styles used by mothers of low and middle socioeconomic status mothers with their infants. These families were living in an urban environment. The first style identified was a "modeling style," a style that one-third of the mothers in the low-SES group exhibited. Mothers who employed this style typically labeled the pictures in the book that served as a model for their children to imitate. The majority of mothers in the middle-SES group and one mother in the low-SES group used a second style, referred to as "different styles for different texts." In general, when looking at picture books with labels or minimal text, the mothers used a modeling style. When looking at books with text, however, they combined reading the text with providing their children models. The third style identified was "reading from the text." One mother in the middle-SES group read straight from the text and deviated from the printed word only when her child's attention to the text waned. The fourth style was labeled "limited periods of joint attention," which two low-SES and one middle-SES mother exhibited. Although all three of these mothers attempted to talk about the books with their children by labeling the pictures, their children did not display interest in the activity. It was hypothesized that the low-SES dyads engaged in book reading for short periods because, as the mothers reported, they were not accustomed to looking at books together. The middle-SES mother reported reading books to her child on a daily basis, but her child did not demonstrate an interest in them. It is important to note, however, that none of the mothers who participated in the study engaged in question-asking routines, a style that is commonly employed by white, middle-class mothers.

Pellegrini et al. (1990) studied an older group of children than Hammer (1999). These researchers investigated how mothers of preschoolers in Head Start provided a general structure to their interactions surrounding narrative and expository texts. In general, Pellegrini et al. (1990) found that mothers produced more low-, medium-, and high-demand strategies when reading expository texts (texts that they read more frequently at home) as opposed to narrative books, and that their children participated to a greater extent when looking at expository texts. In addition, when examining the cognitive demands that mothers placed on the children when looking at familiar and less familiar types of expository texts, these authors determined that the mothers produced more cognitive demands and used more metalinguistic verbs when reading familiar expository texts. Pellegrini et al. (1990) concluded that the mothers were adjusting their language according to their children's abilities and familiarity with the format of the text, a behavior, the authors argue, that white, middle-class mothers engage in with their children.

African American mothers' use of specific communicative acts during book reading have also been investigated to some extent, with the reference group varying in these studies. Hammer (1999) examined the communicative behaviors of low- and middle-SES African American mothers with 12- to 18-month-old infants. The two groups of mothers were similar in that they produced statements, questions, and responses with the same frequency. Low-SES mothers produced significantly more directives than did the middle-SES mothers. This may have been due to the fact that the low-SES mothers reported reading less frequently to their children, and, thus, they needed to use their language to structure their children's attention to the task at hand. Unlike white mothers of infants who set up question-asking routines, both the low- and middle-SES mothers produced relatively few questions.

Anderson-Yockel and Haynes (1994) compared the communicative acts produced by working-class African American and working-class white mothers when reading books to their toddlers. The two groups were similar with respect to frequency with which they produced the various types of communicative acts, with one exception. The African American mothers produced significantly fewer questions than did their white counterparts. This difference in the question-asking behaviors of the mothers had an impact on the children's verbalizations. Not surprisingly, Anderson-Yockel and Haynes (1994) discovered that the white children produced more question-related communications whereas the African American children produced more spontaneous vocalizations.

Thus, the few studies that have been conducted on African American mothers indicate that mothers from this cultural group employ a variety of styles when looking at books with their children, styles that differ from the book-reading routines that white, middle-class mothers display. The studies illustrate that African American mothers resemble white, middle-class mothers in that they adjust their communication (i.e., to involve more abstract language and thought) according to their children's abilities and familiarity with the text genre.

Book-Reading Experiences of Hispanic Children

Our understanding of the book-reading experiences of Hispanic children from low-income homes is severely limited, even in comparison to our knowledge about African American families. Few studies have examined the home literacy experiences of Hispanic preschoolers. The investigations that have been conducted either explored the general aspects of the children's environment or studied the effects of a home literacy program. Specifically, two studies examined the contexts in which literacy events occurred in children's lives. When studying preschoolers from low-income Hispanic, African American, and white homes, Teale (1986) found, contrary to a commonly held belief that children from low-income homes had little exposure to literacy, that children from all three cultural groups were exposed to literacy experiences throughout their daily routines. However, within all three groups, the children were exposed to a range of and varying amounts of literacy events in their respective homes. Similarly, Delgado-Gaitan (1990) studied the home literacy opportunities of school-age, Mexican American children (the SES level of the children was not specified). She too found a variety of opportunities available to the children that ranged from the parents providing emotional support for the children's efforts in school to the parents reading books to their children.

Goldenberg, Reese, and Gallimore (1992) investigated Hispanic kindergartners' literacy experiences by studying the effects of a home literacy program which involved sending photocopied storybooks and worksheets home with the children. The results indicated that use of the worksheets but not use of the storybooks was related to children's literacy achievement. The authors suggested that the reason the worksheets were effective was that the worksheets were "more consistent with parents' views of how children learn to read and, therefore, were used in a way that was more meaningful both to parents and children" (Goldenberg et al., 1992, p. 525; see also Chapter 15).

Although these studies on the home environments of Hispanic children are important, the role of bilingualism is an essential aspect of children's development that needs to be understood in relationship to children book-reading and other literacy experiences. However, no studies were found in the literature that specifically examined this issue. Studies have been conducted that examined the children's acquisition of two languages in the home and in school as well as that have studied how to support children's development of both Spanish and English in schools (e.g., Genesee, 1994; Tabors 1997; Vasquez, Pease-Alvarez, & Shannon, 1994; Zentella, 1997), indicating a critical gap in the research base.

The Potential Impact of These Differences on Children's Language Development and School Success

The literacy styles employed by families from the mainstream culture complement the practices used in preschool and elementary classrooms. Thus, children from these families are at an advantage at school because of the similarity between interactional styles, life experiences, and uses of literacy in the home and school environment (Heath & Branscombe, 1986; Panofsky, 1994). Specifically, parents from the mainstream culture employ story grammars and question-asking routines that resemble those used in the schools. As a result, children who do not have such experiences are at risk for school failure for several reasons (Vogt, Jordan, & Tharp, 1987).

First, if book reading is not a common occurrence at home, children may not have gained the abilities that are thought to come from exposure to books at home, which includes vocabulary development, knowledge of print conventions, and emerging metalinguistic awareness. Second, children from different cultures may not have experienced the events the characters encounter in the stories used in school (Bloome, Harris, & Ludlum, 1991). Children who have experienced a particular event or script and are familiar with the vocabulary associated with that event are at an advantage over children who cannot relate to the story due to a lack of knowledge about the topic. Third, children may have different expectations for how meaning is derived and what constitutes a story. The research reviewed illustrates this point well. Heath (1983), for example, found that in the homes of the families she studied, the meaning of the text was jointly constructed and what constituted a "story" differed from what occurred in school, which Heath argued contributed to the children's difficulties in succeeding in school. Finally, and more specifically, children may experience different styles of interaction surrounding books. None of the studies discussed found that African American or Hispanic parents engaged their children in question-asking routines, unlike in white, middle class families where children are asked questions to which adults know the answer. As a result, children from other cultures may experience difficulty attempting to answer the types of questions asked by their teachers. As demonstrated by Heath (1983) and Vernon-Feagans (1996), children may think that they are being tricked or may not understand why they are being asked a question with a known answer and may respond incorrectly.

The question remains what to do about these differences between the home practices of families from nonmainstream cultures and those employed in the school. One solution is to provide parents with training, so that their styles and literacy practices more closely resemble the educational system of this country. The problem with this solution is that literacy is more than a decoding skill. It is an activity that is embedded in a social and cultural context (Bloome et al., 1991; Heath & Branscombe, 1986; McLane & McNamee, 1990; Westby, 1995). Thus, literacy experiences vary between cultures because parents from these cultures provide their children with opportunities to acquire literacy abilities that are pertinent to their lives, abilities that may or may not be the same as those stressed by in school (Heath, 1983; Rogoff, Mistry, Goncu, & Mosier, 1993). Because literacy events are inextricably tied to a family's cultural belief system, making changes in the home environment may be difficult. In addition, asking a family to change its culture by changing its literacy practices may be inappropriate. The problem with this argument, of course, is that literacy skills are needed in order to be successful in the United States. The solution we propose is that instead of asking the family to make all the changes, we ask that school systems meet parents halfway. We suggest that school systems strive to (1) learn about the literacy practices of the children they serve, (2) become sensitive to how these differences between home and school practices may impact children's performance in the classroom, and (3) incorporate the children's home styles into the classroom to help bridge the children's experiences between home and school. (See prevention and intervention strategies, in Strickland, Chapter 22.)

We still need to understand whether these differences can be better used as children enter school. For instance, if African American children have less experience with the question–answer paradigm but do have experience and skill in elaborated storytelling that is often jointly initiated with others, it would seem important that teachers use this knowledge in developing effective literacy strategies. Too often this does not happen and too often the children are found to be "deficient" and not "different" as they enter school.

Phonological Skills and Literacy

Because it is important to understand the general literature on phonological skills independent of the specific issues related to literacy and poverty, this section reviews more generally the importance of phonological skills in the acquisition of literacy and then specifically discusses issues related to dialect and Hispanic bilingualism.

Young children need to acquire a progression of skills to become good readers. They must recognize the relationship between alphabetic symbols and spoken language. This is not an easy task because the printed symbols that make up a word are discrete letters but the units of speech to which they refer (i.e., phonemes) are not (Liberman & Shankweiler, 1985). When a word is spoken, the phonemes overlap to form larger syllabic units (Liberman, Cooper, Shankweiler, & Studdert-Kennedy, 1967). The basic task of the beginning reader is to learn that graphemes represent phonemes (see Adams, Chapter 6). To do this, a child must be aware that the spoken word is composed of individual sounds. This conscious awareness of the sound structure of language and the ability to manipulate phonological segments is called "phonological awareness" (Blachman, 1994; see Goswami, Chapter 9). The relationship between reading and phonological understanding appears to be a reciprocal one. Improved phonology fosters improved reading and vice versa (Bradley & Bryant, 1983; Bryant, MacLean, Bradley, & Crossland, 1990; Byrne, Freebody, & Gates, 1992; Catts, 1991; Ehri & Wilce, 1987; Mann, 1993; Perfetti, Beck, Bell, & Hughes, 1997; Spector, 1992; Torgesen, Wagner, & Rashotte, 1994; Vellutino & Scanlon, 1987). Even when cognitive ability is held constant, phonological awareness tasks account for a large proportion of the variance in reading achievement (Wagner & Torgesen, 1987).

Early problems with phonological awareness have cumulative adverse effects and can lead to reading disability (MacDonald & Cornwall, 1995; Mann, 1993; Stanovich, 1986). Prereaders with the poorest phoneme segmentation skills are most likely to become the poorest readers (Ball & Blachman, 1988). Beginning readers need to have knowledge both of phonological segments and of letters in order to develop word-recognition abilities; neither alone is sufficient (Byrne & Fielding-Barnsley, 1991). Many beginning readers, unfortunately, do not have this knowledge and children from homes with lower incomes may be most at risk (Adams, 1990). Children who start out behind in phonemic awareness tend to fall further behind (Stanovich, 1987).

Children easily gain access to larger units such as words. Once this is accomplished, a child must become aware that words can be segmented into syllables. Preschoolers are likely to have a general awareness that two words rhyme or that one word is longer than another, but young children generally do not recognize that spoken syllables are composed of phonemes (Treiman, & Baron, 1981). The ability to detect onsets and rhymes is a midway point between awareness of syllables and awareness of phonemes. The onset and rhyme is a linguistic unit that falls between the syllable and the phoneme (Treiman, 1985). An onset is the initial consonant or consonant cluster of a word or syllable and the rhyme is the remainder of the word or syllable (the vowel and any consonant(s) that follow it). In the word "pot," /p/ is the onset and "ot" is the rhyme.

Dialect

Language is used differently by different social groups as well as groups that are separated geographically. The prestige associated with a particular dialect, social pressure, and identity all are important factors in how a child speaks (Labov, 1972). As children become competent communicators, they will use language the way their social group uses language. Dialectal differences affect all aspects of language, including vocabulary and phonology. Unfortunately, there are few good data on the phonological awareness of poor African American children, but we will review a few representative studies.

In an effort to develop methods for teaching reading that take into account home language and culture, Labov, Baker, Bullock, Ross, and Brown (1998) addressed the specific limitations in the reading ability of children who speak African American English (AAE). In the United States, minority status and poverty are highly correlated, and socioeconomic status is highly correlated with reading performance (Labov, Cohen, Robins, & Lewis, 1968). Labov et al. (1998) found that second- and third-grade children suffered a high level of frustration when attempting to read books at their grade levels. In addition to phonological problems, errors appeared to be due to lack of familiarity with the vocabulary and poor strategies for deducing the meanings of unfamiliar words from context. They found specific weaknesses in children's grapheme-to-phoneme processing.

The children in the Labov study (Labov et al., 1968) accurately detected the first letter of a word; however, they did not apply rules of sound–letter correspondences; for example, the word "ceiling" was read as "killing," showing a failure to apply the rule that "c" is pronounced as /s/ before front vowels "e" or "i." It was, however, recognized as "c." This situation changed, however, when onsets had more than a single consonant. Digraphs were read as single graphemes (*their* as *her*) and as other digraphs (*that* as *what*). Locational errors also occurred (*strong* as *short, settling* as *stealing*). Labov's data showed that when words were read incorrectly, a lone initial consonant was rarely involved, but if a complex onset was present, it was likely responsible for the error. In addition, errors for the vowel nucleus showed a much higher level of errors than did onsets. Spoken patterns of West Philadelphia English that are not stable (e.g., production of postvocalic /r/) were obstacles in the reading patterns of the children.

Differences between written language and spoken language are greater for AAE than for other dialects, primarily because the reduction of final consonants is more extensive. Among young children, this tendency can lead to an extreme use of homonymy and a greater difficulty in recognizing distinctions that are obvious in more standard dialects. These phonological patterns appeared to obstruct the step from orthographic representation to phonemic interpretation. The success of the children in Labov's study in identifying initial consonants may be attributed to phonics instruction. It is clear from the children's reading problems, however, that time needs to be devoted to teaching the rhyme of the syllable with emphasis on the ends of words. If there is a high correlation between frequency of reading errors and the complexity of the word and syllable, a lot may be gained by introducing these relationships in early literacy activities.

Bilingualism

In recent years, the growth of diverse ethnic groups in the United States has been explosive. In 1990, it was estimated that 6.3 million school-age children in the United States spoke a language other than English at home. By the turn of the century over 30% of the U.S. population will be from a racial/ethnic minority group (U.S. Bureau of the Census, 1990; see Tabors & Snow, Chapter 12).

There are wide discrepancies between the literacy achievement of minority children from diverse language backgrounds in comparison to that of their majority culture peers. Children from Hispanic backgrounds (the largest language minority in the United States) lag behind their non-Hispanic peers in the acquisition of school-related skills during the preschool years and continue to do so throughout elementary and middle school. To serve these children, differences in language experience that may affect literacy development must be addressed and strategies that meet the particular needs of second-language (L2) learners must be addressed (Gutierrez-Clellan, 1999). Developmental processes that affect children's first-language (L1) phonology are similar across languages. Children from all language backgrounds, for example, tend to produce sounds in the front of the mouth for those in the back (e.g., *key* is produced as *tea*). All language learners, when confronted with syllable structures that are far too complex for their phonetic ability, will modify those structures to make them conform to their phonetic ability (i.e., omit final consonants or reduce clusters to one phoneme).

There is some evidence that the phonological systems of bilingual speakers develop somewhat differently from monolingual speakers of either language because the L1 affects the learning of L2 (Gildersleeve, Davis, & Stubbe, 1996). Existing evidence points to an overall lower intelligibility rating, more errors on consonants and vowels, more distorted sounds, and more uncommon error patterns among bilingual children. Errors may be common to both languages or common to only one (Yavas & Goldstein, 1998). Children in bilingual environments may initially show a greater number of errors but are likely to demonstrate more rapid improvement, closing the gap with monolingual speakers.

Bilingual preschool children initially demonstrate more errors in their spoken phonologies than do their monolingual peers. Some errors are due to transfer from one language to another, but other differences in learners' productions cannot be explained in this way. L2 learners appear to use their own interlanguage, a system that is separate from both the native and target languages (Selinker, 1972). Spanish speakers of English, for example, often produce all final stops as voiceless. Because English has both voiced and voiceless final stops, this phenomena cannot be explained by English input. Spanish does not allow "b," "d," or "g" in final position. Consequently there is nothing for a final consonant devoicing rule to apply to. Thus, it appears that L2 learners internalize their own version of the target language.

The bilingual experience leads to an early awareness of language (Bialystok, 1997; Clyne, 1987; Levy, 1985). Because bilingualism induces an early separation of word and referent, bilingual children develop an early capacity to focus on and analyze the structural properties of language (Hakuta & Diaz, 1985). Despite these findings, many bilingual families encounter prejudices against early bilingualism. Well-intended, but uninformed, educational professionals may view normal language mixing as harmful and ask parents to speak only English. Bilingual families have been known to give up being bilingual, much to their social, cultural, and emotional detriment, because of worries caused by misinformation (Romaine, 1989). Competent bilinguals may be a select group of children with advantaged language learning situations.

Relatively little is known about the influences of bilingualism on early literacy because of the varying definitions of bilingualism stretching from dual exposure at birth to the introduction of a second language sometime later in childhood. In addition, the learning situation is affected by the languages the parents speak with their children, the parents' native language, and the extent to which the parents' language reflects the dominant language of the community at large (Bialystok, 1997; de Houwer, 1995). One may find that a child goes to a bilingual Spanish–English Head Start program, the child's grandparents speak only in Spanish, the parents mix Spanish and English, and older siblings speak only English. The child may, however, see the grandparents only once a week or, on the other hand, if the grandparent is the babysitter, they may spend most of their waking moments exposed to Spanish. Television programs using English may be watched, but the family may go to Puerto Rico for holidays. Even if a child's larger community is English-speaking, the actual day-to-day reality for the child may be Spanish dominant. It is the language use within the child's individual social network that determines input patterns. Current research findings do not, as a rule, report details of how much time a child spends exposed to a particular language or dialect.

It appears that L2 learners have more difficulty with sounds that are similar to those in their L1 than with sounds that are different (Wode, 1980; Young-Scholten, 1985). The type of errors children produce in L2 will also vary depending on the particular dialect of L1 that is spoken in the child's community. Data on bilingual Spanish–English children indicate different error patterns in English in children who speak Mexican versus Puerto Rican Spanish (Yavas & Goldstein, 1998). Children who speak Puerto Rican Spanish tend to delete word-final /s/ and /n/ as a dialect feature. Speakers of Mexican Spanish are more likely to produce final consonants.

L2 learners may have different reading and spelling skills depending on their familiarity with the written code in their native language. Children across languages use analogies to determine the pronunciation of irregular words (Gombert, Bryant, & Warrick, 1997). Children who are learning to read orthographies in transparent languages, such as Spanish, need less ability to process analogies. Learning opaque languages such as English (more discrepancies in sound–letter relations) requires analogical processing to be used more often. Children with the more transparent language may decode with greater accuracy than those with opaque orthographies (Goswami, Gombert, & Fraca de Barrera, 1998). Ability to use lexical strategies that depend on familiarity with target words may be more difficult for Spanish-speaking children. Consequently, it is important that L2 learners learn several different strategies for decoding and spelling new words, including increased experiences with reading, increased phonological knowledge, and explicit teaching of analogy strategies (Jimenez, Garcia, & Pearson, 1996).

Word decoding or spelling of unfamiliar words can be accomplished by memory, invention, or analogy (Ehri, 1997). Children's previous experiences with the target words are crucial to the retrieval of their memorized representation. Using invention, children assemble pronunciations from letters to decode unfamiliar words. In analogy, knowledge about the pronunciations or spellings of similar words is used to decode the new word. Readers with limited English proficiency have difficulty applying any of these strategies to reading English due to a restricted store of lexical representations for English words and limited phonological knowledge about the pronunciations of different words. Reading comprehension is significantly related to both knowledge of vocabulary and ability to identify cognates (Nagy, Garcia, Durgunoglu, & Hancin-Bhatt, 1993).

Many bilingual children experience some kind of language loss (Kessler, 1984). The degree of competence in both languages before a changed input condition and age play a role in the extent to which productive control over language continues. Parents who are discouraged from speaking naturally to their children, either by mixing or by using one language at a time, are not likely to provide a rich language input to their children. A rich language environment, either monolingual or bilingual, is the most important aspect of early literacy.

Young bilingual children are adept at code switching, hinting at increased metalinguistic awareness. Most studies, however, have paid little attention to the sociolinguistic context in which the child's speech productions occurred. Expectations of the communication partner's language capabilities play a major part in a child's language selection. Like monolingual children, bilingual children attempt to talk like the people around them. Adjusting to the listener's language as well as to what the child senses is expected or approved of may result in less than optimal language performance. Studying bilingual children is an immensely complex problem and the baseline of normal bilingual development is not yet established. Thus, it is difficult to know when bilingual children are experiencing problems.

Traditional family literacy programs focus on having the family read to the child. For families with limited literacy skills or limited school support, this expectation may increase feelings of incompetence as parents. Ruiz (1995) suggests the performance of bilingual children may be maximized if the child is allowed to choose the code (English vs. Spanish), the topic, and the genre of the book. Topics that represent the child's experiences can be incorporated into learning activities (border stories, folktales, etc.).

Although phonological awareness has been shown to be linked to later better reading ability in mainstream children, it is still not clear how dialect and bilingualism affect specific aspects of literacy acquisition. It will be especially important to understand in future studies how the multiple factors associated with minority status and poverty can be separated from such skills as phonological awareness. Further, educators need to be sensitive to those aspects of the dialect or first language that might be especially problematic in acquiring good reading skills.

Future Research

Clearly, given the limited research conducted on both African American and Hispanic children, additional investigations are warranted. Given the piecemeal nature of the research, there needs to be a greater emphasis on measuring the full range of risk and protective factors for poor children, including the importance of health and access to good health care in early childhood, the complex home environment, teaching strategies as children enter school, discrimination, cultural values, and so on. This means investment in large-scale studies that focus on the child and the child's home environment as well as a greater focus on these children's transition to school. Our schools have not always been prepared to teach these children or to deal with the discrimination in the larger society against poor and minority children. Trying to understand the insidious way in which discrimination plays out in the microcosm of the classroom is as important as assessing the developing skills of these children.

A critical area of need relates to the emerging literacy skills of Hispanic children. Studies that document the home, literacy environment, and book-reading interactions between children and caregivers in particular, are greatly lacking. Future studies, however, should focus on families from specific Hispanic subgroups (Puerto Rican American, Mexican American, Cuban American, etc.), as "Hispanic" individuals do not represent a homogeneous group. In addition, studies are needed that examine children's literacy development in both Spanish and English. Specifically, information is needed about (1) children's development of literacy in both languages, (2) children's oral language development in both languages, (3) children's language use and production as a function of the language(s) their communicative partners speak (e.g., monolingual English and Spanish interactants and bilingual interactants), and (4) the relationship between children's home-literacy experiences, oral language abilities, reading, and written language competencies.

Additional studies are needed that examine the home and neighborhood environments of urban versus rural children from both African American and Hispanic families to determine similarities and differences that exist cross-culturally and between socioeconomic groups with respect to preliteracy language experiences and skills. There may be more important differences between urban and rural children than between some SES groups, but currently we have few data especially on rural children. There is a real need to understand the early literacy and language skills of these groups of children so they can be used by teachers in the classroom to promote literacy. Although not discussed at length in this chapter, but found in other chapters in this book (e.g., Goldenburg, Chapter 15; Vellutino & Scanlon, Chapter 20; Strickland, Chapter 21), there is a real need to develop better prevention strategies that teachers can use as poor children enter school. Many programs are being implemented, but not many are individuated for the background multiple risk factors presented by the child. The 21st century presents a number of challenges for understanding literacy development in poor children and especially designing ways to ensure that all our children will be successful in school.

Acknowledgment

The preparation of this chapter was supported in part by Grant No. HD131540 from the National Institutes of Health.

References

Adams, M. J. (1990). *Beginning to read: Thinking and learning about print.* Cambridge, MA: MIT Press.

Alexander, L. K., & Entwisle, D. R. (1988). Achievement in the first 2 years of school: Patterns and processes. *Monographs of the Society for Research in Child Development, 53* (2, Serial No. 218).

Anderson-Yockel, J., & Haynes, W. (1994). Joint picture-book reading strategies in working-class African American and white mother–toddler dyads. *Journal of Speech, Language, and Hearing Research, 37,* 583–593.

Baker, L., Serpell, R., & Sonnenschein, S. (1995). Opportunities for literacy learning in the homes of urban preschoolers. In L. M. Morrow (Ed.), *Family literacy: Connections in schools and communities* (pp. 236–252). Newark, DE: International Reading Association.

Ball, E., & Blachman, B. (1988). Phoneme segmentation training: Effect on reading readiness. *Annals of Dyslexia, 38,* 208–225.

Bashir, A. S., & Scavuzzo, A. (1992). Childern with language disorders: Natural history and academic success. *Journal of Learning Disabilities, 25,* 53–65.

Bereiter, C., & Engelmann, S. (1966). *Teaching disadvantaged children in the preschool.* Englewood Cliffs, NJ: Prentice-Hall.

Bernstein, B. (1971). Language and socialization. In N. Minnis (Ed.), *Linguistics at large* (pp. 227–245). New York: Viking.

Bialystok, E. (1997). Effects of bilingualism and biliteracy on children's emerging concepts of print. *Developmental Psychology, 33,* 429–440.

Bishop, D. V. M., & Adams, C. (1990). A prospective study of the relationship between specific language impairment, phonological disorders and reading retardation. *Journal of Child Psychology and Psychiatry, 31,* 1027–1050.

Blachman, B. (1994). Early literacy acquisition: The role of phonological awareness. In G. P. Wallach & K. G. Butler (Eds.), *Language learning disabilities in school-age children and adolescents* (pp. 253–274). New York: Merrill.

Blank, M. (1975). Mastering the intangible through language. In I. D. Aaronson & R. W. Rieber (Eds.), *Developmental psycholinguistics and communication of sciences* (pp. 44–58). New York: New York Academy of Sciences.

Bloom, B. (1964). *Stability and change in human characteristics.* New York: Wiley.

Bloome, D., Harris, O., & Ludlum, D. (1991). Reading and writing as sociocultural activities: Politics and pedagogy in the classroom. *Topics in Language Disorders, 11,* 14–27.

Bradley, L., & Bryant, B. (1983). Categorizing sounds and learning to read—A causal connection. *Nature, 301,* 419–421.

Bryant, MacLean, M., Bradley, L., & Crossland, J. (1990). Rhyme and alliteration, phoneme detection, and learning to read. *Developmental Psychology, 26,* 429–438.

Bus, A. G., van IJzendoorn, & Pellegrini, A. D. (1995). Joint book reading makes for success in learning to read: A meta-analysis on intergenerational transmission of literacy. *Review of Educational Research, 65,* 1–21.

Byrne, B., & Fielding-Barnsley, R. (1991). Evaluation of a program to teach phonemic awareness to young children. *Journal of Educational Psychology, 83,* 451–455.

Byrne, B., Freebody, P., & Gates, A. (1992). Longitudinal data on the relations of word-reading strategies to comprehension, reading time, and phonemic awareness. *Reading Research Quarterly, 27,* 140–151.

Cain, K. (1996). Story knowledge and comprehension skills. In C. Cornoldi & J. Oakhill (Eds.), *Reading comprehension difficulties: Processes and intervention* (pp. 167–192). Mahwah, NJ: Erlbaum.

Carnegie Corporation of New York. (1994). *Starting points: Meeting the needs of our youngest children.* New York: Author.

honour of Michael Halliday (pp. 85–103). Amsterdam: John Benjamins.

de Houwer, A. (1995). Bilingual language acquisition. In P. Fletcher & B. MacWhinney (Eds.), *The handbook of child language* (pp. 219–250). Cambridge, MA: Blackwell.

Delgado-Gaitan, C. (1990). *Literacy for empowerment: The role of parents in children's education.* New York: Falmer Press.

Delpit, L. (1995). *Other people's children: Cultural conflict in the classroom.* New York: New Press.

Dickinson, D. C., De Temple, J. M., Hirschler, J. A., & Smith, M. W. (1992). Book reading with preschoolers: Coconstruction of text at home and at school. *Early Childhood Research Quarterly, 7,* 323–346.

Duncan, G., & Brooks-Gunn, J. (1997). *Consequences of growing up poor.* New York: Russell Sage.

Ehri, L. C. (1997). Learning to read and learning to spell are one and the same, almost. In C. A. Perfetti, L. Rieben, & M. Fayol (Eds.), *Learning to spell: Research, theory, and practice across languages* (pp. 237–269). Mahwah, NJ: Erlbaum.

Ehri, L. C., & Wilce, L. (1987). Does learning to spell help beginners learn to read words. *Reading Research Quarterly, 12,* 47–64.

Feagans, L., & Farran, D. C. (1981). How demonstrated comprehension can get muddled in production. *Developmental Psychology, 17,* 718–727.

Feagans, L. V., & Farran, D. C. (1994). The effects of daycare intervention in the preschool years on the narrative skills of poverty children in kindergarten. *International Journal of Behavioral Development, 17,* 503–523.

Feagans, L., & Fendt, K. (1991). The effects of intervention and social class on children's answers to concrete and abstract questions. *Journal of Applied Developmental Psychology, 12,* 115–130.

Feagans, L., & Haskins, R. (1986). Neighborhood dialogues of black and white 5-year-olds. *Journal of Applied Developmental Psychology, 7,* 181–200.

Feagans, L. V., Kipp, E. K., & Blood, I. (1994). The effects of otitis media on the language and attention skills of daycare attending toddlers. *Developmental Psychology, 30,* 701–708.

Feagans, L., Sanyal, M., Henderson, F., Collier, A., & Appelbaum, M. (1987). Relationship of middle ear disease in early childhood to later narra-

Speech–Language–Hearing Association, Seattle, WA.

Goldenberg, C., Reese, L., & Gallimore, R. (1992). Effects of literacy materials from school on Latino children's home experiences and early reading achievement. *American Journal of Education, 100,* 497–536.

Gombert, J. E., Bryant, P., & Warrick, N. (1997). Children's use of analogy in learning to read and to spell. In C. A. Perfetti, L. Rieben, & M. Fayol (Eds.), *Learning to spell: Research, theory, and practice across languages* (pp. 221–235). Mahwah, NJ: Erlbaum.

Goswami, U., Gombert, J. E., & Fraca de Barrera, L. (1998). Children's orthographic representations and linguistic transparency: Nonsense word reading in English, French, and Spanish. *Applied Psycholinguistics, 19,* 19–52.

Gutierrez-Clellan, V. F. (1999). Mediating literacy skills in Spanish-speaking children with special needs. *Language, Speech, and Hearing Services in Schools, 30,* 285–292.

Hakuta, K., & Diaz, R. (1985). The relationship between degree of bilingualism and cognitive ability. In K. Nelson (Ed.), *Children's language* (vol. 5, pp. 319–344). Hillsdale, NJ: Erlbaum.

Hammer, C. S. (2001). Come sit down and let mama read: Book reading interactions between African American mothers and their infants (pp. 21–44). In J. Harris, A. Kamhi, & K. Pollock (Eds.), *Literacy in African American communities.* Hillsdale, NJ: Erlbaum.

Hammer, C. S. (1999). Guiding language development: How African American Mothers and their infants structure play. *Journal of Speech and Hearing Research, 42,* 1219–1233.

Hart, B., & Risley, T. R. (1995). *Meaningful differences in the everyday experience of young American children.* Baltimore: Brookes.

Heath, S. B. (1983). *Ways with words.* New York: Cambridge University Press.

Heath, S. B., & Branscombe, A. (1986). The book as narrative prop in language acquisition. In B. Schieffelin & P. Gilmore (Eds.), *The acquisition of literacy: Ethnographic perspectives* (pp. 16–34). Norwood, NJ: Ablex.

Hess, R. D., & Shipman, V. C. (1965). Early experience and the socialization of cognitive modes in children. *Child Development, 36,* 869–886.

Hunt, J. (1961). *Intelligence and experience.* New York: Ronald Press.

Jimenez, R. T., Garcia, G. E., & Pearson, P. D. (1996). The reading strategies of bilingual Latino/o students who are successful English readers: Opportunities and obstacles. *Reading Research Quarterly, 3,* 90–112.

Kao, G., & Tienda, M. (1995). Optimism and achievement: The educational performance of immigrant youth. *Social Science Quarterly, 76,* 1–19.

Kessler, C. (1984). Language acquisition in bilingual children. In N. Miller (Ed.), *Bilingualism and language disability: Assessment and remediation* (pp. 26–54). London: Croom Helm.

Labov, W. (1972). *Sociolinguistic patterns.* Philadelphia: University of Pennsylvania Press.

Labov, W., Baker, B., Bullock, S., Ross, L., & Brown, M. (1998). *A graphemic–phonemic analysis of the reading errors of inner city children.* Unpublished manuscript, University of Pennsylvania. Available: http://www. Ling. upenn. edu/~labov/Papers/GAREC/GAREC. html

Labov, W., Cohen, P., Robins, C., & Lewis, J. (1968). A study of the nonstandard English of Negro and Puerto Rican speakers in New York City. *Cooperative Research Report 3288. Vols I and II.* Philadelphia: U. S. Regional Survey (Linguistics laboratory, University of Pennsylvania).

Levy, Y. (1985). Theoretical gains from the study of bilingualism: A case report. *Language Learning, 35,* 541–54.

Liberman, I. Y., Cooper, F. S., Shankweiler, D., & Studdert-Kennedy, M. (1967). Perception of the speech code. *Psychological Review, 74,* 431–461.

Liberman, I. Y., & Shankweiler, D. (1985). Phonology and the problems of learning to read and write. *Remedial and Special Education, 6,* 8–17.

Lozoff, B. (1988). Behavioral alterations in iron deficiency. *Advances in Pediatrics, 35,* 331–360.

Lozoff, B. (1992). Iron deficiency anemia and infant behavior. In E. J. Susman, L. V. Feagans, & W. J. Ray (Eds.), *Emotion, cognition, health, and development in children and adolescents* (pp. 111–120). Hillsdale, NJ: Erlbaum.

MacDonald, G. W., & Cornwall, A. (1995). The relationship between phonological awareness and reading and spelling achievement eleven years later. *Journal of Learning Disability, 28,* 523–527.

Mann, V. (1993). Phoneme awareness and future reading ability. *Journal of Learning Disabilities, 26,* 259–269.

McLane, J., & McNamee, G. (1990). The beginnings of literacy. *Zero to Three, 12,* 1–8.

Nagy, W. E., Garcia, G. E., Durgunoglu, A. Y., & Hancin, Bhatt, B. (1993). Spanish–English bilingual students' use of cognates in English reading. *Journal of Reading Behavior, 25,* 241–259.

Ninio, A. (1983). Joint book reading as a multiple vocabulary acquisition device. *Developmental Psychology, 19,* 445–451.

Ninio, A. (1990). Early environmental experiences and school achievement in the second grade: An Israeli study. *International Journal of Behavioral Development, 13,* 11–22.

Ninio, A., & Bruner, J. (1978). The achievement and antecedents of labeling. *Journal of Child Language, 5,* 1–15.

Ogbu, J. U. (1982). Societal forces as a context of ghetto children's school failure. In L. Feagans & D. C. Farran (Eds.), *The language of children reared in poverty* (pp. 117–138). New York: Academic Press.

Ogbu, J. (1988). Cultural diversity and human development. *New Directions for Child Development, 42,* 11.

Ogbu, J. U. (1990). Minority status and literacy in comparative perspective. *Daedalus, 119,* 141–168.

Panofsky, C. (1994). Developing the representation-al functions of language. In V. John-Steiner, C. Panofsky, & L. Smith (Eds.), *Sociocultural approaches to language and literacy* (pp. 223–242). New York: Cambridge University Press.

Pellegrini, A., Perlmutter, J., Galda, L., & Brody, G. (1990). Joint reading between black Head Start children and their mothers. *Child Development, 61,* 443–453.

Perfetti, C. C., Beck, I., Bell, L. C., & Hughes, C. (1997). Phonemic knowledge and learning to read are reciprocal: A longitudinal study of first grade children. *Merrill-Palmer Quarterly, 33,* 283–319.

Puma, M. N., Karweit, N., Price, C., Ricciuti, A., Thompson, W., & Vanden-Kiernan, M. (1997). *Prospects: Final report on student outcomes.* Washington, DC: U. S. Department of Education, Planning and Evaluation Services.

Ramey, C. T., & Campbell, F. A. (1991). Poverty, early-childhood education, and academic competence: The Abecedarian experiment. In A. Huston (Ed.), *Children reared in poverty* (pp. 190–221). New York: Cambridge University Press.

Roberts, J. E., Burchinal, M. R., Collier, A. M., Ramey, C. T., Koch, M. A., & Henderson, F. W. (1989). Otitis media in early childhood and cognitive, academic and classroom performance of the school-aged child. *Pediatrics, 83,* 477–485.

Roberts, J. E., Burchinal, M. R., Koch, M. A., Footo, M. M., & Henderson, F. W. (1988). Otitis media in early childhood and its relationship to later phonological development. *Journal of Speech and Hearing Disabilities, 53,* 416–424.

Rogoff, B., Mistry, J., Goncu, A., & Mosier, C. (1993). Guided participation in cultural activity by toddlers and caregivers. *Monographs of the Society for Research in Child Development, 58*(8).

Romaine, S. (1989). *Bilingualism.* Oxford: Blackwell.

Ruiz, N. T. (1995). The social construction of ability and disability: I. Profile types of Latino children identified as language learning disabled. *Journal of Learning Disabilities. 28,* 476–490.

Rutter, M. (1987). Psychosocial resilience and protective mechanisms. *American Journal of Orthopsychiatry, 57,* 316–331.

Sameroff, A. J., Seifer, R., Barocas, R., Zax, M., & Greenspan, S. (1987). Intelligence quotient scores of 4-year-old children: Social environmental risk factors. *Pediatrics, 79,* 343–350.

Selinker, L. (1972). Interlanguage. *International Review of Applied Linguistics, 10,* 209–2321.

Senechal, M., LeFevre, J., Hudson, E., & Lawson, E. P. (1996). Knowledge of storybooks as a predictor of young children's vocabulary. *Journal of Educational Psychology, 88,* 520–536.

Shaywitz, S. E., Shaywitz, B. A., Pugh, K. R., Fulbright, R. K., Constable, R. T., Mencl, W. E., Shankweiler, D. P., Liberman, A. M., Skudlarski, P., Fletcher, J. M., Katz, L., Marchione, K. E., Lacadie, C., Gatenby, C., & Gore, J. C. (1998). Functional disruption in the organization of the brain for reading in dyslexia. *Proceedings of the National Academy of Sciences, 95,* 2636–2641.

Snow, C. E., Barnes, W. S., Chandler, J., Goodman, I. F., & Hemphill, L. (1991). *Unfulfilled expectations: Home and school influences on literacy.* New York: Cambridge University Press.

Snow, C., Burns, S., & Griffin, M.. (1998). *Preventing reading difficulties in young children.* Washington, DC: National Academy Press.

Snow, C. E., Hamphill, L., & Barnes, W. S. (Eds.). (1991). *Unfulfilled expectations: Home and school influences on literacy.* Cambridge, MA: Harvard University Press.

Snow, C. E., & Tabors, P. O. (1993). Language skills that relate to literacy development. In B. Spodek & O. N. Saracho (Eds.), *Language and literacy in early childhood education* (pp. 1–20). New York: Teachers College Press.

Spector, J. (1992). Predicting progress in beginning reading: Dynamic assessment of phonemic awareness. *Journal of Educational Psychology, 84,* 353–363.

Stanovich, K. E. (1986). Matthew effects in reading: Some consequences of individual differences in the acquisition of literacy. *Reading Research Quarterly, 21,* 360–407.

Stanovich, K. E. (Ed.). (1987). Introduction. Children's reading and the development of phonological awareness [Special issue]. *Merrill–Palmer Quarterly, 33*(3).

Stanovich, K. E., West, R. F., Cunningham, A. E., Cipielewski, J., & Siddiqui, S. (1996). The role of inadequate print exposure as a determinant of reading comprehension problems. In C. Cornoldi & J. Oakhill (Eds.), *Reading comprehension difficulties: Processes and intervention.* Mahwah, NJ: Erlbaum.

Steele, C. M. (1992). Race and the schooling of black Americans. *Atlantic Monthly, 269,* 67–78.

Sulzby, E., & Teale, W. H. (1987). *Young children's storybook reading: Longitudinal study of parent–child interaction and children's independent functioning* (Final report to the Spencer Foundation). Ann Arbor: University of Michigan Press.

Sulzby, E., & Teale, W. (1991). Emergent literacy. In R. Barr, M. Kamil, P. Mosenthal, & P. D. Pearson (Eds.), *Handbook of reading research* (vol. II, pp. 727–758). New York: Longman.

Tabors, P. (1997). *One child, two languages.* Baltimore: Brookes.

Taylor, D., & Strickland, D. (1986). *Family storybook reading.* Portsmouth, NH: Heinemann.

Teale, W. (1986). Home background and young children's literacy development. In W. Teale & E. Sulzby (Eds.), *Emergent literacy: Writing and research* (pp. 173–206). Norwood, NJ: Ablex.

Teale, W. H., & Sulzby, E. (1987). Literacy acquisition in early childhood: The roles of access and mediation in storybook reading. In D. Wagner (Ed.), *The future of literacy in a changing world* (pp. 111–130). New York: Pergamon Press.

Torgesen, J., Wagner, R., & Rashotte, C. (1994). Longitudinal studies of phonological processing and reading. *Journal of Learning Disabilities, 27,* 276–286.

Treiman, R. A. (1985). Onsets and rimes as units of spoken syllables: Evidence from children. *Journal of Experimental Child Psychology, 39,* 161–181.

Treiman, R., & Baron, J. (1981). Segmental analysis ability: Development and relation to reading ability. *Reading Research: Advances in Theory and Practice, 3,* 159–198.

U. S. Bureau of the Census. (1990). *Statistical abstract of the United States (11th ed.).* Washington, DC: U. S. Department of Commerce.

Van Kleeck, A., Gillam, R. B., Hamilton, L., & McGrath, C. (1997). The relationship between middle-class parents' book-sharing discussion and their preschoolers' abstract language development. *Journal of Speech and Hearing Research, 40,* 1261–1271.

Vasquez, O., Pease-Alvarez, L., & Shannon, S. (1994). *Pushing boundaries: Language and culture in a Mexicano community.* New York: Cambridge University Press.

Vellutino, F., & Scanlon, D. (1987). Phonological coding, phonological awareness, and reading ability: Evidence from a longitudinal and experimental study. *Merrill–Palmer Quarterly, 33,* 321–363.

Vernon-Feagans, L. (1996). *Children's talk in communities and classrooms.* Cambridge, MA: Blackwell.

Vernon-Feagans, L., Emanuel, D. C., & Blood, I. (1997). The effect of otitis media and quality of daycare on children's language development. *Journal of Applied Developmental Psychology, 18,* 395–409.

Vernon-Feagans, L., Hurley, M., & Yont, K. (in press). The effect of daycare quality and otitis media on mother/child bookreading and other language measures. In D. J. Lim, C. D. Bluestone, & M. L. Casselbrant (Eds.), *Proceedings of recent advances in otitis media.* Ontario: Decker Periodicals.

Vogt, L., Jordan, C., & Tharp, R. (1987). Explaining school failure, producing school success: Two cases. *Anthropology and Education Quarterly, 18,* 276–286.

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.

Westby, C. (1995). Culture and literacy: Frameworks for understanding. *Topics in Language Disorders, 16,* 50–66.

Wode, H. (1980). Phonology in L2 acquisition. In S. Felix. (Ed.), *Second language development* (pp. 123–136). Tubingen: Narr.

Yavas, M., & Goldstein, B. (1998). Phonological assessment and treatment of bilingual speakers. *American Journal of Speech–Language Pathology, 7,* 49–60.

Young-Scholten, M. (1985). Interference reconsidered: The role of similarity in second language acquisition. *Selecta, 6,* 6–12.

Zentella, A. (1997). *Growing up bilingual.* Malden, MA: Blackwell.

Zeskind, P. S., & Ramey, C. T. (1981). Preventing intellectual and interactional sequelae of fetal malnutrition: A longitudinal, transactional and synergistic approach to development. *Child Development, 52,* 213–218.

Zigler, E., & Muenchow, S. (1992). *Head Start: The inside story of America's most successful educational experiment.* New York: Basic Books.