A CASE STUDY: EMERGENT BILITERACY IN ENGLISH AND CHINESE
OF A FIVE-YEAR OLD CHINESE CHILD
WITH WORDLESS PICTURE BOOKS
by
RAN HU
(Under the Direction of Michelle Commeyras)
ABSTRACT
This study was designed to investigate the development of a five-year-old child’s language and literacy development in English and Chinese within a tutoring context where the primary materials were wordless picture books. In this study, ten wordless picture books were used during the three weekly tutoring sessions for ten consecutive weeks.

Story telling in English and Chinese was the primary activity in each session. Extended activities included labeling pictures, reading biliterate text, sentence making and invented spelling. Assessments were done to examine the child’s development in alphabet and character recognition, directionality, oral and reading vocabulary in English and Chinese.

Analyses of data indicated that wordless picture books were appropriate and beneficial materials to use with this child in that they enabled her to grasp the concept of story structure, develop comprehension, use creative thinking, increase vocabulary, communicate in a higher language level, and learn spelling rules of the English language.

INDEX WORDS: Wordless picture books, Emergent literacy, Biliteracy, Phonological processing, Print awareness, Emergent writing, Oral proficiency, Sight vocabulary, Context vocabulary, Oral-only vocabulary
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by

B.A., Beijing Second Foreign Languages Institute, China, 2001

A Thesis Submitted to the Graduate Faculty of The University of Georgia in Partial Fulfillment
of the Requirements for the Degree

MASTER OF ARTS

ATHENS, GEORGIA
2004
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August 2004
ACKNOWLEDGMENTS

I thank my advisor, Dr. Michelle Commeyras, for her kindness, patience and encouragement. Without her scholarly insight and numerous hours of intensive work this thesis would have been impossible. She has been a personal teacher, an experienced researcher, and a sincere friend to me during my graduate study in the University of Georgia.

I am very grateful to my committee members, Dr. James Baumann and Dr. Linda Harklau for their substantive contributions towards the final product of this thesis. I admire their expertise and their thoughtful comments.

I also wish to thank the parents of this child. Thank them for their understanding and their cooperation in making the tutoring sessions go smoothly.

In addition, I thank my boyfriend, Hui Yang, for his assistance and his tolerance during the process of my writing this thesis.

Finally, I thank my mom, for her forever love and support, from the other part of the world in China. Thank her for her confidence in me.
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CHAPTER 1
INTRODUCTION

Statement of the Problem

Indeed, with the exception of Native Americans, everyone in our nation is either an immigrant, or the descendent of voluntary or involuntary immigrants.

—The Rights of Immigrants Briefing Paper, Immigrants’ Rights Project, American Civil Liberties Union

The United States has a diverse linguistic population. Even though the number of Chinese population is not the largest, it has been increasing dramatically. In 1980, there were 25,621,850 people who spoke a non-English language in the United States. Among them 688,403 were Chinese and 57,957 were children under five years old. The number of people who spoke Chinese grew into 1,249,213 after ten years in 1990 (McKay & Wong, 2000). Every year, the U.S. issues thousands of visas to Chinese students. Over 50,000 Chinese now study in the United States, and China now rivals Japan as the source of the largest number of foreign students seeking education in America.\(^1\) Based on these statistics, it is reasonable to assume that the number of Chinese students in elementary schools in the United States is increasing. Many of the children are young and are not yet proficient in their Chinese literacy development. Now they are facing the task of learning to speak the English language and acquiring English literacy simultaneously. There is widespread agreement in the field of bilingual education that children must have oral proficiency in the second language in order to learn to read and write (Garcia.

\(^1\) [http://www.intstudy.com/visausa.htm](http://www.intstudy.com/visausa.htm)
Cummins (1981, 1989) found that the development of cognitive proficiency in the first language is important for children’s second language education. The academic achievement of students for whom English is a second Language (ESL) is closely related to their level of first language literacy.

“Emergent literacy” is a term, which was introduced by Marie Clay (1967) to describe the process of children becoming literate. In contrast to the reading readiness theory, emergent literacy emphasizes that children learn by being involved or participating in any kind of literacy activities themselves. They develop literacy skills such as holding books, reading from left to right, and realizing word-meaning relationships from exposure to print. Studies have been done about emergent literacy and some of them focus on using wordless picture books to support literacy development. (Reese, 1996; Arthur, 1982; Avery 1996; Read & Smith, 1982; Larrick, 1976; Gitelman, 1990; Degler, 1979; Flatley & Rutland, 1986). These educators and authors write about ways of using picture books with none or very few words to promote the concept of print and the concept of story structure. Furthermore wordless picture books help to develop comprehension; oral language, reading vocabulary, and visual literacy. If wordless picture books have been found to promote emergent literacy among children for whom English is a first language perhaps they would benefit ESL children’s development of literacy and even biliteracy.

My interest in doing a biliteracy study with wordless picture books began with a volunteer experience in a kindergarten classroom. There I met a five-year old girl who was from China and had only been in the US two and half months. She did not speak English but she was in a classroom where English is the only language spoken. After the first two weeks of crying, struggling and adapting to the classroom she became the most silent student in the classroom.
Once a week for seven weeks I worked with her in the classroom as her tutor. I communicated with her in Chinese and that allowed me to learn which English words she was learning and what she could understand in English. As the weeks progressed she became more responsive to questions I would pose in English. Also she began asking me more questions about the books we read together. I became interested in working with her more often outside of school on her English and Chinese literacy development by using wordless picture books.

Purpose and Research Questions

The purpose of this study was to investigate the development of a five-year-old child’s language and literacy development in Chinese and English within a tutoring context where the primary materials were wordless picture books. Specifically I investigated these questions:

1) How can wordless picture books be used to develop biliteracy in Chinese and English with a five-year-old Chinese national?

2) What reading and writing abilities does the child develop in Chinese and English?

3) What oral language development in English occurs in the child in the context of tutoring her in reading and writing?
CHAPTER 2

LITERATURE REVIEW

Emergent Literacy and Biliteracy

The term “emergent literacy” was first coined by Marie Clay (1967) and it is used to describe how children go through a long and gradual process of becoming literate (Teale and Sulzby, 1986). Emergent literacy challenges the view that children acquire knowledge about reading and writing only through formal literacy instruction. Children gain important literacy prerequisites by observing others who take part in literacy activities and by participating in informal literacy events themselves (Justice & Kaderavek, 2002). Emergent literacy theorists and researchers have demonstrated with data that children are learning to become literate as infants from their first exposure to print. They learn through their relationships with literate others how to hold a book, how to read from left to right, how speech and print are related, and how to get meaning from letters and words instead of pictures.

Many case studies have investigated young children’s literacy development in English (Anderson, 1994; Baghban, 1984; Henderson et al., 1993; Lass, 1982; Sinclair & Golan, 2002; Torrey, 1973). Based on a review of those studies, Whitehurst & Lonigan (2001) concluded that key to the development of emergent literacy are phonological processing skills, print awareness, and oral language skills.

Phonological Processing

Activities that require sensitivity to, manipulation of, or use of the sounds in English words comprise phonological processing. Prior research has identified three interrelated clusters
of phonological processing abilities: phonological sensitivity, phonological memory, and phonological naming (Wagner & Torgesen, 1987). According to Whitehurst & Lonigan (2001), phonological sensitivity is an oral language skill and it refers to the ability to detect and manipulate the sound structure of the English language. It is different from phonics, which teaches sound-symbol correspondences and the spelling rules of English. Asking children to pronounce the letter sounds /c/ /a/ /t/ is one way to assess children’s sensitivity or awareness to phonemes. Children who are more sensitive to hearing the individual sounds in words have fewer difficulties in identifying the correspondence between print and the language it represents (Lonigan et al., 1998). Phonological memory refers to short-term memory for sound-based information (Baddeley, 1986). Children’s phonological memory could be measured by having them repeat nonwords and sentences of increasing length. Efficient phonological memory helps decoding by enabling children to maintain an accurate representation of the phonemes associated with the letters of a word. Phonological naming refers to the efficiency of retrieval of phonological information from permanent memory (Whitehurst & Lonigan, 2001). For young children, labeling pictures in storybooks is one way to practice phonological naming. If a child can do labeling activities with ease, it shows that the child is efficient in phonological access and this will increase the likelihood that the child can use phonological information in decoding. Children’s decoding abilities are strongly influenced by these three phonological processes and the better phonological processing abilities children have, the better readers they will become.

What has been discussed focuses on children whose native language is English. However, the importance of the phonological processing is the same for children who speak English as a Second Language (ESL). And phonological skills in both the first and second language will
benefit second language reading even though children’s first language is not written in an alphabetic orthography such as Chinese (Gottardo, et. al., 2001).

Print Awareness

Concepts About Print (CAP), concept of word, and alphabetic recognition are forms people used when talking about children’s awareness of print language. Clay (1982) defined children’s CAP as key behaviors children display in the emergent level of reading. Concepts include knowing the front of the book, that it is the print not pictures that tells the story, where the first letter in a word is to be found. All these behaviors are called orienting behaviors by psychologist (Clay, 1989) and children learn them over a period of time if they get plenty of experience with text. There may be many reasons that why children find these orienting behaviors difficult—conceptual, linguistic, or lack of opportunity to learn—but if children are not able to stay with the constraints of the printer’s code, this is a great impediment to reading progress. Many studies support this point. Dickinson and Tabors (2001) conducted an eleven-year longitudinal study of 74 Head Start children beginning when the children were three years old and they found out that phonological awareness and print knowledge are of the greatest importance to children at the outset of literacy acquisition. Other studies (Adams, 1990; Dickinson et al., 2003; Whitehurst & Lonigan, 2001) also addressed that the knowledge of the alphabet and letter-word relationship greatly influence early reading achievement.

People use many approaches to examine children’s CAP and one of the approaches that is related to my research is the use of wordless picture books. Paris and Paris (2001) used narrative wordless picture books to assess children’s comprehension. The activities they used with wordless picture books consisted three parts: picture walk, story retelling and prompted comprehension. And Paris and Paris (2001) used the picture walk to evaluate five behaviors,
which are book-handling skills, engagement, picture comments, storytelling comments and comprehension strategies. The activities mentioned here when used with an individual child are efficient in evaluating children’s knowledge about print.

Clay’s book, *Stone* and *Sand*, is widely used in assessing emergent reader’s CAP and has been translated into many languages (Clay, 1989). However, in looking for emergent literacy studies done with Chinese children, I did not find it translated into Chinese and no one has used it to assess Chinese children’s CAP in English.

*Emergent Writing*

Behaviors such as pretending to write and learning to write one’s name could be considered examples of emergent writing. These writing behaviors and invented spelling are ways for children to gain print awareness and learn letter knowledge (Whitehurst & Lonigan, 2002). There have been a number of descriptive studies of children’s emergent writing (Ferreiro & Teberosky, 1982; Harste, Woodwards, & Burke, 1984; Sulzby, 1986). These studies describe a common developmental pattern of children’s emergent writing and conclude that very young children treat writing in a pictographic sense that includes using drawing as writing or using scribble-like markings with meaning only to the child. Gradually children will understand the alphabetic principle. Studies such as Torgeson and Davis (1996) and Clarke (1988) found that children who were encouraged to do emergent writing activities outperform those who were not.

Invented spelling is usually associated with alphabetic languages, but Buckwalter and Gloria Lo (2002) used invented spelling to explore how a child develops writing in Chinese. And they reported that the child went through three stages in writing unfamiliar characters, writing either straight lines or crossed lines; writing discrete symbol units; and relying on visual memory to write characters or copy what the adults wrote, to develop writing in Chinese.
Oral Language Skills

Emergent literacy theory regards oral language as a vehicle for the development of both reading and writing. It is the basis for becoming literate. Without oral language, emergent literacy theorists argue it might be impossible to develop the ability to read and write (Lee, 2002). The National Research Council’s conclusion about the relationship between reading and oral language are that the majority of reading problems could be prevented by, among other things, increasing children’s oral language skills (Snow, Burns, & Griffin, 1998). Consistent with this conclusion, a number of studies demonstrate positive correlations between individual differences in oral language skills and later differences in reading (Bishop & Adams, 1990; Butler, Marsh, Sheppard, & Sheppard, 1985; Pikulski & Tobin, 1989; Scarborough, 1989; Share, Jorm, MacLean, & Mathews, 1984).

Children learn a language because they have the desire to be understood, to express themselves, and to communicate. Marie Clay (1991) said that every sentence that children construct is a hypothesis about language. When they are understood, they know that their hypothesis is confirmed and they understand that ideas could be expressed in that way. When they are not understood or a listener is puzzled, they know that their hypothesis is rejected and they will have to form a different sentence. This is how children learn a language. Several factors can show that children have good oral language skills (Clay 1991). These are sentence structure, vocabulary, and rules about inflections such as plural “s” and verb endings, and articulation of sounds.

Children’s oral language development can be greatly influenced by the communication between children and adults. Halliday (1974) and Newman (1985) emphasized the importance of
language interactions among children and adults. In the emergent level, this interaction of language is usually between parents and their children.

*Informal Description of Emergent Literacy in Chinese*

I searched for emergent literacy standards in Chinese, but none were found. I do not know if there might be books or articles in China about emergent literacy. I offer here my personal experience and observation of Chinese learning to read.

Parents and teachers in China acknowledge the importance of oral language in literacy development. Parents, especially the mother, are usually the first ones who begin talking to the baby. They believe that children’s early oral language development is critical in their reading and writing development in Chinese.

Many parents let children interact with picture books at a very early age. Before children learn to read and write characters, some parents allow children to play with pens and paper. They consider the early drawing or writing as good signs for writing development in the later school years. They also believe that a print-rich environment will benefit children’s learning. Furthermore, many parents read aloud stories to children at bedtime. However, parents seldom encourage independent reading before children go to school since Chinese characters, the pronunciation and the meaning, need to be learned before children can read and vocabulary instruction is a major task in elementary schools grade one to six in China.

Because of the lack of standards, assessment, and materials in emergent literacy in Chinese, this study was based on the assumption that many emergent literacy theories, standards, and assessments in English can be applied to emergent literacy studies in Chinese.
Emergent biliteracy studies of English and Chinese

Biliteracy refers to children’s literate competencies in two languages, to whatever degree, developed simultaneously or successively (Dworin, 1998). When I began to search for articles about emergent biliteracy, I found 65 articles about biliteracy or bilingual studies of Spanish and English and only nine about Chinese and English from ERIC at EBSCO host. Among these nine articles, four studies are related to what I was doing (Townsend & Fu, 1998; Wan, 2000; Gottardo, et al., 2001; Buckwalter & Gloria Lo, 2002).

Townsend and Fu (1998) studied how a Chinese boy developed reading and writing ability in English in his second grade classroom. They concluded that providing ESL children freedom in learning, such as allowing them to choose activities that make sense and encouragement in drawing upon personal experience in reading and writing workshops, helped their literacy acquisition.

Wan (2000) did a two-year qualitative case study of the storybook experience of a US born Chinese girl and she found out that cultural factors influence the child’s literacy experience at home. For example, books that the family chose to read to the child focused on moral and cultural education and their reading sometimes ended with an emphasis on moral lessons. In addition, the grandparents’ reading style to the child was different from the style that the parents use in that the grandparents expected the child to memorize more than making meaning.

Gottardo, et al (2001) administered parallel measures of phonological processing skills to 65 children who spoke Cantonese as their first language (L1) and English (L2) as their second language and concluded that phonological processing skills in L1 and L2 was correlated even though the two languages are significantly different.
Buckwalter and Gloria Lo (2002) studied the biliteracy experience of a five-year-old boy from Taiwan for 15 weeks and investigated whether teaching children to read and write two languages, English and Chinese, would lead to confusion in the children’s literacy learning. The results suggested that prior to formal instruction, children had no tendency to confuse literacy development in these two languages and interacting with books in both alphabetic and non-alphabetic languages would not have a negative effect on their ability to read and write.

The studies examining children’s literacy development in English and Chinese did not provide children enough opportunities to develop their own literacy in the two languages by using wordless picture books and none of them examined children’s oral language development in the two languages within the context of reading and writing.

I also came across Li’s work (2002) that focused on how the home environment influences Chinese children’s learning experiences in Canada. The book examined the learning experience of four Chinese children with different backgrounds, some had well educated parents and lived in a culture-rich community; some had poorly educated parents and lived in poverty. Li concluded that social capital determines whether a family environment has a positive impact on children’s literacy development. Li’s work allows us to look closely at Chinese children’s schooling in Canada; however, it did not focus on recording those Chinese children’s language and literacy development in English and Chinese.

**ESL students’ language and literacy learning**

Being called the “melting pot,” the United States boasts a large number of immigrants and a large number of ESL learners in classroom. However, the level and quality of the research
still has not kept pace with the numbers of bilingual children living in the United States (Garcia, 2000).

Social interaction within family and community is the biggest influence for a normally developing child’s learning a first language from 0 to 3 years old (Whitehurst & Lonigan, 2001). Children at this time will gradually acquire the age-appropriate knowledge of phonology, grammar, vocabulary, discourse, and pragmatics. If children could have exposure to a second language at this time, the level of their language development of L1 and L2 will depend on how much contact they have with the target language population. If they live in a bilingual family in a bilingual community, they will have almost equal development of both languages; if they stay in a bilingual family in an English community, it is possible for them to have a stronger development of English than their native language. In the bilingualism field, it is believed that those children who become bilingual as infants are acquiring languages simultaneously (McLaughlin, 1985 & Baker, 2001). From 3 to 5 years old, children begin to have contact with people outside of their family and community. If they participate in some kind of pre-school program, then their language development is closely related to teachers and the children around them (Whitehurst & Lonigan, 2001). As for their language development, it is believed that children who acquire languages in adolescence learn the languages successively or in sequential order (McLaughlin, 1985 & Baker, 2001). Since bilingual children are not required to stay in bilingual class and because it is hard to get the bilingual education materials for the home language (Meier, 2003), students most often develop their English and are in danger of losing their L1 literacy.

Evidence shows that ESL students will get more potential benefits in literacy learning from teachers who share the same cultural background, but the reality in the United States is that
there are not enough teachers who share the same cultural background as students and the ESL students are taught with native students in same classroom by the same teachers using the same instructional methods (Fitzgerald, 1995b). Furthermore, for those children who speak only their native language and come to English language atmosphere with no one who shares their cultural background in the classroom, it may take years for them to gain English language proficiency. Before they master the language, they go through a hard time in classrooms to become fluent in English and to learn to read and write in English at the same time. Collier (1987,1989) and Cummins (1981) have reported that, on average, at least five years is required for ESL students to attain grade norms on academic aspects of English proficiency, and for those who were born in the US or arrive the US in a very early age, the situation is even somewhat worse in that they will need, on average, seven years of schooling to catch up with their English-speaking peers academically. And the reason for the difference is that children who belong to the later category do not have a basic knowledge in their first language in reading and writing.

Researchers in applied linguistics believe that the acquisition of the first language is driven by the need and desire to communicate (Cummins, 1994), and so it is not surprising to consider that children learn a second language through the same pattern. However, Wong Fillmore (1991) in her study found that variation both in rate of acquisition and in the ultimate level of proficiency attained is more evident in second-language acquisition than the first. Wong Fillmore (1991) also stated three major components of her model to explain children learning a second language, which are (1) learners who realize they need to speak target language and are motivated to do so; (2) target language speakers who know the language well enough to provide the learners with access to it and to reinforce the need for learning it; and (3) a social setting that
brings learners and target language speakers into sufficiently frequent contact to make language learning possible.

Educators, researchers and teachers notice the importance of developing language competency in English for ESL students in order to be literate. One of the longstanding theories of language development in both literacy and foreign language teaching has involved a dichotomy between oral and written proficiencies and one between receptive and productive skills. It has been assumed that oral language development (listening and speaking) precedes written language development (reading and writing) (Hornberger, 1989. pp. 281). In the field of second language acquisition, a lot of attention has been given to communicative approaches, which emphasize the development of interpersonal communicative skills as the major goal in language learning and include Communicative Language Teaching (CLT) and the Natural Approach (Chamot & O’Malley, 1994). Communicative language teaching focuses on developing communicative proficiency rather than mastering grammatical structures (Chamot & Stewner-Manzanares, 1985; Richards & Rodgers, 1986). And the focus of CLT is on the development of oral proficiency; reading and writing activities may be incorporated into instruction. The Natural Approach (Krashen & Terrell, 1983), claimed that comprehensible input is important in second language acquisition and the best form of input to the second language learners is language that includes input that is a bit beyond learners’ current level (i+1) but still comprehensible. Examples of using comprehensible input to teach and learn a second language are: do not encourage students to talk in class if they are not ready to; reading and writing are taught as natural extensions of listening and speaking. Based on Krashen and Terrell’s comprehensive input, Pica, Holliday, Lewis, and Morgenthaler (1989) stated that ESL learners might also have the opportunity to produce “comprehensible output”, which is an extension of
the comprehensible input. Swain (1985) also argued that learners must have the opportunity to produce comprehensible output in order to move from a purely semantic analysis to a syntactic analysis of the language. For example: speaking, as well as listening, contributes to the negotiation of meaning in interaction, which in turn is said to lead to language acquisition. In a review article exploring lessons from first language acquisition for second language acquisition, Gathercole (1988) indicated that recent research shows that “the relationship between comprehension and production is not unidirectional—that progress in either may lead to progress in the other” (pp. 426). In other words, young ESL learners reading and writing may also help their listening and speaking in the second language.

Gathercole’s indication that the relationship between comprehension and production of learning a second language is supported by some of the findings of Hudelson’s (1984) research, which are (1) even children who speak no or very little English are reading some of the print and are using that reading to increase their English. (2) ESL learners are able to read and write English before they have complete control over the oral and written systems of the language. (3) the processes of writing, reading, speaking and listening in a second language are interrelated and interdependent.

Being literate is a multifaceted skill that all children living in the United States must accomplish in order to be successful. However, this skill is hard to accomplish for ESL students due to their special language background. And if they want to become literate in two languages, this task becomes even much harder and more difficult. Biliteracy has a close association with ESL students’ academic achievement in class and with the level of first language literacy (Cummins, 1994; Ernst-Slavit, & Mulhern, 2003). Even though language and literacy are usually taught at the same time in classrooms to young children and the learning of either may improve
the learning of the other, the learners may find the connection difficult and the process complex because the reading and writing instruction begin in a language that they do not speak with any ease (Allen, 1994). And few studies have investigated the process of becoming biliterate in young children (Bauer & Montero, 2001). Many factors influence the development of being biliterate.

**Oral Proficiency**

In the oral-literate continuum (Hornberger, 1989), the development of literacy relies heavily on spoken language. If oral language is important for native children to become literate, then oral language development in both the first and second language should also be critical to ESL children’s development of biliteracy. Ernst-Slavit and Mulhern (2003) showed that a sound foundation in the first language—spoken and written—creates the best conditions for the acquisition of a second language and when biliteracy is fostered, literacy skills and strategies used in one language could transfer to the other. Fitzgerald (1995a) summarized factors that may influence ESL students’ literacy development including students’ native language proficiency and it indicated that ESL students’ native language background will improve ESL students’ oral proficiency and reading proficiency of English.

**Culture**

Another important phenomenon explaining the difficulties of ESL students acquiring biliteracy is the cultural factor. Many ESL students like to be silent on class and many teachers will assume that the reason for that is because they have language problems or they have shy personalities. However, this is not usually the case. Research suggests that this is because bilingual ethnic minority children have home cultures that they are unable to share with the class (Schmidt, 1995; Harklau, 2002). Young children have the tendency to keep silent if what they
say cannot be understood or accepted by others whether linguistically or culturally. Children’s attention and interest in learning may suffer when they do not speak. Literacy cannot be acquired efficiently without the integration of listening, speaking, reading and writing. These are four inseparable components that lead toward literacy.

*First language resources*

The third factor that causes the delay of acquiring biliteracy is the lack of resources in the first language. Studies have demonstrated the importance of literacy in the first language for students’ full development of proficiency in the language of instruction, subsequent academic success, and high levels of self-confidence (Collier, 1992; Snow, 1990). The success in a second language in academic settings depends greatly on the language base and literacy skills acquired in the first language, it is essential for ESL students to have enough resources that are based in their first language. There is an increasing population in the US who speak both English and Spanish and it may not be hard to find a bilingual book in Spanish and English. However, there are not as many bilingual books for languages such as Chinese, Japanese, Russian, and Hindi. Without appropriate and plentiful materials for instruction, it is difficult for ESL students to become literate in their own languages.

*Language Difference between English and Chinese*

The Chinese language has many unique features compared with the English language. It is a tonal language, which means it uses varied pitches to differentiate between words that have the same phonemes. The language has four tones (Mandarin) and characters that have the same phonemes but different tones are semantically different.

Another difference between English and Chinese is that Chinese is a logographic writing system in which the written symbols, or characters, represent lexical morphemes. The structure
of the majority of characters (80% to 90%) is composed of two components: a radical that gives a meaning clue and a phonetic component that offers a pronunciation clue (Shu & Anderson, 1997). In order to read, children need to remember the pronunciation of the phonetic component of the character and the radical which stands for the meaning, which is essential for vocabulary instruction in elementary schools in China. And a good reader of Chinese is symbolized by the ability to interpret novel characters on the basis of their radical (Li, 2002).

Furthermore, the Chinese language is not as difficult as English, grammatically speaking. Verbs do not change forms according to tense or plurality of the subject and tense is encoded by entirely different characters.

*Wordless Picture Books benefit both native and ESL children’s literacy development*

Wordless picture books—the “pure” picture books or the “almost” wordless picture books, which rely on illustrations to tell a story and offer a surprising variety of topics, themes, and levels of difficulty. They are an excellent resource for educators of young children (Jalongo, Dragich, Conrad, & Zhang, 2002). Wordless picture books provide native young readers many opportunities to acquire literacy. Many educators and teachers have recommended using wordless picture books with children to support emergent literacy (Reese, 1996; Arthur, 1982; Avery, 1996; Read & Smith, 1982; Larrick, 1976; Gitelman, 1990; Degler, 1979; Flatley & Rutland, 1986). They describe skills and methods, offer activities and books to use with young readers. Because of the absence of print, ESL students will not be faced with a language that they are not familiar with. This special quality makes possible doing reading and writing activities to develop their literacy in English and in their home language.

Reese (1996) used wordless picture books in a second grade classroom to promote the concept of story structure. The project was divided into three stages. First, the second graders
and teachers worked together in a whole class setting; second, the students were asked to work with their assigned partners; and third, they worked individually. When the wordless picture books were first introduced in a whole class setting, the children were asked to describe each picture by writing a sentence. After the whole book was written about, two children were chosen to read the book to the principal and another two were chosen to read the story to first graders. And then the children considered the responses from the first graders to decide if their story needed revision. The eight-week long class project enabled the improvement in students’ writing. When working with peers, students read what they wrote to each other and checked if the story made sense and made corrections as needed. In the individual working stage, students did everything they had done as a group and they also read their story to the whole class, to kindergarteners, to first graders and other second graders. Each visitor was supposed to ask questions to help the author make the story clearer. The author then rewrote the story according to the questions asked. Through the 6 months’ project, students learned to write stories in complete sentences, to expand their ideas to better describe the pictures, and to produce a meaningful story.

ESL students could also use wordless picture books to develop their concept of stories. In grade two and grade five level, if they have been learning their native language, they should not only practice writing sentences in English, but also they should learn how to express the meaning of the picture orally or by writing about pictures.

Wordless picture books were also used to develop comprehension (Arthur, 1982). One of the many ways that teachers can use the wordless picture books is to direct children’s attention to “reading for meaning” without having to deal with the added problem of word identification. Children’s comprehension could be directed at different levels according to the individual
children. Some children may be able to label things in the picture books without understanding the whole story, and some may be able to tell what happened in one page but cannot understand a sequenced story. And all the wordless picture books are good vehicles for developing children’s prediction skills. Children can get the meaning from the pictures and predict what might happen in upcoming pictures.

Arthur (1982) introduced five representative wordless picture books that are typical for children to read for meaning and to make predictions. The five books are *Mouse House Months* by Helen Craig, *The Elephant’s Nest* by Marilee Burton, *Flicks* by Tomie de Paole, *The Scribble Monster* by Jack Kent, and *Cricket in the Grass* by Philip Van Soelen. *Mouse House Months* represents wordless picture books that do not follow a clear story line. *The Elephant’s Nest* and *Flicks* are books that contain a series of short stories, which are the ideal type for children who may have difficulty with a long illustration book that conveys a single story. *The Scribble Monster* represents wordless picture books that can offer children many opportunities to make predictions and to find solutions to a problem. *Cricket in the Grass* fits into the category of science and social studies. It has sketches made by ink and pen and this type of book is realistic and informative. Choosing the appropriate type of wordless picture books is important in developing ESL students’ reading both in English and their native language. One should imagine oneself in the child’s position and think about all of the background information to choose wordless picture books which are culturally appropriate, age appropriate and appeal to the child’s interests.

Wordless picture books support children’s attempts at storytelling and hence lead children to communicate at a higher language level (Avery, 1996). Avery investigated the use of the wordless picture book, *The Chicken’s Child*, with a second and a fifth grader and
demonstrates its usefulness in oral storytelling. Both the second and the fifth graders were asked to read the story and present their interpretations. The result of the comparison between the two interpretations shows that wordless picture books provide a marvelous framework for oral storytelling among children. ESL students’ language development in both English and their native language can also benefit a lot from using wordless picture books. If the adult who is helping the child can speak both English and the child’s native language, through the exchanging of ideas and the communicative talking and instructions such as labeling and picture walking in both languages, the child will gradually develop and improve their listening, speaking, reading and writing skills in both languages.

Wordless picture books help the teaching of visual literacy (Read, 1982; Lindauer, 1988). Wordless picture books are important visual materials for children to use. The strong details that are presented by the pictures and the creative use of space, color and symbolism are essential factors that attract young children to use their imagination to tell a story. And young readers can learn: the sequencing, identifying details, determining main ideas, drawing conclusions, distinguishing cause and effect relationships, and making judgments from the reading of wordless picture books. The creation of stories depends heavily on the child’s native language thus removing the need for print matter to be translated, and wordless picture books provide ESL students the perfect foundation for purely creative thinking (Lindauer, 1988).

Wordless picture books elicit talking (Larrick, 1976). Wordless picture books provide chances for children to create the words on their own and even the poorest readers may like reading their own words. The use of wordless picture books leads to discussions among children, interactions between children and teachers or parents. Children find it easy to read within their own world and the words they created reflect their world (Merrill, 2000). Their own abbreviation
of the words or invented spellings are the best materials for them to develop the alphabetic
principle and phonemic awareness gradually. The mastering of these skills is significant for ESL
students striving to become literate in English and their first language.

Degler (1979) recommended wordless picture books as a means for nurturing skills and
attitudes that surround the handling of books and the development of concepts about print.
Concepts such as “word,” “sentence,” “capital letter” and “lower case letter” were taught within
the context of reading wordless picture books and young readers developed reading readiness
through thinking about the pictures. Teachers and parents also helped children to develop their
language competence through asking questions. Besides, books without words ensured a
successful reading experience, a no-fail encounter with a book. The use of these books
encouraged children to foster positive attitudes towards reading and the no-fail experience was
the best stimuli for ESL children to foster their love of English.

Research with Wordless Picture Books

Only few scholars (Kraayenoord & Paris, 1996; Lindauer, 1988; Crawford & Hade,
2000) have done studies using wordless picture books with children. Crawford and Hade (2000)
did a qualitative study about wordless picture books with three children using a semiotic
framework. The study explores ways in which children assign meaning to a variety of visual
signs and cues. Three children in different age groups and with different educational experience
were selected and they were asked to choose, according to their personal likes and dislikes,
altogether three books given to read at their home. The data were then collected by one
researcher and one parent and analyzed according to the principles of qualitative content analysis
and divided into categories with different foci. Some categories include descriptors related to the
children’s references to images contained within the book, some categories address references to sources beyond the book, and other categories include information related to the children’s behaviors during the reading. The result of this study indicates that all three children based their reading choices upon their response to some type of visual element and some important findings are that children are making sense through prior knowledge and experiences, through intertextuality, through multiple perspective taking, through story language and story rituals, and through active, playful behaviors.

Another important study of wordless picture books investigated using story construction from a Picture Book to assess young children’s abilities to construct meaning independent of decoding skills. (Van Kraayenoord, & Paris, 1996) The article addresses the importance of meaning-making as the foundation of literacy during children’s early years in school. That is, comprehension from what is seen or read or heard. Most methods of early assessment focus on children’s abilities to decode or write text. This neglects the complexity of understanding their comprehension abilities. Van Kraayenoord and Paris offer three compelling reasons to create literacy assessment activities that measure young children’s abilities to construct coherent stories independently from print. First, meaning-making is essential for comprehension and composition. It taps the use of language functionally, socially, and expressively. Second, literacy curricula around the world emphasize meaning-making in daily activities such as drawing, retelling, and writing. Third, there are few tasks that provide empirical evidence about the relation between meaning-making and subsequent literacy development. This study involves two waves of testing by using different assessment programs, such as the Index of Reading Awareness (IRA), the Test of Reading Comprehension (TORCH), the Think Along Passages (TAP) and 62 students aged five in average participated in the study. The result shows that a
Story Construction activity provides both curricular and consequential validity and found significant correlations between meaning-making from a picture book and teachers’ ratings of children’s comprehension and motivation, and between story construction and comprehension, metacognition and strategic reading. More important is the finding that because the activity of story construction from a picture book does not rely on the ability to decode or write, it can be used with new entrants to the school environment, and if the wordless storybook has been carefully chosen or created, may also be suitable for use with children from non-English-speaking backgrounds.

The above studies done with young children emphasize the importance of using wordless picture books with emergent readers; however, they did not focus on using them with ESL emergent students to support emergent biliteracy. When ESL children are immersed in the English-only atmosphere at school and the native language dominated atmosphere at home, it would be interesting and important to look into the strategies and methods that they use to learn two languages and the ability to read both. Besides, we know that it is commonly believed that we learn a language in the sequence of listening, speaking, reading and writing, but there are those who argue that the four skills are inseparable and the development of each may improve the development of the other. This leads to my wondering if an ESL young student using wordless picture books can learn reading, writing, and speaking in two languages. Can the child acquire literacy both in English and in his/her native language without fully developed oral language skills and how? How can the child get benefits from using wordless picture books and what are the benefits? Hence, this study is designed to contribute to knowing how ESL children develop in more than one language to become biliterate.
Summary of Literature Review

My review of literacy studies indicates that phonological processing skills, print awareness, and oral language skills are important factors toward children’s emergent literacy development. Oral language and the availability of first language resources including people and materials play important roles in ESL children’s biliteracy development. Listening, speaking, reading and writing skills interact and benefit each other during language development. Wordless picture books lead to many literacy related activities that assist children’s language and literacy development in both the native language and the second language.

However, no research was found that combines emergent literacy, bilingualism and wordless picture books to study ESL children’s reading and writing development. Hence, I have identified key points that support the importance of this study.

1. There is no in-depth research about using wordless picture books with an ESL student whose native language is totally different from languages such as English, Spanish, French... which depend on different scripts to acquire literacy.

2. There is no research using wordless picture books to assess whether the theories in emergent literacy hold up for students acquiring biliteracy.

This study was guided by the three research questions, which are

1) How can wordless picture books be used to develop biliteracy in Chinese and English with a five-year-old Chinese national?

2) What reading and writing abilities does the child develop in Chinese and English?

3) What oral language development in English occurs in the child in the context of tutoring her in reading and writing?
CHAPTER 3

METHODOLOGY

This is a descriptive case study. Qualitative description of the tutoring sessions and literacy activities reveal the child’s acquisition of reading and writing in English and Chinese. Descriptive statistics were also used to inform narrative and situational characteristics, which contributed to the qualitative dimensions of this case study.

This study was designed to find out the literacy development of a five-year-old Chinese child by using wordless picture books for ten consecutive weeks within the tutoring context. Included in this chapter are an introduction to the child and her family, the criteria for the selection of the ten wordless picture books, the literacy related activities the child and I did during three weekly sessions, and a description of data collection and data analysis.

Background Information

I met Chaochao (pseudonym) when she had been in a kindergarten classroom in the US for four weeks. She was uncomfortable and unresponsive in the classroom where everyone spoke English. When I talked to her in Chinese, she nodded first and then smiled, after a while she murmured to tell me that she did not understand what the teacher said to her. I could imagine it must be very hard for a five-year old Chinese child staying in a place where she could not communicate and understand. I wanted to offer her some help and I also wanted to see how she develops her English language skills.
Chaochao comes from a Chinese family. Her mother came to the United States four years ago when Chaochao was only two and half years old and she has a post-doctoral position in the field of biochemistry. Chaochao’s father was a university law teacher when they lived in China. When Chaochao and her father first came to the US in the year of 2001, she was only three and half years old. Her parents wanted Chaochao to receive a US education because they think children get more opportunities to develop creativity and independent thinking skills. However, they were afraid that at the age of three and half, Chaochao was too young to learn both the languages well. They went back to China and chose to move to the US when Chaochao was five, an age that children can speak and understand well in their native language. They expected that Chaochao could be able to acquire English language skills without losing her native language.

Chaochao’s parents told me that they began to do literacy activities in Chinese when she was one and half years old. They showed her picture-word cards and read her bedtime stories. Chaochao was able to recognize (but not write) about 200 characters in Chinese before the age of three, which is a lot for a three-year-old. After returning to China for a year Chaochao learned numbers and the English alphabet. In addition, her parents sent her to a program for two months to practice speaking English. She learned the names of human body parts. She learned how to greet people and how to ask and answer questions about her age and name. Even though she had some education in English, she did not speak much English when she arrived in the US but she could understand numbers, her age and name. Two months after Chaochao and her father arrived in the US, she went to kindergarten everyday. Her parents expected once Chaochao was in an English speaking environment, she would acquire English easily. Yet they worried that she might lose interest in continuing her Chinese language and literacy learning. So they spoke Chinese at home and taught her Chinese literacy after school every day. In addition to
recognizing 200 characters she could write about 100 Chinese characters at the time she entered kindergarten in US.

Chaochao’s parents observed their daughter’s learning behavior since she started looking at a book and they found out that she loves to make up stories on her own. When I came to them asking if I could work with Chaochao to study her language and literacy development in English and Chinese, they gave their permission immediately. They wanted Chaochao to learn with someone fluent in both Chinese and English. Also, they were happy about our project since creating stories was what Chaochao liked to do when learning about reading and writing.

The idea of doing this study with Chaochao originated during a course in Fall 2003; however, the tutoring session did not start until January 12\textsuperscript{th}, 2004. From September to January, Chaochao went to kindergarten everyday. She could have acquired English just by being in the atmosphere. Even when the instructional sessions began, Chaochao still spent the majority of her time in kindergarten classroom, so it is hard to distinguish precisely between what she learned at school and what she learned during the tutoring sessions with me. Furthermore, Chaochao’s father has been a great teacher. He used the time after school or on weekends to teach her reading and writing in Chinese and mathematics. The books her father used are textbooks for first and second graders in elementary schools in China, and this put Chaochao far beyond her grade level peers in China. With solid background knowledge in Chinese, Chaochao showed her superiority in Chinese. Chaochao’s rich background precludes drawing any causal implications solely from my tutoring her in English and Chinese biliteracy.
Selection of wordless picture books

The tutoring called for ten different wordless picture books and I got them from the Curriculum Material Center (CMC) in the College of Education in UGA. I collected about 20 books from the list in CMC. After getting suggestions and opinion from Dr. Harklau and after I familiarized with the different types of books, selection criteria were developed. There are three factors that I took into consideration in choosing wordless picture books that were appropriate to her age and her cultural background. They are story line, content, and color. They are important and necessary for children in any languages who want to study with wordless picture books.

Story line

The wordless picture books that I chose are the ones that I thought would make sense to a five-year old girl who came from China. There are a lot of good wordless picture books that are simple and interesting and they invite children to label things but they do not present a story line. The books that I chose have clear and concrete story lines with the exception of the first book we used and they are appropriate for a five-year old. Besides, I also considered her gender. The characters in these ten books are people and nice little animals and I assume that they are pleasing to a girl.

Content

Another important factor that I took into consideration is the content of the book. First of all, I looked for stories that took place with background information that Chaochao would be familiar with. Studies have been done emphasizing that background knowledge plays an important role in learner’s reading comprehension (Smallwood, 2002., Droop & Verhoeven, 1998., Ridgway, 1997., & Chen & Graves, 1995). For instance, there are a great many books dealing with Christmas and Masquerade Parties. Those are interesting topics for American
children, but they are not the most appropriate topics for Chinese children. I looked for stories that took place in China or with some Chinese background but I could not find them. So finally, I ended up with stories that seemed appropriate for children from different cultural backgrounds. Secondly, I looked for storybooks that are related to her personal experience. I assumed that children would have more to talk about when they had similar experiences. What is more, considering the fact that she is going to create some English sentences, I avoided complicated content that would be difficult for her to talk about.

*Color*

I believe that the color of the illustration plays an important role in motivating children to learn. The books I selected possess beautiful illustrations and bright colors. They are pleasing to the eyes of a five-year old. Below is the list of the wordless picture books that we used and they are listed in the order we used them.

They are organized according to the levels of difficulty. The first book, *Baby Animals* (Salegers, 1987), is the one with the weakest story line. It could be constructed into a story or it could also be viewed as individual pictures. I believe it was a good starting point since the illustrations are nice and the content is simple.

The second book, *the Egg Book* (Kent, 1975), was the closest to Chinese culture. Chinese children are familiar with a similar story, which tells about a careless Duck Mom who lost her child and then looked all over to find her egg. I thought that she could learn how to tell a story with this book.

The book, *The Good Bird* (Wezel, 1964), we used for the third week, has the most unique illustrations. All the pictures are made by crayon. They are simple-illustrations and give readers the impression that they were drawn by a child. The story line is simple too, which talks about a bird who found a worm and shared it with a fish.

The fourth book, *Kitten for a Day* (Deats, 1982), has a few words at the beginning and at the end. With the help of these words, it is easy to construct a story, but I covered the words since I wanted to see her understanding of the story without being influenced by the few words provided.

*Elephant* (Barton, 1971) is a little cute book that tells a story about a girl seeing elephants in a store window, in the circus, on her TV, in a dream and in the zoo. We used this book in the fifth week and I hoped that she could be able to link her experience of seeing an elephant in a zoo in China to tell a story for this book.

I came across the book *Jungle Walk* (Tafuri, 1988), when I was writing my literature review. Jalongo, Dragich, Conrad and Zhang (2002) mentioned that wordless picture books could be used with children who speak another language. The article included a biliterate text in
English and Chinese that Zhang created for sixth graders by using the book *Jungle Walk*. I was interested in knowing how a kindergartener would construct a story in English and Chinese, so I used this book during week six.

Books used during week seven, eight, nine, and ten are all series books. *Good dog Carl* (Day, 1991) and *Carl goes shopping* (Day, 1989) were from the same series. Carl, a big black dog, takes care of the baby. The drawings are cute and story lines are inviting. I used these books toward the end of instruction because they seem to call for more sophisticated vocabulary.

For week nine and ten we read *School* (McCully, 1987) and *First Snow* (McCally, 1985) from another series. These books are the most difficult, because they require a lot of oral vocabulary knowledge. The illustrations portray more activities and invite more labeling of objects. The reasons that I chose these two are because though they are difficult, they are close to her personal experience. Her hometown in China snows a lot and she is familiar with snow. And she goes to school everyday now, so she knows what school is like and what students do in school.

**Procedures and Biliteracy Instruction**

Chaochao and I met three times a week, Monday, Wednesday, and Friday in the University of Georgia’s Reading Clinic for about forty-five to sixty minutes for ten consecutive weeks. Chaochao came back from school at three in the afternoon and after a little break, her father brought her to meet me at four o’clock. The clinic room is not big, but very well equipped. We have shelves behind us that are full of books. Also we have a computer and a printer. And often we use a small white board to write on.
We used wordless picture books to do literacy activities during each session. English is the primary language used in each session and Chinese is the auxiliary language used when Chaochao could not understand what I said in English. At the beginning, I provided Chinese translations after my requests in English. After the fourth week, I did less translation although there still were instances when I did so if she did not respond to English. I summarized activities we did in each session including the language we used (Table 3.1). The following table provides examples of our activities. Furthermore, I also did nine assessments at the beginning, in the middle, at the end, and two weeks after the tutoring sessions. The assessment information and results are provided in the next chapter.

Table 3.1

Summary of literacy activities with wordless picture books

<table>
<thead>
<tr>
<th>Monday: Pre-Reading</th>
<th>Wednesday: Reading</th>
<th>Friday: Post-Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greeting (E)</td>
<td>Greeting (E)</td>
<td>Greeting (E)</td>
</tr>
<tr>
<td>Labeling (E &amp; C)</td>
<td>Story retelling (E &amp; C)</td>
<td>Story retelling (E &amp; C)</td>
</tr>
<tr>
<td>Picture walk (E &amp; C)</td>
<td>Reading word cards (E &amp; C)</td>
<td>Picture finding (E &amp; C)</td>
</tr>
<tr>
<td>Story telling (E &amp; C)</td>
<td>Reading biliterate texts (E &amp; C)</td>
<td>Word finding (E &amp; C)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Sentence making (E &amp; C)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Invented spelling (E)</td>
</tr>
</tbody>
</table>

* E--- English, C--- Chinese

**Monday Session - Pre-reading Activities**

Week five: Elephant (by Barton, 1971).

Date: 02/09/04

**Greeting**

*Ran (R): Hi, Chaochao, how are you?*

*Chao (C): Fine.*

*R: What did you do in school today?*

*C: Play.*
R: Anything else?
C: No.

**Labeling**

R: Ok, Chaochao, today we are going to read a new book together. Do you know this word? (I showed her the book and pointed to the word elephant.)
C: ... (silence)

R: Elephant, do you know what is elephant?
C: 大象。(saying Chinese words for elephant.)

R: Yes, good! 大象 is elephant in English. Have you ever seen an elephant?
C: Yes.

R: Where did you see it? Do you like it?
C: Yes. 动物园。(the zoo)

R: Oh, you have been to the zoo. Is that in China?
C: Yes.

R: Did your Mom and Dad take you to the zoo here in the United States?
C: No.

R: Ok, Chaochao, we are going to see a lot of elephants in this book. Ok, let’s look at the pictures together. (I opened the book and pointed to the picture of the store.) This is a...?
C: House.

R: Good. It could be a house. But think of it, where your Mom and Dad take you to buy something?
C: ...(silence)
R: 商店. (I said the Chinese words for shop or store.)

C: 商店. (She repeated my Chinese words.)

R: Do you know how to say it in English, Chaochao?

C: ...(silence)

R: Store or shop.

C: Store, shop.

R: Good! And this is a ... (Pointing to a girl.)

C: girl.

R: Great! Yes, this is a girl. And do you want to give her a name?

C: Yes. En... Honghong. (Hong is a Chinese word to say the color of red. She named the girl in picture Honghong because the girl is in red cloths.)

R: Ok, and what is that? (pointing to a tree)

C: a tree.

R: Very good! How about that? (pointing to a toy elephant.)

C: ...(silence)

R: 这是一个玩具啊。玩具, how to say it in English?

C: toy.

R: Great, Chaochao! This is a difficult word. I am glad you can say it. How about this? (pointing to a television)

C: TV.

R: And this? (pointing to a bed.)

C: Honghong's bed.
R: Excellent! This one? (pointing to a sofa?)

C: 沙发。

R: Yes, sofa. And Honghong is reading a…? (pointing to a book)

C: Book.

R: Good. This is a…? (pointing to the hill.)

C: Hill.

R: And they go to…? (pointing to the picture that has lot of animals together.)

C: Animal fair.

R: Wow! You did so good. And Honghong now has a …? (pointing to a balloon.)

C: Balloon.

R: Good. Now, are you ready for telling me the story?

During the pre-reading activities, I asked her questions related to the pictures of the book. The picture walk we did together gave her a basic idea about the content of the book and labeling the words in the pictures helped her construct her sentences in English. She told me her story about the picture book in English and Chinese after we finished our pre-reading activities. I tape-recorded her story in order to get all the words and sentences she said. Then I put the words she said on cards both in English and Chinese and made corrections to her sentences mainly grammatically both in English and Chinese and I used the words to create a biliterate text for her to read on Wednesday and Friday. Here is an example of my biliterate text in comparison to hers.

Table 3.2

Biliterate Text Comparison of Chao and Ran on Monday Week Eight

<table>
<thead>
<tr>
<th>Week 8, 03/01/04 Carl goes shopping</th>
<th>English</th>
<th>Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
1. Baby Mom talk to the dog. She said: “You have to play with the baby.”

1. Carl 和小孩的妈妈和小孩到商店里买东西。

2. They go to (elevator)*.

2. 小孩骑在Carl的背上。他俩上电梯，Carl在按电梯。

3. They go up to toys.

3. Carl把小孩放在车里，他推，推到玩具着。

4. The baby want to play with the elephant.

4. 宝宝和玩具跑到一起，小孩想把玩具摆得和刚才一样。

5. The baby want to read.

5. Carl到书这，小孩拿一本书。

6. They play hat and they walk away.

6. 小孩拿帽子，Carl带手套，他们化妆就走了。

7. Somebody take a picture of them.

7. 然后别人照了许多他们的图，哪都有。

8. The baby want to sleep.

8. 他们下电梯躺在毯子上。

9. They eat.

9. 他们俩吃东西，Carl买东西吃。

10. They go to…pet. (It took her some time to pronounce this word.) The pet go out. They hide.

10. 他们去买东西的地方，他们俩把这些东西都放出去。那些东西又跑又跳。

11. They see the mom want to go home.

11. 他们看见他的妈妈。

12. Carl run.

12. 他们又到电梯这。
<table>
<thead>
<tr>
<th>Ran’s sentences</th>
<th>1. Carl, the baby and his mom go to shopping and Mom said to Carl: “Play with the baby.”</th>
<th>1. Carl, 小孩和妈妈一起去商店买东西. 妈妈让 Carl 看着小孩.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2. The baby sits on Carl’s back and they go to the elevator.</td>
<td>2. 小孩骑在 Carl 的背上, 坐电梯.</td>
</tr>
<tr>
<td></td>
<td>3. Carl takes the baby to the toys.</td>
<td>3. Carl 带小孩到卖玩具的地方.</td>
</tr>
<tr>
<td></td>
<td>4. The baby wants to play with the toy elephant.</td>
<td>4. 小孩喜欢玩具象.</td>
</tr>
<tr>
<td></td>
<td>5. Carl takes the baby to the books.</td>
<td>5. Carl 带小孩到卖书的地方.</td>
</tr>
<tr>
<td></td>
<td>6. Carl takes the baby to the hats and gloves.</td>
<td>6. Carl 把小孩带到卖帽子和手套的地方.</td>
</tr>
<tr>
<td></td>
<td>7. Somebody takes many pictures of Carl and the baby.</td>
<td>7. 别人照了很多小孩和 Carl 的照片.</td>
</tr>
<tr>
<td></td>
<td>8. The baby is sleepy and they lie down on the blanket.</td>
<td>8. 他们下电梯, 躺在毯子上.</td>
</tr>
<tr>
<td></td>
<td>9. They eat together.</td>
<td>9. 他们 俩 一起吃东西.</td>
</tr>
<tr>
<td></td>
<td>10. They go to pet store and set all the pets free.</td>
<td>10. 他们到宠物店去, 放了所有的宠物.</td>
</tr>
<tr>
<td></td>
<td>11. They see the mom coming back.</td>
<td>11. 他们看见妈妈就要回来了.</td>
</tr>
</tbody>
</table>
12. Carl runs back and puts the baby back to the carriage.

13. Mom goes back and said: “Good dog, Carl.”

12. Carl 跑到原来的地方把小孩放到车上.

13. 妈妈回来了, 对 Carl 说: “干得好.”

Wednesday session - Reading Activities

After greeting each other, the first thing we do on Wednesdays is to have Chaochao tell her story again in English and Chinese. By comparing the words she used, the way she organized her sentences and her story, I can see her language development in English and Chinese. Then she read the English words and Chinese characters from the word cards and read the correct biliterate text that I wrote. And again I provide her Wednesday’s version of Carl goes shopping as an example (Table 3.3).

Table 3.3

Biliterate Text on Wednesday Week Eight

<table>
<thead>
<tr>
<th>English</th>
<th>Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The baby mommy said: “Carl, you have to play with the baby.”</td>
<td>1. 小孩的妈妈让 Carl 跟小孩玩．</td>
</tr>
<tr>
<td>2. The baby go away and Carl go away too.</td>
<td>2. 小孩使劲拽 Carl 的耳朵, 小孩骑着 Carl 的背．</td>
</tr>
<tr>
<td>3. Carl put the baby in a toy.</td>
<td>3. Carl 去电梯那, 它按电梯．</td>
</tr>
<tr>
<td>4. The baby has lots of toys.</td>
<td>4. Carl 把小孩放到很多玩具里, 它推小孩，把玩具撞倒了, 小孩想把玩具摆</td>
</tr>
</tbody>
</table>
5. The baby want to look some books. The baby look Carl pick one.

6. The baby have a hat. They go to (electronics).

7. Some people take a lot of picture of them.

8. The baby want to sleep. So they sleep.

9. They eat.

10. They go to pet store. Everything come out.

11. They see the mom want to go back.

12. They run and run.

13. Carl put the baby back in.

14. The mom go down. The baby mom said: “Good Carl!”

Friday session - Post-reading Activities

Besides retelling the story again, we did many post reading activities with words and sentences Chaochao said. Below are some examples of what we did.


Date: 02/20/04
1. Finding pictures: (I read a word from our word card to let her find a picture that matches the word.)

R: Chaochao, can you find the picture of the elephant?

C: (Pointing to the correct picture.)

R: Good. And what is a hippo?

C: (Again, correct.)

R: And where did you see the birds?

C: (Correct.)

R: Excellent. Ok, another word. We learned this word before. Let me see if you still remember it? Crocodile?

C: (Correct again.)

2. Finding words: (I pointed to a picture to let her say the word first and then find the word in the word card.)

R: Chaochao, what is this? (pointing to the picture of a banana.)

C: Banana.

R: Good! Which one is banana here? (let her choose from the word cards.)

C: b..b.. (she murmured the letter “b” and then got the correct word.)

R: Great! Now, can you find the word for...? (Pointing to a picture of monkey.)

C: (She got it immediately.)

R: Very good! How about this picture? (pointing to a horse.)

C: horse/house. (Her pronunciation of the word “horse” has no big difference with the pronunciation of the word “house”.)

R: Where is that?
C: (Showed me the word she found “house”.)

R: Well, not exactly. What is horse in Chinese?

C: 马。

R: Good, then how to say 房子 in English? (house)

C: house/horse. (again, pronunciation the same.)

R: Ok, Chaochao, 马是 horse, 房子是 house. (I taught her the difference between these two words.)

C: (She repeated.)

R: Good, now, tell me how many horses here?

C: Three.

R: Correct! Can you find the word “three” for me?

C: (She pronounced “s...” and was looking for words beginning with the letter “s”.)

R: Did you get it?

C: (Smile, silence.)

R: How about this one? (pointing to the word “three”)

C: Three! (Said it quickly.)

3. Making sentences by using only the word cards.

R: Ok, Chaochao, these are all the words you used to tell the story about Mike. (she named the boy in Jungle Walk Mike.) And can you use the words to make up a sentence?

C: Mike saw monkey. (She said)

R: Good! Find the words!

C: Monkey. (She said Mike, but she got the word Monkey.)
R: Is that Mike?

C: (silence)

R: No, that is not Mike, but it is good because Mike begins with M and has a K in it! Try others.

C: (She picked the correct one this time.) Mike- see- monkey. (She said “saw”, but picked the word “see”.)

R: This is great!

4. Making sentence according to the picture.

R: What is this picture talking about? (I showed her the picture of a boy who went to sleep but dreamed that he got up and saw his cat running out of the window.)

C: Mike dream and his cat go out.

R: Wow! Excellent! Can you show me your sentence now?

C: (She found all the words by herself except the word “dream”. It is hard for her to distinguish the sound “dr” from the word “d”.)

5. Matching words from the cards with the words I said in sentence.

R: Ok, I have a sentence for you! Listen carefully! Mike saw a monkey eating a banana.

C: She was able to find each word correctly and put them into the right order to make a sentence.

R: Great! Let’s do another one in both Chinese and English. 迈克关灯。Mike turned off the light.

C: She had no problem in finding the correct Chinese character and she found all other English words automatically except the word “light”.

6. Invented spelling of her words and her own sentences in English.
After sentence-making activities, we did spelling exercises. I read the words from her story
telling and asked her to spell them as best as she could. This was a form of dictation. Examples
below were drawn from week six, 02/20/04.

- tell—till
- hand—hnd
- want—wnt
- like—like
- jump—Ilnp
- something—smsing
- banana—banrnr
- tiger—tigr
- flower—flrwr
- window—windo

And she also spelled sentences that I said:

1. Mike is reading his book and his cat is sleeping.
   Mik is rging hes bok and hes cat is sleping.

2. Mike saw a bird standing on the hippo.
   Mik sw a drd sdnning on the heppo.

The examples given for Monday, Wednesday and Friday sessions are from
different weeks. The reason for this is because even though we did these activities with
all the books during the ten weeks, I wanted to provide readers with a variety of examples
from different contexts.

Data Collection

Data collection began January 12th and concluded April 2nd. Data collection
included the ten weeks of tutoring sessions, two interviews with Chaochao’s parents at
the beginning and in the middle of the project, and nine assessments in English and
Chinese. Data from the tutoring sessions and interviews were audio-taped and transcribed.
The assessments were also audio-taped and later scored. The information from the interviews was used as auxiliary data. Thus there are two major categories of data: 1) assessment, and 2) instructional activities.

Data Analysis

I sorted the data into assessment data, instructional data, and auxiliary data. Analysis of these data was guided by the research questions. 1) How can wordless picture books be used to develop biliteracy in Chinese and English? 2) What reading and writing abilities does the child develop in Chinese and English? 3) What oral language development in English occurs in the child in the context of tutoring her in reading and writing?

I first analyzed the auxiliary data, two interviews. Two goals directed my analysis. One was to look for Chaochao’s background information such as Chaochao’s education experience in China and her learning English and Chinese. The second was to understand her family support in her English and Chinese language learning while in the US.

Analysis of the assessment data proceeded through several stages to obtain descriptive statistics. I obtained the accuracy percentage of before-tutoring-assessment data by dividing the total number of English alphabet and Chinese characters that Chaochao read correctly from the total number of alphabet and characters that were presented to her to read.

Other assessments that I did in the middle and at the end of tutoring involved Chaochao’s reading the words and characters she used in her oral story telling. Hence, analysis of these data required me to initially count the total number of words Chaochao
used in English and Chinese during her oral story telling. First I counted the vocabulary that she read by looking at the words or characters individually from word cards (sight vocabulary). Second I counted the vocabulary that she read with the help of the context, which is reading words from her own sentences (context vocabulary). Third I counted the vocabulary that she failed to read even with the help of her context (oral-only vocabulary). With these numbers and total number, I calculated percentages of Chaochao’s sight vocabulary, context vocabulary and oral-only vocabulary.

Two assessments involved using the Fry and the Dolch word lists. I noticed that both the Fry and the Dolch have some words that are unique to each list, so I combined these two lists. Together they yield those words that are the most high-frequency words. The Fry and Dolch Combined word list has 157 words on it. I used this list to assess Chaochao’s reading of high frequency words and calculated the percentage that she read correctly.

Three emphases directed the analysis of the instructional data. They were Chaochao’s oral language development in English and Chinese; Chaochao’s oral vocabulary versus reading vocabulary development in English and Chinese; and Chaochao’s writing development in English.

In order to see progress in Chaochao’s oral language development, I counted the number of words she used to describe each picture and compared the number in her first telling, second telling, and the third telling; I examined the sentences she said in story telling by looking at the length and the complexity such as using compound sentences and using clauses; and I also checked her accuracy in speaking by analyzing the grammatical mistakes she made in her story telling.
Chaochao’s English and Chinese oral and reading vocabulary in each week were counted and compared and were made into line graphs to analyze her vocabulary development.

All Chaochao’s writing samples in these ten weeks were gathered and findings were found from reading these samples.
CHAPTER 4

RESULTS

This chapter reports the results of data analyzes. The results of assessments are reported as (1) before tutoring, (2) in the middle of tutoring, (3) the end of tutoring, and (4) post tutoring. The results of instruction are reported according to three emphases. They are (1) Chaochao’s oral language development in English and Chinese; (2) Chaochao’s oral vocabulary versus reading vocabulary development in English and Chinese; and (3) Chaochao’s writing development in English.

Assessments Data Analysis Results

Nine assessments were used in conjunction with the tutoring session in the ten weeks (See Table 4.1).

Before Tutoring Assessments and Results

In the first week (Jan 12th and 14th), we did assessments on English alphabet recognition, Chinese character recognition and directionality assessment (Clay, 1991) on reading English and Chinese.

Alphabet Recognition. The Alphabet recognition chart from Assessment for Reading Instruction by Michael C. McKenna and Steven A. Stahl was used for English alphabet assessment (Appendix A). Chaochao had four miscues among the 44 English upper case and lower case letters in the chart. She misread the lower case letters d and b, p and q, the upper case letter I and lower case letter l.
Table 4.1

Assessments and Results

<table>
<thead>
<tr>
<th></th>
<th>English</th>
<th>Chinese</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Assessment</td>
<td>Result</td>
</tr>
<tr>
<td>Before Tutoring</td>
<td>Alphabet Recognition</td>
<td>Accuracy 91%</td>
</tr>
<tr>
<td>(Week-1)</td>
<td>Directionality</td>
<td>Accuracy 100%</td>
</tr>
<tr>
<td></td>
<td>Chaochao’s reading of her</td>
<td>Sight Vocab. 33%</td>
</tr>
<tr>
<td></td>
<td>oral vocabulary in the first</td>
<td>Context Vocab. 36%</td>
</tr>
<tr>
<td></td>
<td>five weeks (166 total)</td>
<td>OralONLY Vocab. 32%</td>
</tr>
<tr>
<td></td>
<td>Dolch/Fry combined words</td>
<td>Sight Vocab. 18%</td>
</tr>
<tr>
<td></td>
<td>(157 total)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Chinese Characters Recognition.** Since there are no published Chinese materials for me to use as assessment, I created my own chart (Appendix B). There are 24 Chinese characters in my chart and they are from the textbook for first graders in China.

Chaochao could read 21 characters correctly and she said that the reason that she did not
know the characters 左 (left), 目 (eye), 足 (foot), was because her father had not taught her these three yet.

Chaochao could recognize the majority of the English letters and the Chinese characters in these two charts showed that she remembered well what she had learned before about English alphabet and Chinese characters.

Directionality Assessments. Clay’s (1991) emergent literacy assessment includes directional learning. Children need to learn what to attend to and in what order when looking at written language. Clay notes that asking children to read with their fingers provides an opportunity to track children’s reading behavior such as left to right, right to left, top to bottom, bottom to top, out from the center (right to left on a left page and left to right on a right page) and snaking (movement across a page in which one line is read left to right and the next line is right to left). In addition to the English language conventions for directionality, I also arranged some of the text in the vertical order (especially to Chinese), and separating the one line text into two or three separate lines.

Chaochao read these bilingual texts with her finger and she could find the correct order to read both English and Chinese texts, which showed that she had well-developed concept about reading order.

During Tutoring Assessments and Results

Observing Chaochao for five weeks, I got the impression that she was using more English words in her story telling. So I did another assessment on Feb 13th, the Friday of the fifth week. I examined Chaochao’s reading of her oral vocabulary from the first five weeks, which included 166 words. Chaochao read these words from the word cards first, and for those she could not read, I presented the sentence cards to let her read within the
context. Thirty-three percent of the words she could read automatically from looking at the word cards, 36% of the words she could read within the context, and the remaining 32% of the words she could not read even when given the context that she had created through sentences. Thus I divided her vocabulary into three types: 1) sight vocabulary—vocabulary that can be read automatically without conscious analysis, 2) context vocabulary—vocabulary that requires context to be read, and 3) oral-only vocabulary—vocabulary that has not developed into reading vocabulary. And I concluded that in the week five there were no big differences between Chaochao’s three types of vocabulary even through she required context to read most of her oral vocabulary.

From week eight to week ten (March 1st to March 19th), I used the Fry word list, the first 100 words to the third 100 words, and the Dolch word list, the preprimer grade to third grade, to analyze Chaochao’s reading vocabulary. I wanted to know if Chaochao was acquiring English words that frequently occur in text. Because Fry and Dolch word lists are not exactly alike, I took the words from both Fry and Dolch to create a combined word list (Appendix E5). Using this word list allowed me to analyze similarities and differences between Chaochao’s vocabulary development and the high-frequency words for English-speaking children in different levels. I found that Chaochao could recognize 29 words out of the 157 words in the chart. In other words she could read 18% of the words. Most of these words were from the Dolch preprimer and primer levels and from the Fry the first and second 100 words. Only two words were from the Fry third 100 word level. This result indicated that Chaochao would be in the frustration level in reading preprimer and primer level books designed for English-speaking children.
End of Tutoring Assessment and Result

At the end of the tutoring session (week ten, March 17th and 19th), I did character reading assessment by using Chaochao’s oral vocabulary in Chinese. The assessment was divided into two parts. First I copied all Chaochao’s oral vocabulary on a piece of paper to let her read. Considering the great number of characters on one piece of paper for a five-year old to read, I asked her to pick out just the characters that she knew. My purpose in doing so was to find out her sight vocabulary. During the second part, I first picked the characters that did not belong to her sight vocabulary and went back to her text to find where and how she used those characters in her stories, then I copied all the sentences with all these vocabularies and presented them for her to read the next time. I wanted to know if the context would help her to identify her oral vocabulary in Chinese.

Reading her own vocabulary in Chinese seemed much easier for Chaochao than reading her English. She read 183 characters automatically from the total of 300 characters, which constitute about 61% of all the vocabulary. The next time, she could read 70 more characters when she found them in the context and the rest of 48 characters were the one she could not read by herself, which showed that Chaochao had 23% of context vocabulary in Chinese and 16% of oral only characters.

Post Tutoring Assessments and Results

Two assessments were done two weeks after the instructional session had finished in April 2nd. They were reading Chaochao’s oral vocabulary in these ten weeks and reading Chaochao’s oral vocabulary that was not included in the Fry and Dolch list. Chaochao’s oral vocabulary from these ten weeks included those that are not listed on the Fry and Dolch word lists; however, the reason that I did a separate assessment on reading
those words which are not listed on that Fry and Dolch word lists was because I wanted to know how many of those words which are not regarded as English high-frequency words became Chaochao’s sight words.

*Reading Chaochao’s Own Oral Vocabulary.* I used the same method as I did in the fifth week and the purposes in examining her reading of all her oral vocabulary in these ten weeks were to compare with the results that I obtained from the fifth week and from Chaochao’s reading of her Chinese oral vocabulary. I wanted to know first if she had some changes on her sight vocabulary, her context vocabulary and her oral-only vocabulary in English and second I wanted to know the difference between Chaochao’s vocabulary development in English and in Chinese. There were altogether 252 words and she read 52 words without context, which covered about 20% of all her vocabulary. She read 125 more words with the help of the sentence context that was about 49% of all the vocabulary. The rest 31%, 78 words were her oral-only vocabulary. The result illustrated that Chaochao increased her context vocabulary the most from week six to week ten but she had far less sight vocabulary in English than that she had in Chinese.

*Reading of Chao’s vocabulary that were not included in the Fry and Dolch word list.* I picked the words that Chaochao used in her oral talking that do not appear on the Fry and the Dolch word lists. I listed those 101 words in a piece of paper and made words with different beginning letters in different colors. For example: all the B words were in red and C words in blue. I assumed that a five-year-old child would have more interest in reading colored words than just the long list of black words. She had 38 sight words in this chart, which was about 38%. This 38% compared with the 18% by using the
combined Fry and Dolch word list showed that Chaochao had more sight words when the words belonged to her oral vocabulary.

**Instructional Data Analysis Results**

In addition to assessments, I analyzed transcripts from the instructional tutoring to examine six areas of literacy development (see Table 4.2).

Table 4.2

Instructional Data

<table>
<thead>
<tr>
<th>Data</th>
<th>Analysis</th>
<th>Oral Language Development</th>
<th>Vocabulary Development</th>
<th>Writing Development</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number of Words</td>
<td>Sentence Complexity</td>
<td>Oral Accuracy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>E  C  E    C    E    C</td>
<td>E  C</td>
<td>E  C</td>
</tr>
<tr>
<td>First Telling</td>
<td>x  x  x  x  x  x</td>
<td>x  x</td>
<td>x  x</td>
<td>x  x</td>
</tr>
<tr>
<td>Second Telling</td>
<td>x  x  x  x  x  x</td>
<td>x  x</td>
<td>x  x</td>
<td>x  x</td>
</tr>
<tr>
<td>Third Telling</td>
<td>x  x  x  x  x  x</td>
<td>x  x</td>
<td>x  x</td>
<td>x  x</td>
</tr>
</tbody>
</table>

* E -- English, C – Chinese

The six categories can be summarized into three big aspects. First, Chaochao’s oral language development in English and Chinese can be shown by the number of words, sentence complexity, and oral accuracy. Second, Chaochao’s oral vocabulary versus reading vocabulary development in English and Chinese can be shown by looking at her oral vocabulary and reading vocabulary (Reading of her own oral vocabulary). And the third aspect is Chaochao’s writing development in English.
Oral language development within the tutoring session

More words and longer sentences, increased sentence complexity, and improved accuracy in oral speaking showed that Chaochao improved her oral language in both English and Chinese.

More words and longer sentences were used by Chaochao in telling her story of picture books. The primary task for Chaochao in using wordless picture books was to tell a story using the pictures. In the first session, Chaochao used only two or three English words to describe a picture but in the last week, she used thirty-eight words for one picture and her longest sentence had sixteen words. In Chinese, she used a greater variety of Chinese characters and phrases and she had more to say about each picture overall. The pattern of development was also evident in that she used only two Chinese characters to describe a picture in the first week and forty-nine in the last week. By counting words, characters, and sentences she used, I obtained the average number of words and characters that she used per picture in telling her stories during the ten weeks and made two line graphs below (Table 4.3 and 4.4).

The trends in the graphs show that Chaochao gradually began to apply more vocabulary and longer sentences in her English and Chinese story telling. It should be noted that the story books we used in the later sessions required more vocabulary than the ones used at the beginning. In comparing the two graphs, it is obvious that even though both English and Chinese vocabulary and sentence length increased, the advantage of her native language is evident. Her Chinese vocabulary and sentence length increased more predictably upward. By comparison, Chaochao’s English vocabulary and sentence length increased, but it was not a simple linear progression. One reason for this was because
storybooks *Elephant* and *Jungle Walk* used in week five and six might have had simpler story lines to her. Other factors might influence her story telling performance such as personal interest.

Table 4.3

Average English Words Per Picture

![Graph showing average English words per picture]

Table 4.4

Average Chinese Characters Per Picture

![Graph showing average Chinese characters per picture]

*Chaochao increased her sentence complexity in English story telling.* I analyzed Chaochao’s talking in English and Chinese during the three weekly sessions and
discovered that her understanding of the picture book did not change because she
constructed the same story each time. What did change was that she used more
compound sentences, which are sentences made up of two or more independent clauses,
during the second and third sessions on Wednesdays and Fridays than in the first story
telling on Mondays. And this difference is especially clear in her English story telling. I
selected some typical examples to illustrate this. The repeated practice with story telling
the same picture book was developmentally helpful.

   Example 1 in Week Two (1/19, 1/21, 1/23):

Monday 1/19: Diandian see the egg is popping.

Wednesday 1/21: When the egg is pop, Huanghuang come out.

   Example 2 in Week Four (2/2, 2/4, 2/6):

Monday 2/2: The mouse said: “Close your eye.” Huanghuang close his eye.

Wednesday 2/4: The mouse said: “Close your eye” to the dog. So the dog close his eye
and other kittens was see.

Friday 2/6: The mouse said: “Close your eyes.” Then Huanghuang close his eyes.

   Example 3 in Week Ten (3/15, 3/17, 3/19):

Monday 3/15: Everyone like to go down and everybody said: “Huihui, you have to come
down. We have to go home.” Huihui didn’t come down.

Wednesday 3/17: They are playing and said: “Huihui”, but Huihui is not ready. They
said: “Huihui, you need to come down. We have to go home.”

Friday 3/19: Everybody was playing but they know it’s time to go. So they said: “Huihui,
you need to go down because we need to go home.”
Chaochao’s spoken English improved during these ten weeks. I analyzed ten different types of errors in her oral speaking from the transcripts of tutoring. They are 1) wrong tense, 2) missing article, 3) missing verb, 4) noun-verb only, 5) incomplete sentence, 6) inappropriate wording, 7) wrong pronoun, 8) wrong personal pronoun, 9) singular-plural form, and 10) more than one verb in a sentence. Chaochao had the most errors in the category of wrong tense and missing verb. I analyzed these two categories in detail and found that her error rate decreased across these ten weeks of instruction (see Table 4.5 and 4.6).

Table 4.5  Wrong Tense in Spoken English within Tutoring Context

![Wrong Tense Graph](image)

Table 4.6  Missing Verb in Spoken English within Tutoring Context

![Missing Verb Graph](image)
In addition to the decreased errors in her talking, Chaochao also began to develop the concept of tense, which marked the greatest difference between English and Chinese. In Chinese, tenses of past, present, and future are expressed by different characters instead of the different forms of a verb. And the English tense is the most difficult part for Chinese whether they are children or adults in learning the language (see Table 4.5). At the beginning, Chaochao used the wrong tense 100% of the time but at the end the tense correct about 65%. Furthermore, by examining her sentences, I found out that she began to use different tenses in English. In week one, Chaochao used present tense only. In week two she used present progressive tense and present tense. And in week four, she used past tense for the first time and in week six past progressive tense appeared. She applied all these tenses in her story telling in the following few weeks and future tense came in the last week. Even though she did not use these tenses correctly, the significant thing was that she began to develop the tense concept in her oral telling.

Oral vocabulary versus Reading vocabulary in English and Chinese

Difference between English and Chinese Vocabulary. I defined Chaochao’s oral vocabulary as all the words she used in her story telling. And Chaochao’s reading vocabulary included her without context and context vocabulary. I counted the words in her oral vocabulary and reading vocabulary in each week (see Table 4.7 and 4.8) to compare her reading vocabulary with her oral vocabulary.
Table 4.7

English Vocabulary

![English Vocabulary Graph]

Table 4.8

Chinese Vocabulary

![Chinese Vocabulary Graph]

The tables tell us that Chaochao had more rich oral vocabulary in both Chinese and English than her reading vocabulary. She increased her oral vocabulary overall, however, the progress was uneven. It can be assumed that other factors influenced her oral vocabulary such as her mood at the moment on story telling the book, her interest in the book, and the complexity of the pictures. On the contrary, her reading vocabulary increased in a rather stable pattern, which showed that Chaochao was able to read more and more of her own words.
Furthermore, I have mentioned in the prior assessment part that Chaochao had more sight vocabulary in Chinese than in English. The differences between her context and oral-only vocabularies were also compared (Table 4.9).

Table 4.9
Vocabulary Comparison between English and Chinese

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>English</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Chinese</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Word Recognition and Word Identification. Another finding is that Chaochao had no difference from the standard expected of English-speaking children in developing word recognition and word identification with high frequency words. Word recognition is the ability to name a word with a prompt and word identification, on the other hand, is the ability to name the word directly without any external prompt (Durkin, 1993).

Finding words from the word cards was a typical activity that Chaochao and I did together on Fridays of each tutoring session. I noticed that she could recognize a word from her sight vocabulary immediately by hearing me pronouncing the word. And she also could find the right words by repeating my pronunciation if this word I said was not in her sight vocabulary. However, if I pointed to a picture and asked her to find the corresponding words, it took her longer time to find. She first thought the pronunciation
of this word and she could obtain the right one if she could say it, but if this word was out of her context vocabulary then she just kept silent and refused to try.

By observing her for ten weeks, I realized that if without a prompt, Chaochao could not identify her context and oral-only vocabularies as easy as her sight vocabulary. In the Chinese language, since it is a non-alphabetic language, which depends on characters to convey meaning, skills about recognition and identification in the alphabetic language cannot be applied to Chinese. Recognition and identification of Chinese characters depend heavily on memory.

*Writing development in Chinese and English*

From interviewing Chaochao’s parents, I know she started reading and writing in Chinese when she was one and half years old at her home in China and she could write about 100 characters when she came to the US kindergarten. Once in US, Chaochao has continued learning to write two Chinese characters everyday with her father. Based on Chaochao’s Chinese background and some informal writing we did together in the first two weeks of tutoring session, I assumed that she had already passed the first two stages mentioned by Buckwalter and Gloria Lo (2002), which are writing either straight lines or crossed lines and writing discrete symbol units. Chaochao had reached the final stage of relying on visual memory to write characters or copy what the adults wrote, to develop writing in Chinese. Due to this assumption, I did not focus my instructional session on her Chinese writing.

Based on Chaochao’s invented spelling in English, I summarized three important findings.
1. Chaochao could not distinguish the pronunciation of letters when they vary in pronunciation across words.

Chaochao learned how to read and write the 26 letters in English when she was in China, but she did not develop phonemic awareness in English enough to support phonics instruction. She only applied this knowledge of sounds and letters to her writing. I selected these few words as examples.

Table 4.10

Selected Writing Samples and Analysis

<table>
<thead>
<tr>
<th>Word</th>
<th>Chao’s writing</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>car</td>
<td>cr</td>
<td>/ar/ , r-- /ar/ . These two sound the same.</td>
</tr>
<tr>
<td>up</td>
<td>rp</td>
<td>The pronunciation of short “u” is close to the sound “r”</td>
</tr>
<tr>
<td>eye</td>
<td>ai</td>
<td>/ai/ is what “eye” pronounces</td>
</tr>
<tr>
<td>big</td>
<td>beg</td>
<td>“be” pronounces /bi/ , “g” pronounces /g/</td>
</tr>
<tr>
<td>all</td>
<td>oo</td>
<td>“all” pronounces similar to “o”</td>
</tr>
<tr>
<td>hand</td>
<td>hnd</td>
<td>“an” sounds like “n”</td>
</tr>
<tr>
<td>dance</td>
<td>dns</td>
<td>“ce” sounds /s/ in this word</td>
</tr>
<tr>
<td>table</td>
<td>taboo</td>
<td>/ble/ and /boo/ pronounce similar</td>
</tr>
<tr>
<td>hill</td>
<td>heo</td>
<td>“e” --- /i/ , “o” pronounces similar to /l/</td>
</tr>
<tr>
<td>read</td>
<td>rid</td>
<td>“ea” sounds the same like /i/</td>
</tr>
</tbody>
</table>

2. Chaochao changed the voiced and unvoiced pronunciation of “th”, into /de/ and /s/.

Chinese does not have the “th” pronunciation, so Chaochao’s way of writing the following words showed that she depended on her knowledge of phonemic awareness in Chinese to write English.
Table 4.11

Selected “th” Writing Samples and Analysis

<table>
<thead>
<tr>
<th>Word</th>
<th>Chao’s writing</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>their</td>
<td>dr</td>
<td>Her understanding: “their” is pronounced /deir/.</td>
</tr>
<tr>
<td>them</td>
<td>dm</td>
<td>“them” is /deim/</td>
</tr>
<tr>
<td>they</td>
<td>da</td>
<td>“they” is /dei/</td>
</tr>
<tr>
<td>three</td>
<td>sre</td>
<td>“three” is /sre/</td>
</tr>
<tr>
<td>thing</td>
<td>sing</td>
<td>“thing” is /sing/</td>
</tr>
<tr>
<td>other</td>
<td>rdr</td>
<td>“other” is /rdeir/</td>
</tr>
</tbody>
</table>

3. Chaochao gradually developed a phonemic rule understanding during this tutoring session that the letter “c” and letter “k” both make the hard “C” sound in some words.

“Cat” was the word that she could write before she came to the program, however, she did not know that the hard “c” can be spelled with a “K”. So in the second week, she wrote words “can” “car” “come” as “kn”, “kr”, and “komm”. With many reading exercises on C-words, she realized the similarity in sound between “C” and “K”. She even said: “K is C” when I asked her to write some of the C-words in week six. Her examples are: she wrote the word “car” into “kr” in the second week, but changed into “cr” in the fourth one; “come” was written into “komm” in the second week but changed into “com” in the sixth week; “kn” for the word “can” in the second week also changed into “cn”. What is more, she wrote “clln” for “clean” and “cloz” for “close”.

This is the only correct spelling awareness that she developed by herself during these ten weeks and this is also a big step, in my opinion, for a Chinese child in learning to spell in English.
Summary of the Results

This chapter reports the results and findings of the study. I summarized several points below as the most important findings of the study:

- Chaochao had well-developed abilities for English alphabet recognition and Chinese learned character recognition.
- Chaochao has developed the concept about reading directionality when reading both English and Chinese.
- Reading the child’s own vocabulary in English is easier for Chaochao than reading a list of high-frequency words in English.
- Chaochao’s increase of oral vocabulary in English is much more evident than the increase of reading vocabulary in English; and her increase in English vocabulary is more obvious than the increase in Chinese characters.
- Chaochao presented her oral language development by applying more words, longer and more complex sentences, and having different tenses and less grammatical mistakes in her oral story telling.
- English invented spelling is useful in helping Chaochao figure out spelling rules on her own.
CHAPTER 5
DISCUSSION, LIMITATION AND RECOMMENDATIONS

Discussion

Emergent literacy is a field that attracts attention from many educators and researchers. In recent years more researchers have taken an interest in emergent biliteracy. However, the number of studies done on emergent biliteracy is far less compared with other fields such as bilingualism or language learning of ESL and EFL students. Furthermore, studies about Spanish-speaking children learning biliteracy represent the majority of the emergent biliteracy studies.

Chinese children are also one of the fastest growing populations in the United States; however, the quantity of research done on how they acquire the two languages, Chinese and English, does not reflect the growing population.

The purpose of this study was to investigate the development of a five-year-old child’s language and literacy development in Chinese and English within a ten-week tutoring session using wordless picture books. The three research questions guided data analysis. And discussions of the findings for this study are organized according to each research question.

Research Question 1:

How can wordless picture books be used to develop biliteracy in Chinese and English?

Wordless picture books give ESL children the opportunity to read without struggling with an unfamiliar language. They read the pictures. And they use their own
language to communicate their reading of the pictures. Thus there is no wrong reading. The child’s language may not be grammatically correct or complete but it is authentic. This provides researchers an opportunity to study children’s language and literacy.

In this study, ten wordless picture books were used for instruction and they were carefully selected by taking cultural factors, story content and the child experiential background in English and Chinese into consideration. The books were also organized from simple to more complex by the approximate considering the number of vocabulary that might be required in story telling. Each book was used three times a week on Mondays, Wednesdays and Fridays with constructing stories in English and Chinese as the primary activity. Extended activities with the book included labeling pictures, reading and finding words and characters appeared in the child oral telling from word cards, reading the biliterate text on sentences cards, sentences making and invented writing.

The analysis indicated that Chaochao improved her oral and reading vocabulary in both English and Chinese, improved oral fluency in English story telling, increased sentence length in story telling, and developed a spelling rule in English. Chaochao’s successful experience with wordless picture books supports Van Kraayenoord and Paris (1996)’s suggestion that carefully-chosen wordless picture books can be used with non-English-speaking children to support literacy development.

Using wordless picture books in this way enabled the child to grasp the concept of story structure, develop comprehension and creative thinking, communicate in a higher language level, and learn the spelling rules of the English language. In addition, this study with wordless picture books is also unique in the way that it is the only study that has ever done to compare language and literacy development in English and Chinese of a
Chinese child. The great differences between the phonemic and pronunciation systems, the spelling and writing rules of the two languages make it hard to compare the development in these two language, but with the use of wordless picture books, the trend of vocabulary acquisition and sentence length increasing were compared. The differences between the development of the child’s native language and second language were evident and provide opportunity for future research.

**Question 2:**

*What reading and writing abilities does the child develop in English and Chinese?*

The child increased her reading vocabulary in English and Chinese both; however, the increase was more evident in her English than in Chinese. And this supports one of the Wong Fillmore’s (1991) findings that variation in the rate of acquisition is more evident in second language than the first.

The development in reading English also indicated that Chaochao, as an English learner, could gradually develop English phonological processing abilities, which included phonological sensitivity, phonological naming, and phonological memory (Wagner & Torgesen, 1987) to help her become a better reader even though her first language has a totally different phonological system.

Chaochao’s writing in Chinese was above her grade level and she had already acquired the ability to depend on memory to write characters. Repeated writing was a strategy that her father used in teaching her to write Chinese characters.

Invented writing activities helped Chaochao learn English spelling. Her invented spelling indicated that she did not develop her phonemic awareness in English enough to support phonics instruction, but she could get more benefits in spelling and reading
English from continued exercise of invented spelling. So it is reasonable to say that both ESL children and native English speaking children will benefit from invented spelling activities.

What is more, Chaochao’s invented words showed how she understood English spelling rules at her current level. These findings need to be studied to find out how Chinese children acquire phonemic awareness in English.

*Question 3:*

*What oral language development in English occurs in the child in the context of tutoring her in reading and writing?*

The child developed her oral language in English from three aspects, more words and longer sentences, increased sentence complexity, and improved accuracy and fluency during story telling. Many factors contributed to this development.

First of all, Chaochao had been immersed in the English language atmosphere at her school. Starting from the fifth week, we also used English as the primary language to communicate in the tutoring session. I encouraged her to say any words that she could think of in English to convey meaning. This method is very similar to Communicative Language Teaching, which focuses on developing communicative proficiency rather than mastering grammatical structures (Chamot & Stewner-Manzanares, 1985; Richards & Rodgers, 1986).

Secondly, the activity of constructing stories by using wordless picture books was beyond Chaochao’s English level at the beginning of the tutoring session. Both her mother and father told me in the interviews that they believed that Chaochao could not describe pictures or tell stories in English before we started our instructional session.
However, the results showed that she could and she achieved progressed quickly. This supports Krashen and Terrell (1984)’s comprehensible input, which argues that the best form of input to the second language learners is language that includes input that is a bit beyond learners current level (i+1) but still comprehensible. However, I feel it is hard to find exactly this level. Taking Chaochao as an example, the result of the study might be different if I started with a more complicated wordless book. She might have acquired more vocabulary and made a bigger improvement in her oral production if a harder level was used from the beginning. It is difficult to know what level is a little bit beyond but still comprehensible.

At last, Chaochao’s language and literacy development demonstrated to me that the abilities of listening, speaking, reading and writing in another language are interrelated. The development in one area may influence the development of the other. And it is incorrect to say that oral language development, listening and speaking, precedes written language development, reading and writing.

Limitations of the Study

This is a descriptive study on how a five-year old Chinese girl developed reading and writing in English and Chinese by using wordless picture books. Many findings are important in understanding how children acquire biliteracy at the emergent level, however, there are limitations in three aspects.

First of all, this is a case study of only one child. The results and findings of the literacy development limit only to this child. It may have some implications for future
study; however, it cannot represent the trend of literacy development of other ESL children.

Secondly, the study lacks baseline data. Even though I did assessments with Chaochao on English alphabet knowledge and Chinese characters recognition at the beginning of the tutoring sessions, I still did not know exactly how much knowledge Chaochao had in English and Chinese.

The last factor that limits the study is the lack of related resources in Chinese in this study. Two reasons lead to this limitation. First of all, there are not many scholars who do research on Chinese children’s emergent literacy, so there is not a lot of related literature for me to use as reference to make my study more thorough. And secondly, no one has ever translated some of the materials for assessment into Chinese, so it makes hard to find a standard in assessing children reading and writing development in Chinese.

**Recommendations for Future Study**

Studies looking at emergent biliteracy in languages where one script is phonetic and one is character-based are in great need. The child in this study acquired her first language in China and there has developed fluency and accuracy in her spoken Chinese. She is now is the US where she is learning English as a second language. Hence she is learning two languages and becomes biliterate in a sequential or successive order. More studies need to be done on Chinese children who were born in the US and have to learn the two languages and biliteracy simultaneously. What difference does an English only atmosphere in the classroom have on Chinese children who acquire reading and writing in the two languages successively and simultaneously?
Also, emergent writing or the invented writing in Chinese requires more study. The result of Buckwalter and Gloria Lo’s study (2002) shows the stages that Chinese children develop in their writing; however, how invented writing helps reading Chinese, the non-alphabetic language, remains unclear. Furthermore, since Chinese is a non-alphabet logographic language, what occurs in learning to write that is similar or different from English invented spelling? Last but not least, researchers who are interested in this field should develop materials and assessments in Chinese in order to further our understanding of emergent literacy in Chinese.
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Sulzby, E. (1986). Writing and reading; Signs of oral and written language organization in the young child. In W. H. Teale & E. Sulzby (Eds.), *Emergent Literacy: Reading and writing* (pp. 50-87), Norwood, NJ: Ablex.


APPENDIX A

ENGLISH ALPHABET ASSESSMENT
### Alphabet Recognition Chart

<table>
<thead>
<tr>
<th>B</th>
<th>d</th>
<th>x</th>
<th>m</th>
<th>v</th>
<th>c</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
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<td>l</td>
<td>f</td>
<td>J</td>
<td>z</td>
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<td>t</td>
<td>o</td>
<td>a</td>
<td>I</td>
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<tr>
<td>D</td>
<td>Y</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*From Assessment for Reading Instruction by Michael C. McKenna and Steven A. Stahl.*
APPENDIX B

CHINESE CHARACTERS RECOGNITION
<table>
<thead>
<tr>
<th>乔</th>
<th>高</th>
<th>十</th>
<th>目</th>
</tr>
</thead>
<tbody>
<tr>
<td>足</td>
<td>中</td>
<td>木</td>
<td>猫</td>
</tr>
<tr>
<td>天</td>
<td>女</td>
<td>男</td>
<td>田</td>
</tr>
</tbody>
</table>
APPENDIX C

PARENTAL PERMISSION FORM
PARENTAL PERMISSION FORM

I agree to allow my child, __________________, to take part in a research study titled, “An Analysis of a Chinese Child’s Emergent Reading and Writing Development with Wordless Picture Books”, which is being conducted by Ms. Ran Hu, from the Reading Education Department at the University of Georgia (542-2718) under the direction of Dr. Michelle Commeyras, Reading Education (542-4621). I do not have to allow my child to be in this study if I do not want to. My child can stop taking part at any time without giving any reason, and without penalty. I can ask to have the information related to my child returned to me, removed from the research records, or destroyed.

- The reason of this study is to explore the learning process of how a child with little or no English language background learns to read and write.
- Gao Mengqiao may improve her English reading and writing.
- If I allow Gao Mengqiao to take part, she will be asked to do reading and writing in English.
- The research is not expected to cause any harm or discomfort. My child can quit at any time.
- Any information collected about my child will be held confidential unless otherwise required by law.
- The researcher may record using audio-tape or video-tape during the study. These materials will be held confidential and the audio will be destroyed in 5 years.
- The researcher will answer any questions about the research, now or during the course of the project, and can be reached by telephone at 706-338-6858. I may also contact the professor supervising the research, Dr. Michelle Commeyras, Reading Education Department, at 542-4621.
- I understand the study procedures described above. My questions have been answered to my satisfaction, and I agree to allow my child to take part in this study. I have been given a copy of this form to keep.

Name of Researcher: ___________________ Signature: ___________________ Date: ________________

Telephone: ________________________ Email: __________________________

Name of Parent or Guardian: ___________________ Signature: ___________________ Date: ________________

Please sign both copies, keep one and return one to the researcher.

Additional questions or problems regarding your child’s rights as a research participant should be addressed to Chris A. Joseph, Ph.D Human Subjects Office, University of Georgia, 606A Boyd Graduate Studies Research Center, Athens, Georgia 30602-7411; Telephone 706-542-3199; E-Mail Address IRB@uga.edu
APPENDIX D

CHILD ASSENT FORM
Child Assent Form

I want to see if you would be willing to help me with a research project about using wordless picture books to accompany reading and writing in English. We will learn together how to label things and how to tell stories with the wordless picture books in English. We will review what you learned at school and to some other learning projects that interest you. We will be studying how the use of the wordless picture books helps you become a more independent reader and writer. Your opinions about what you are learning will be important and I will use audiotape and keep notes on what you tell me.

If you decide to do the project with me, your answers will be kept just between you and me. You can also decide to stop at any time or can chose not to answer questions that you don’t want to answer.

Do you have any questions? Would you be willing to do the project with me?

_____________________________
Child’s signature
APPENDIX E1

CHAOCHAO’S ORAL VOCABULARY IN THE FIRST FIVE WEEKS
a
afraid
am
an
and
another
are
at
away
baby
balloon
bath
bear
because
bed
big
bigger
bird
box
bread
bye
can
car
carrot
cat
catch
chair
close
come
crocodile
dad
day
doesn't
dog
don't
down
dream
drink
drive
eat
egg
eight
elephant
eye
face
fair
find
fish
fly
food
found
four
friend
get
give
go
good
hand
happy
has
have
he
heavy
hen
her
here
hill
his
house
how
hungry
I
in
into
is
it
jump
kittens
know
let's
like
little
look
love
maybe
middle
milk
Mom
mommy
monkey
mouse
no
not
now
OK
on
one
or
out
outside
passed
person
pig
play
pop
rabbit
real
run
sad
said
saw
say
scared
see
she
sheep
sit
sleep
smell
so
some
something
soup
stop
sun
table
talk
than
the
their
them
then
there
these
they
this
three
to
together
told
too
tree
try
turkey
turtle
TV
two
under
up
very
wake
walk
wall
want
was
wash
we
were
when
where
why
window
with
worm
you
your
APPENDIX E2

CHAOCHAO’S ORAL VOCABULARY IN ENGLISH
<table>
<thead>
<tr>
<th>a</th>
<th>afraid</th>
<th>good</th>
<th>me</th>
<th>run</th>
<th>think</th>
</tr>
</thead>
<tbody>
<tr>
<td>all</td>
<td>all</td>
<td>am</td>
<td>an</td>
<td>and</td>
<td>animal</td>
</tr>
<tr>
<td>am</td>
<td>another</td>
<td>are</td>
<td>ask</td>
<td>at</td>
<td>away</td>
</tr>
<tr>
<td>an</td>
<td>doesn't</td>
<td>are</td>
<td>ask</td>
<td>at</td>
<td>away</td>
</tr>
<tr>
<td>and</td>
<td>down</td>
<td>ask</td>
<td>at</td>
<td>away</td>
<td>baby</td>
</tr>
<tr>
<td>animal</td>
<td>doesn't</td>
<td>another</td>
<td>are</td>
<td>ask</td>
<td>ask</td>
</tr>
<tr>
<td>another</td>
<td>are</td>
<td>ask</td>
<td>at</td>
<td>away</td>
<td>baby</td>
</tr>
<tr>
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APPENDIX E3

CHAOCHAO’S ORAL VOCABULARY

NOT LISTED ON THE FRY AND

THE DOLCH WORD LISTS
afraid
baby
balloon
banana
bath
bear
bed
bigger
bird
box
bread
brother
bye
carrot
cat
catch
chair
circle
crocodile
dad
dance
dinner
doesn’t
dog
don’t
dream
dress
drive
drop
dry
egg
elephant
everybody
everyone
everything
afraid
everything
afraid
APPENDIX E4

CHAOCHAO’S ORAL VOCABULARY IN CHINESE
看鱼给小鸟
面包吃
跟猫睡觉
g狗添
他
兔子
胡萝卜拿
鸡蛋
母鸡
的
和
猪
大象
洗澡
猴子
表演
熊
抱着
羊
是好朋友
出去
走路见生
裂开了
孵
c叫
就又一个以为
以后
自己后来
龟
很不高兴
知道
把吓跑她
可比都坐上
白
跳
火
那
到
但这回
一只
在
树
房子
里有
一条
飞进
问
你
为什么
啊
说话
没
我饿
找
然后
蚯蚓面
喂
们俩
虫子
分
一起
黑
天
太阳
多
盆子
所以
也
太
沉
中间
成
滑滑梯
玩
东西
汤
完
脸
椅
会
摔下
老鼠
g告诉
其他
抓洞
哪
用
鼻子
闻
眼睛
闭
妈妈
带
拜
拜
墙壁
两
电视
书
开始
做
梦
床
山坡
六八
醒
爸爸
外
动物园
红
颜色
气球
要
关
灯
窗
虎
粒粒
仙鹤
站在
花
河
马
身
猩猩
香蕉
还
三
回家
散步
孩子
让
帮助
踩
背
骑
掉
穿
藏
楼
喊
弄
放
水
缸
泳
接
葡萄
往
倒
可乐
杯子
奶
模
些
吹
干
原
来
地方
发现
得
对
商店
推
玩具
想
摆
刚
才
样
本
帽子
手套
化妆
别人
照
图
毯
子
校
等
半
候
哥
姐
晚
老
师
考
问题
谁
举
手
当
念
雪
从
堆
唱
歌
耳
再
底
敢
遍
挂
APPENDIX E5

THE FRY-DOLCH COMBINED WORD LIST,

FRY-ONLY WORD LIST AND

DOLCH-ONLY WORD LIST
**Fry-Dolch Combined Word list:**

(F in parentheses represents Fry and the number shows the level in the Fry word list.)

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