Native Chinese-speaking children's acquisition of performance-based and reflective word knowledge in English

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NATIVE CHINESE-SPEAKING CHILDREN'S ACQUISITION OF
PERFORMANCE-BASED AND REFLECTIVE
WORD KNOWLEDGE IN ENGLISH

by

Hong Xu

A dissertation submitted in partial fulfillment
of the requirements for the degree of

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in

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ABSTRACT

The foci of this study were to compare the processes of acquiring concept of word (i.e., performance-based and reflective word knowledge) in English between native English- and Chinese-speaking children and to identify the significant factors influencing the acquisition. A multiple case study design was used for this study. The six participants were enrolled in English-only kindergarten classrooms and were involved in this study for approximately six months. At the beginning and end of this study, the participants were assessed on their Chinese language proficiency and the five tasks for performance-based and reflective word knowledge.

The data sources included (a) transcribed parent and teacher interviews as well as informal talks, (b) fieldnotes from 10 classroom observations, and (c) participants' performance on the assessment tasks. The constant comparison method (Glaser & Strauss, 1967) was employed to analyze the data. Coding and recoding of collected data were ongoing along with data collection (Miles & Huberman, 1994) until data saturation was reached (Bogdan & Biklen, 1992).

The data revealed that the six participants shared similar developmental patterns in their acquisition of performance-based and reflective word knowledge in English. A distinct difference was the participants' difficulty with memorizing the lines of a nursery rhyme. The
participants' limited Chinese literacy experience seemingly had little impact on their development of word knowledge in English. Each participant's home and school literacy support were two significant factors that influenced acquisition of word knowledge in English. The parents of the participants made efforts to provide them with literacy support. Some classrooms promoted participants' oral language development or nurtured their love for reading, while others had only a limited number of learning activities that involved them. There were virtually no authentic writing opportunities in any classroom for the participants to explore a connection between spoken and written language and word boundaries.

This study called for further research with a larger number of participants in diverse classrooms for a longer period of time. Additionally, it suggested the possibility of examining the role of TV programs in native Chinese-speaking children's early English literacy development.
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CHAPTER 1

Introduction

Young children learn to use spoken language easily and naturally once they can say their first word. However, to be able to read a text, children's primary task is to be able to match spoken words with written words (Adams, 1990). In the research literature such a match is called concept of word (Morris, 1983, 1993). The acquisition of concept of word is linear and developmental. Children's word knowledge evolves from the unconscious and implicit level to the conscious and explicit level. There are many factors contributing to children's acquisition of concept of word. Three factors are constantly examined by various researchers: (a) cognitive development, (b) experience with print at home and at school, and (c) formal reading instruction. There is well established research on the influence of each factor on children's acquisition of concept of word in English (e.g., Johnson, Moore, & Moore, 1986; Roberts, 1992; Snow, 1983; Taylor, 1983; Teale & Sulzby, 1986; Templeton & Spivey, 1980). (See Appendices A and B for the definition of terms and the literature review, respectively.)
With the increasing number of immigrants from all over the world, the demographic features of children enrolled in American preschools, kindergartens, and primary schools are changing. It is estimated that by the year 2000, there will be 3.4 million children and young adults (ages 5-17) from homes where languages other than English are used (Nurss & Hough, 1992). The number of Asian children is among the fastest growing. While the Hispanic population has increased 53% from 1980 to 1990, the Asian and Pacific Islander population has increased 107.8% from 1980 to 1990 (U.S. Bureau of the Census, 1994). Asian children's early English literacy success is becoming an area of growing concern to teachers and researchers who, unfortunately, find little research literature on the processes of Asian children's early English literacy acquisition.

This study acknowledged the factors identified by previous studies that had an impact on acquisition of concept of word in English: (a) children's cognitive development, (b) experience with print at home and at school, and (c) formal reading instruction at school. This study compared the processes of native English- and Chinese-speaking children's acquisition of concept of word in English and sought to identify the significant factors influencing native Chinese-speaking children's acquisition of concept of word in English.
Theoretical Framework

This study was grounded in a theoretical framework provided by the theories of emergent literacy and second language (i.e., English) acquisition. Research emanating from an emergent literacy perspective emphasizes young children's development of an understanding of conventions of language (e.g., words) and contexts where growth in conventional understanding of language occurs. The theoretical explanations resulting from second language acquisition research address the influence of children's native language on English acquisition and positive and negative transfer of native linguistic abilities in particular.

Emergent Literacy

From an emergent literacy perspective, children are able to use a language to communicate long before they come to school for formal instruction in a language. They learn to read and write in authentic situations through effective communication with adults and other children. Adult literate support and home literate background are crucial to children's literacy development. Children's process of learning to read and write is continuous and developmental rather than consisting of several stages of reading readiness (e.g., Clay, 1975; Heath, 1983; Ollila & Mayfield, 1992; Taylor, 1983; Teale & Sulzby, 1986). Furthermore, oral language serves as the foundation of early literacy acquisition and further develops along with emergent reading and writing (e.g., Harste,
Woodward, & Burke, 1984; Holdaway, 1979; Strickland, 1989; Sulzby &
Teale, 1991)

Although young children are able to use a language effectively to
communicate, such an ability is unconscious and implicit (Estrin &
Chaney, 1988; Roberts, 1992). As children grow older, their awareness of
language, referred to as linguistic awareness (Mattingly, 1972) or
metalinguistic awareness (e.g., Cazden, 1974) begins to emerge. Only
when formal schooling begins does children's knowledge of a language
evolve from the unconscious or implicit level to the conscious and explicit
level (Papandropoulou & Sinclair, 1974). The basic knowledge of a
language also includes concepts about print, demonstrated in children's
abilities to use a language and to understand the conventions of a
language. According to Clay (1982), concepts about print include: (a) book
orientation--where and how to open a book and where pictures and/or
print start, (b) whether pictures or print convey meaning, (c) directions of
print and sequence of pages, (d) knowledge of words, letters (upper and
lower cases), space, and punctuation, and (e) concept of word and the
relationship between spoken words and written words.

**Concept of word.** Generally speaking, acquisition of concept of word
entails (a) children's ability to distinguish words from nonwords and to
match spoken words with written words, referred to as performance-based
word knowledge (Templeton & Thomas, 1984), and (b) their conscious
knowledge of what a word is, referred to as reflective word knowledge (Papandropoulou & Sinclair, 1974; Templeton & Spivey, 1980). Research on both performance-based and reflective word knowledge has indicated a crucial relationship between concept of word and beginning reading ability (e.g., Ehri, 1979; Henderson, 1980; Morris, 1983, 1993).

To enhance young children's performance-based word knowledge, Morris (1993) suggested the use of finger pointing with each word while reading. In addition, activities using the language experience approach, such as dictated stories, shared book experience, and creative writing, can promote children's concept of word (Gillet & Temple, 1994; Morris, 1981).

With regard to reflective word knowledge, studies with young children have shown the following. First, although children may have some word awareness as observed from their language performance (Karmiloff-Smith, 1986), this awareness is not demonstrated in the task of distinguishing words from nonwords (Downing, 1969) and is limited to content words (Papandropoulou & Sinclair, 1974). Second, children fail to identify function words as words (Estrin & Chaney, 1988) or to differentiate content words from function words (Karpova, 1955). Third, they continue to confuse words with letters, syllables, phonemes, or numbers (Reid, 1966). Fourth, word boundaries are related to the length of words and sizes of letters in words (Holden & MacGinitie, 1972; Melter & Herse, 1969). Finally, children's reflective word knowledge seldom
includes the arbitrary labeling feature of words and actually contains more of the relationships of words and the objects that they represent (e.g., snake is a long word because a snake is long; Roberts, 1992; Templeton & Spivey, 1980) or, sometimes, reflects school instruction (e.g., My teacher taught me to leave space here; Roberts, 1992).

The studies investigating children's concept of word have focused mainly on English-speaking children, with the exception of Karpova's (1955) examination with Russian children and of Hsia's (1992) study with Chinese children. It is Hsia's study that is particularly pertinent to this study. Hsia compared native English-speaking children and bilingual Chinese-speaking children's ability to segment sentences into words in spoken language. Her study found that native English-speaking children and bilingual Chinese-speaking children are similar in how they segment sentences into syllables and words. However, Hsia could not prove her original hypothesis that bilingual Chinese-speaking children were more likely to segment sentences into syllables rather than words due to the influence of the Chinese language, where each morpheme or character is monosyllabic.

Second Language Acquisition

Many theories dealing with second language acquisition recognize the importance of the psycholinguistic process and the social contexts in which second language learning happens (Allen, 1991; Wong-Fillmore,
1991). According to Krashen (1989, 1995), the process of second language acquisition is similar to that of first language acquisition in that children acquire their second language proficiency in informal and naturalistic settings (Cummins, 1994). Another important hypothesis in Krashen's second language acquisition theory is comprehensible input, which is understandable input but a little above the learners' current linguistic proficiency. Krashen's argument of the natural and unconscious process in second language acquisition and understandable linguistic input, both of which are crucial for second language learners' success, are consistent with the emergent literacy perspective: (a) children learn the conventions of a language in meaningful contexts; (b) the learning process is developmental, and (c) the understanding of the conventions of a language moves from the implicit or unconscious level to the explicit and conscious level (e.g., Goodman, 1986; Sulzby & Teale, 1991).

In addition to Krashen's hypotheses about second language acquisition, Cummins' (1979, 1994) theory deals with the influence of a first language on the acquisition of a second language. He proposed that literacy abilities that children have developed in their first language can be transferred to second language literacy. Nevertheless, acknowledging a transfer existing between a first language and English, Gass and Selinker (1983) questioned whether the transfer would be positive between two languages with different phonological, syntactic, and
semantic systems. What is more likely to occur is interference rather than positive transfer between a first language and English when the first language and English are so distinctively different.

The case of Chinese. Chinese is totally different from English in the sense that the former uses the logographic writing system (Norman, 1988) while the latter has the alphabetic system. To help children read Chinese, Pinyin was invented to assist them in making connections between Chinese characters and pronunciations (Chen & Yuen, 1991). Since China is a large country, consisting of mainland China, Taiwan, and Hong Kong, the use of Pinyin varies in these three areas. According to Chen and Yuen, in the schools of both mainland China and Taiwan, Pinyin is used to help children read Chinese in their first two years of schooling. After that, only new characters may be accompanied with Pinyin. However, the Pinyin used in mainland China and Taiwan is different. The one used in mainland China has Roman alphabetic letters while the one used in Taiwan employs the Mandarin phonetic system. In Hong Kong, Pinyin is never used; however, children, more or less, have some exposure to English in and out of school.

Existing research has reached inconclusive findings about the role of young children's Chinese literacy experiences on the acquisition of English. Some have argued that experience with Pinyin has a positive impact on manipulation of the phonological aspect of an alphabetic
language (e.g., Read, Zhang, Nie, & Ding, 1986). Others have proposed that Chinese children are facing a challenge in learning English due to the abstract representations of English words made up of a limited number of letters (Rozin & Gleitman, 1977). Still others have expressed uncertainty about the influence of the Chinese learning experience on English, particularly when it comes to dealing with different ways of learning a language (i.e., more memorization for learning Chinese versus more intelligent guessing for learning English; Wong, 1988).

Furthermore, Hsia's (1992) study has suggested that it is invalid to have hypothesized that bilingual Chinese-speaking children would tend to segment sentences into syllables rather than words because their Chinese (i.e., a monosyllabic and tonal language) learning experience could influence the segmentation task.

**Rationale for This Study**

The research examined thus far has focused on the acquisition of concept of word of predominantly native English-speaking children. However, two studies have investigated non-native English-speaking children. Karpova's (1955) study of how Russian-speaking children segmented sentences into words in spoken language has supported the notion that it is difficult for children to segment words in sentences no matter what native language they speak. A more recent study by Hsia (1992) contributed to our deeper understanding of this difficulty for
children whose native language is Chinese. These two studies, however, have failed to identify the significant factors influencing non-native English-speaking children's acquisition of concept of word.

Among a small number of studies investigating the process of non-native English-speaking children's acquisition of English literacy in general, one influential factor has been explored. Some studies, including those with Spanish-speaking children (e.g., Hudelson, 1984; Perez & Torres-Guzman, 1992; Zutell & Allen, 1988), attributed non-native English-speaking children's acquisition of literacy skills to their exposure to environmental print and experience with it (Allen, 1994; Goodman, Goodman, & Flores, 1979; Krashen, 1985). Goodman, Goodman, and Flores (1979) confirmed that speakers of Navajo, Spanish, and Arabic also demonstrated similar responses to environmental print as native English speakers did. Hence, it has been assumed that the process of acquiring English literacy through experience with print is the same for native English speakers as for non-native English speakers (Goodman, Goodman, & Flores, 1979; Hudelson, 1984; Rigg & Allen, 1989).

The scope of existing research on how non-native English-speaking children acquire English literacy is limited in two ways. First, most studies have focused on native Spanish-speaking children's acquisition of English literacy in general (e.g., Hudelson, 1984; Krashen, 1985). Although Hsia's (1992) study has opened a new window on how bilingual
Chinese-speaking children perceive word boundaries in spoken language, her study is obviously restricted to spoken language. Second, many studies examined the process of acquiring concept of word with a focus on (a) the role of cognitive development (e.g., Ferrerio & Teberosky, 1982), (b) experience with print (e.g., Ehri, 1976), and (c) formal reading instruction (e.g., Holden & MacGinitie, 1972). The combined impact of the above factors with others (e.g., native language influence) on acquisition of concept of word in English has barely been investigated. Therefore, further investigation examining how native Chinese-speaking children acquire concept of word in English would enhance our understanding of the similarities and differences in the acquisition process for children whose native language is logographic.

The foci of this study were to compare the processes of acquiring the concept of word (i.e., both performance-based and reflective word knowledge) in English between native English- and Chinese-speaking children and to identify the significant factors influencing the acquisition process. The following two research questions guided this study in data collection and data analysis:

1) What are the similarities and differences in the process of acquisition of concept of word in English between native English- and Chinese-speaking children?
2) What significant factors influence Chinese-speaking children's acquisition of concept of word in English?
CHAPTER 2

Method

Design and Participants

Given the nature of the research questions and this study, which required a focused, detailed, and extensive examination of Chinese-speaking children's process of acquiring concept of word in English over a sustained period of time in different contexts, it was decided that a multiple case study design (Yin, 1994) was the most appropriate research design. A multiple case study allows researchers to investigate a phenomenon as well as the context where the phenomenon occurs, without a researcher's external manipulation (Merriam, 1988; Yin, 1994). Furthermore, findings from a multiple case design are more robust and compelling than those from a single case study due to replication logic (Miles & Huberman, 1994; Yin, 1994). In a multiple case study, evidence from some cases may contribute to literal replication (i.e., predicting similar results) while others may lead to theoretical replication (i.e., yielding contrasting results). If all cases show similar evidence in similar contexts, the yielded evidence is compelling.
The validity and reliability of a multiple case study can be enhanced through data and methodological triangulation (Yin, 1994). To achieve data triangulation, I collected data in four different school settings and from six different individual participants. I obtained methodological triangulation by using multiple methods of data collection: interviews, observations, informal talks, and assessment instruments.

**The Researcher’s Background**

In qualitative research, a researcher's familiarity with existing literature as well as professional and personal experience are the sources of theoretical sensitivity (Strauss & Corbin, 1990). Strauss and Corbin explained theoretical sensitivity as the quality of a researcher: “having insight, the ability to give meaning to data, the capacity to understand, and capability to separate the pertinent from that which isn’t” (p. 42). Theoretical sensitivity enables a researcher to understand the contexts and participants under study, collect relevant and important data, and interpret data in new ways.

I believe that as a researcher, I possess theoretical sensitivity. I am familiar with theories and issues related to second language learning and teaching through my graduate study and a large amount of reading. Over the years, I have developed my beliefs in second language learning and teaching. I hold the view that second language learners develop early English literacy through ample exposure to English print and active
participation in functional and meaningful use of the English language. I also firmly believe that support from classroom instruction and home environment is vital to second language learners' early English literacy development. My beliefs about second language learning and teaching have been reinforced by my professional and personal experience.

Although I have never taught English in a kindergarten classroom, I taught English as a foreign language in a first grade classroom in China. My professional experience was expanded when I conducted research on early English literacy development with mainly Asian children in primary grade classrooms. Therefore, I am familiar with classroom environments, instructional styles, and diverse students in American schools. Being Chinese myself, I share the Chinese language, Mandarin, and most parts of the Chinese culture with all the parents of the participants. Thus, I was able to obtain as much information as I could from the parents during this study. My English proficiency allows me to collect data from the teachers and children. Acknowledging that my being part of the Chinese culture may have led to bias in my interpreting data related to home environments and literacy support, I asked a trained colleague to read the findings of this study so that her perspective could assist me in minimizing biases in data analysis. In sum, my theoretical sensitivity well prepared me to conduct this study.
Participants

With the assistance of the staff and teachers from the local school district, and leaders in the Chinese community, I identified a pool of 15 Chinese-speaking children from mainland China, Taiwan, and Hong Kong who had oral communication skills in English (i.e., being able to perform the required tasks during the assessment sessions in this study) and were enrolled in public schools. The ages of the children ranged from 5- to 6-years-old. Those who had developed performance-based word knowledge demonstrated in the Pointing Task (see Appendix C) were eliminated from the pool. Additionally, using LeCompte and Preissle’s (1993) criterion-based sampling, I purposively selected the six participants for this study based on established criteria included in the investigation and the replication logic in a multiple case sampling (Yin, 1994).

The following criteria were also used to select the six participants from the identified pool: (a) prior experience with Pinyin (presence vs. absence) and ability to read Chinese in character, (b) home literate environment (with literacy events vs. without literacy events), and (c) literacy instruction at school (presence of book reading experience with finger pointing/creative writing/dictated stories vs. absence of book reading experience with finger pointing/creative writing/dictated stories). Literacy events at home may have included book reading, writing, and English used as a main medium of communication.

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Materials

Materials used for this study included: (a) the tasks for participant selection (i.e., the Pointing Task and the Chinese in Pinyin and Character Task), (b) the researcher-adapted Parent Interview, (c) the researcher-developed Teacher Interview, and (c) the five tasks used to collect data on participants' performance-based and reflective word knowledge during the period of this study.

Participant Selection

The Pointing Task (see Appendix C), measuring a potential participant's performance-based word knowledge (Morris, 1980, 1981; Rowe & Cunningham, 1983), included the first two lines of a nursery rhyme. Forms A and B were used for pre- and post-assessments, respectively. Zero points were assigned for each unrecognized word; one point was assigned for each recognized word. With the Pearson correlation coefficient for the alternate forms, the reliability of the Pointing Task (r = .65) was previously established (Johnson, Moore, & Moore, 1986).

The researcher-developed list of 10 Chinese characters in Pinyin and character (see Appendix C) assessed a potential participant's experience with reading Chinese in Pinyin and/or character. Zero points were assigned for each unrecognized character in Pinyin/character; one point was assigned for each recognized character in Pinyin/character. The
Chinese characters in Pinyin included various combinations of Roman alphabet letters and phonemes in the Chinese language. Another list of Chinese characters in character, in the different order from their corresponding Chinese characters in Pinyin, was used to assess a potential participant's ability to read Chinese characters. The corresponding characters were chosen from the basic Chinese sight vocabulary. The characters that had the same tone and sound but were for children at upper elementary grades to master were not included. In the tasks of recognizing Chinese characters in both Pinyin and character, the potential participants were classified as beginning (0-3), intermediate (4-6), and advanced (7-10) depending on their scores.

The Parent Interview (see Appendix C) was developed based on the parent interviews by Mason (1980) and Barone (1993). The items in the interview covered (a) a potential participant's educational and linguistic (i.e., Chinese, Pinyin, and English) experiences in his/her home country and/or in the United States, (b) the length of stay in the United States, (c) the medium of communication at home, and (d) literacy activities at home.

Teacher Interview

A researcher-developed interview (see Appendix C) was used to obtain information on literacy instruction at the school in which a participant was enrolled and to triangulate data with that obtained from classroom observations and informal talks with the teachers. The
interview included (a) the participant's special needs for literacy instruction, (b) his/her behaviors during various literacy activities, (c) the types of literacy activities helping the participant and other children recognize words, and (d) the similarities and differences between the participant and the other children in recognizing words.

**Tasks**

There were five tasks used in this study: Pointing, Word Identification, Word Awareness, Sentence Dictation, and Sentence Dictation Explanation. The tasks chosen to measure native Chinese-speaking children's concept of word in English reflected both performance-based and reflective word knowledge in spoken and written language. The Pointing Task used in the assessment sessions was the same as the one used for participant selection.

**Word Identification Task.** The Word Identification Task (see Appendix C) measured a participant's performance-based word knowledge in spoken language. The task contained a list of nine words and three phrases, consisting of both content and function words (Templeton & Spivey, 1980; Templeton & Thomas, 1984). Zero points were assigned for an incorrect response; one point was assigned for a correct one. Although the reliability of this task was not previously established, it has been used in a number of published studies (Roberts, 1992; Spencer, 1986; Templeton & Spivey, 1980; Templeton & Thomas, 1984).
Word Awareness Task. The Word Awareness Task (see Appendix C) measured a participant's reflective knowledge in spoken language. The task required the participant to justify each answer in the Word Identification Task (e.g., why is/Isn't from the house a word?; Templeton & Spivey, 1980; Templeton & Thomas, 1984). The scores for the responses were based on the following five categories developed by Templeton and Spivey (1980): (a) 0 points for no response or "I don't know," (b) 1 point for a response relating a word to an object/action, (c) 2 points for a response indicating that a word is the same as saying something, (d) 3 points for a response reflecting structure knowledge of the word in print and/or sound, and (e) 4 points for a response defining a word in a conventional way. The interrater reliability (r = .90) for categorizing all the responses was previously established (Roberts, 1992).

The Sentence Dictation Task. Different from the Pointing Task, which could not reflect a participant's knowledge of word boundaries in written language, the Sentence Dictation Task (see Appendix C) measured the participant's performance-based word knowledge and knowledge of word boundaries in particular. The task contained a sentence with both monosyllabic and multisyllabic words. One point was assigned for a space wider than the spaces between letters within a word; one point was deducted for a wider space between letters within a word or for more or less than the total spaces in the sentence. With the Pearson
correlation coefficient for the alternate forms, the reliability of the Sentence Dictation Task \( (r = .61) \) was previously established (Johnson, Moore, & Moore, 1986).

**Sentence Dictation Explanation Task.** The Sentence Dictation Explanation Task (See Appendix C) measured a participant's reflective word knowledge in written language (Roberts, 1992). The participant was asked to explain why he/she left more space than necessary between letters within a word in a sentence dictated in the Sentence Dictation Task. Zero points were assigned for no response; one point was assigned for an explanation indicating "an artifact of instruction"; two points were assigned for a response indicating "physical appearance of the text or for ease of reading, or auditory convenience"; and three points were assigned for a response reflective of "awareness of words as stable elements of language; spaces divide word units" (p. 138). The interrater reliability \( (r = .90) \) of this task was previously established by Roberts.

**Procedure**

**Participant Selection**

The potential participants were selected from a pool of 15 native Chinese-speaking children aged from 5 to 6 enrolled in the local public schools from the same county in a western state. The Pointing Task, the Chinese in Pinyin and Character Task, and the Parent Interview were used to purposively select the potential participants for this study.
First, in the Pointing Task, each child from the pool repeated after me the first two lines of a nursery rhyme. When the child could recite the two lines from memory, I told him/her that he/she was going to see these two lines on a piece of paper. After modeling finger pointing at each word while reading, I asked the child to do so. Those who had developed performance-based word knowledge (i.e., performing at the 80% mastery level) were not asked to participate in this study.

Second, I asked the child with no performance-based word knowledge to sound out the 10 Chinese words in Pinyin one-by-one. A flash card was used to cover the other words before and after the word that the child was sounding out so that he/she could concentrate on it. The children were classified as beginning, intermediate, and advanced according to their performance on this task.

Third, the children who had varied Pinyin experiences as demonstrated in the task of recognizing Chinese in Pinyin were asked to sound out the corresponding Chinese characters. The same classification criteria applied with the task of recognizing Chinese in Pinyin were applied here. The children were also encouraged to write as many Chinese characters as they could if they were unable to recognize any characters from the list.

Fourth, I informally and briefly interviewed the parents of the children who were found not to have developed performance-based word
knowledge and to have varied experiences with reading Chinese in Pinyin and character. The questions used during the brief interview were from the Parent Interview and focused on (a) what language served as the main medium of communication at home, (b) what literacy activities were used to provide the child with English learning experience, and (c) what was known about their child's English literacy experiences at school.

Finally, six children were chosen from the pool of 15 to participate in this study based on (a) their lack of performance-based word knowledge in English, (b) their prior learning experience in Chinese as demonstrated in the task of recognizing the 10 Chinese words in Pinyin and character, and (c) the varied combinations of the presence and/or absence of home literate environments and the type of school literacy instruction obtained from the brief parent interviews. All six participants were enrolled in English-only kindergarten classrooms in the same school district.

Length of this study

This study started in March, 1996, and finished in January, 1997. To avoid the influence of extraneous variables (e.g., the lack of activities helping the participants develop word recognition at home during the summer break) on the data to be collected, I collected data in two periods. In the first period (March, 1996 -- August, 1996), I collected data on the three participants who were enrolled in year-round schools. In the second
period (August, 1996 -- January, 1997), I collected data on the other three children who were enrolled in 9-month schools.

Parent Interviews

I interviewed the five parents of the participants at their homes and one parent in a local restaurant at the beginning and the end of this study. Five out of six parents chose to speak in Chinese during the interviews. During the interview sessions, the participants were present so that they could provide me with additional information which their parents might miss. The interview sessions were audiotaped, transcribed, and translated into English if conducted in Chinese. I also recorded any appropriate fieldnotes to triangulate with the interview transcripts. Ten percent of the translated transcripts were reviewed by an educated English-Chinese bilingual to ensure a minimum meaning loss or distortion in Chinese-English translation.

Assessment Sessions

The participants were asked to perform the tasks of Pointing, Word Identification, Word Awareness, Sentence Dictation, and Sentence Dictation Explanation in the same order at the beginning and end of this study. Before each assessment session, I had a casual conversation with each participant, trying to ease his/her discomfort and nervousness. The conversation was about the participant's siblings, books read, school, teachers, peers, TV programs, or food. The assessment sessions were
audiotaped and transcribed. All the participants' responses were also recorded manually to triangulate with the assessment transcripts.

**Teacher Interviews and Classroom Observations**

I conducted an interview with each participant's teacher at the beginning and end of this study. The two interviews were audiotaped and transcribed. Additionally, I observed each participant's classroom 10 times to collect data for the impact of classroom literacy instruction on the participant's acquisition of concept of word in English. I conducted each observation on different days of the week. The time length was at least one hour when the teacher was teaching language arts/reading. The observation focused mainly on literacy instruction and the participant's literacy experience in particular. For example, what kind of literacy experience did the teacher provide the participant (e.g., various reading and writing activities)? Was reading big books with finger pointing common in daily literacy instruction? Were there other literacy activities promoting young children's acquisition of concept of word in English? Was the participant always actively engaged in literacy activities?

During each observation, I wrote my fieldnotes on a lap-top computer as authentically as possible. Although I did not interact directly with a participant during most classroom observations, I spent some time examining the participant's work to gain any new information on the participant's growth in concept of word acquisition which may not have
been evident in the previous assessment session or occurred before the next one. Additionally, before or after each observation, I had an informal talk with the teacher to obtain information on daily literacy instruction that I may have missed during the observation or learned from the first teacher interview. The informal talks were also audiotaped and transcribed. All the data from my observations as well as interviews and informal talks with the teacher were triangulated (Yin, 1994).

Data Sources and Analysis

I collected data from (a) two parent and teacher interviews, (b) two assessment sessions of participants' performance of five tasks, and (c) 10 classroom observations. Therefore, the data sources included (a) qualitative data from the parent and teacher interviews and fieldnotes from classroom observations and informal talks with the teacher before or after each classroom observation, and (b) quantitative data from the performance scores of the five tasks (i.e., Pointing, Word Identification, Word Awareness, Sentence Dictation, and Sentence Dictation Explanation). The qualitative data provided me with sources to identify the significant factors which would influence native Chinese-speaking children's concept of word acquisition in English. Similarly, the quantitative data furnished information enabling me to compare and contrast the concept of word acquisition between native English- and Chinese-speaking children and within Chinese-speaking children.
Qualitative data. I transcribed the audiotapes recorded from the two parent and teacher interviews as soon as the interviews were finished. The notes taken during the interviews were used to cross-check the accuracy of the data. The data from the parent interviews were analyzed based on (a) the broad categories of a participant's background information, including prior Chinese learning experiences, and the presence and/or absence of English literacy events at home and (b) any emerging categories. The analyzed data guided me in deciding if a literate home environment and prior Chinese learning experiences were two of the significant factors influencing native Chinese-speaking children's concept of word acquisition in English.

The data from the first teacher interview were analyzed based on (a) the categories of the participant's special literacy needs, behaviors during various literacy activities, and type of instructional literacy activities that help children recognize words and (b) any emerging categories. The analyzed data guided me at each subsequent classroom observation to concentrate on specific and detailed aspects of the participant's behaviors during various literacy activities. The last teacher interview, in turn, assisted me in confirming if literacy instruction was one of the significant factors.

Similarly, I organized the fieldnotes as soon as feasibly possible after the completion of each observation to avoid the loss of information.
due to memory. The fieldnotes were carefully checked against the notes taken during the observation and an informal talk with the teacher. The constant comparison method (Glaser & Strauss, 1967) was employed to analyze the data. In the initial data analysis, I focused the coding on the following three broad categories: (a) a participant's special literacy needs, (b) his/her behaviors during the various literacy activities, and (c) types of literacy activities. As data collection went on, the previously coded data were recoded based on the new categories and subcategories that emerged. Coding and recoding of collected data were ongoing along with data collection (Miles & Huberman, 1994) until data saturation was reached (Bogdan & Biklen, 1992).

At the initial stage of data analysis, a trained colleague and I compared each other's coding categories from the same set of data to ensure authenticity. Throughout the data analysis, I used memo writing (Miles & Huberman, 1994) to assist me in deepening my understanding of each case and discovering the patterns across cases. In the cross-case data analysis, I used Yin's (1994) replication strategy to examine evidence from each case that supported or weakened findings emerging from other cases.

The analyzed data from classroom observations and informal talks were used to (a) determine if classroom literacy instruction was a significant factor influencing native Chinese-speaking children's concept
of word acquisition in English and (b) identify the similarities and
differences in English concept of word acquisition between native English-
and Chinese-speaking children.

Quantitative data. The performance scores of the participants on
the five tasks were analyzed using descriptive statistics. These data were
used to compare with the developmental patterns of native English-
speaking children's acquisition of concept of word (e.g., Roberts, 1992) and
to illustrate any changes within and across participants over the period of
this study. It was also used to support the speculations gleaned from the
qualitative data (Miles & Huberman, 1994) concerning how prior Chinese
learning experience, a literate home environment, and/or classroom
literacy instruction might contribute to Chinese children's acquisition of
concept of word in English.
CHAPTER 3

Results

In this chapter, each of the six cases is described in detail focusing on (a) the participant's linguistic background, (b) performance of the five tasks used to assess performance-based and reflective word knowledge in English, (c) home literacy support, and (d) classroom literacy support. Each case description is followed by an overall summary. The cross-case comparison of the six cases then serves to answer the research questions posed.

The six participants in this study were kindergartners. Only English was used in their classrooms. In the first period of this study (March, 1996 – August, 1996), Linda, Edna, and Fred were the participants. They were all enrolled in year-round schools. Edna and Fred were in the same classroom. In the second period of this study (August, 1996 – January, 1997), Susan, Willie, and Dick were the participants. They were all enrolled in nine-month schools. Susan and Willie were in different classrooms of the same school. The six participants spoke English at school and Chinese at home.
Case One: Linda

Linguistic Background

Linda was born in the United States and has remained here except for one month during which she and her mother traveled back to mainland China for a visit. At the beginning of this study, she was 6 years and 1 month old. At home, she spoke Kejia, one of the Chinese dialects, which I did not understand at all. English was seldom spoken at home. Linda had never been formally introduced to Pinyin even when she was in a kindergarten class in mainland China for one month. She was unable to recognize any Chinese written in Pinyin on the list of Chinese. However, she did learn to write some Chinese characters from her kindergarten teachers in China. When I gave her the list of Chinese words written in character, she confused the character, 马 on the list with the one she had known, 马. However, she did correctly write 12 basic Chinese characters in the pre-assessment session and 6 in the post-assessment session. She may have practiced writing her Chinese characters less after the pre-assessment session. Some of the 12 characters were written in a vertical order, and some were written in a horizontal order.

At school, according to her teachers as well as my observations and communications with her, Linda spoke fluent English although her voice was always low and soft. She was able to recite the alphabet and write
the 26 letters in both upper- and lower-cases. At the beginning of this
study, when she was asked to write the alphabet for me, she left no
distinct space between each set of letters. At the end of this study, she left
some space between several sets of letters.

**Performance of Five Tasks**

In the pre- and post-assessment sessions, Linda was asked to
perform the Pointing, Word Identification, Word Awareness, Sentence
Dictation, and Sentence Dictation Explanation Tasks. Although she did
not make significant improvement for each task, her performance between
the pre- and post-assessment sessions showed some degree of progress.

**Pointing Task.** In both the pre- and post-assessment sessions, it
was not easy for Linda to memorize the two lines of a nursery rhyme
although there were only 12 words. In the pre-assessment session, she
repeated each line after me twice; then we recited the lines together five
times before she was able to memorize the two lines by herself. In the
post-assessment session, to memorize the two lines of another nursery
rhyme Linda repeated them after me twice and recited them with me six
more times.

Although there was virtually no improvement in how fast Linda
could memorize the two lines of a nursery rhyme over the period of this
study, I did discover her progress in performance-based word knowledge
as it was shown in her finger pointing while reading along the lines. In
the pre-assessment session, Linda could correctly finger point at three words, Sam, Sam, and the, all of which were monosyllabic words. She moved her finger through the rest of the words.

In the post-assessment session, Linda correctly finger pointed at nine monosyllabic words, Tom, Tom, the, son, a, pig, that, a, and ton, but was stuck with stole and weighed as well as one multisyllabic word, piper's.

Word Identification Task and Word Awareness Task. Linda understood the difference between words and phrases as demonstrated in both the pre- and post-assessment sessions. She could tell the three phrases, from the house, up and down, and hide and seek from the rest of the words, table, give, night, put, and, the, children, took, and with. In the pre-assessment session, Linda could identify only the and and as words, which she had read on a flip chart once a week in her classroom. She had no reflective word knowledge as she could not explain why she had identified the and and as words and the rest as non-words. Shaking her head or shrugging her shoulder were her only answers to the question, “Why is/isn’t . . . a word?” In the post-assessment session, Linda identified three more words, table, night, and took as words, all of which were content words. Although she answered, “I don’t know” to the questions, “Why isn’t up and down/hide and seek a word?” and “Why is and a word?”, her explanation to “Why is/isn’t table/give/from the
house/the a word?” demonstrated some level of structure knowledge awareness where she used the presence of t in a word/phrase as a criterion to judge if it was a word.

Researcher: Why do you say table is a word?
Linda: Because it has a t.

Researcher: Why isn’t give a word?
Linda: Because it doesn’t have a t.

Researcher: Why isn’t from the house a word?
Linda: Because from is not a t.

Researcher: Why is the a word?
Linda: Because it starts with a t.

Sentence Dictation Task and Sentence Dictation Explanation Task.

Over the period of this study, Linda made some progress on the performance of these two tasks. In the pre-assessment session, although she could memorize the sentence The monkey went up the tree after repeating it only once after me, she could not write one word even when I encouraged her to write whatever she could. In the post-assessment session Linda demonstrated her understanding of the sentence The puppy went out the door by writing down something related to the sentence. After repeating it once after me, she drew a picture of a dog and wrote dog under the picture. I asked her to write more words if she could; she thought about that for a while but did not write down anything. Since
Linda loved coloring and drawing, I asked her to copy some pictures from a book I brought with me and she was happy to do the copying. After she was finished with the picture of a Christmas tree with some presents under it, she looked at me and waited for my response. When I asked if she wanted to copy down the nursery rhyme next to the picture, she nodded her head yes. From Linda’s copied nursery rhyme, I was able to discover her level of implicit understanding of word space. The nursery rhyme went like this:

Little Jack Horner
Sat in a corner,
Eating his Christmas pie.
He put in his thumb
And pulled out a plum,
And said, “What a good boy am I!”

When Linda was copying this nursery rhyme, she never split a word when she reached the end of a line. Her lines did not have the same length as the ones in the book. For instance, in the first line, she copied down Little Jack though the line in the book finished with Horner. Linda’s limited awareness of word space was also evident by the lack of space between words in the same line. She seldom left distinct space between two words, except between He and put or between What and a. When I asked her to explain why she left some space between the words
He and put as well as What and a, she stared at me with a puzzled look for a while. I thought that she was unable to provide an explanation about the word space, possibly due to her English language proficiency. I asked her mother to explain my question to her in Chinese, hoping that Linda would give an explanation to her mother. According to her mother, Linda did not know how to explain.

Home Literacy Support

Linda lived with her parents and 10-month old sister in a one-bedroom apartment. Her father worked first in a Chinese restaurant as a waiter and later in a casino as a dealer. He spoke much better English than his wife, who was able to read half of Linda’s English books and understand a little of the TV programs that Linda watched. Linda's mother stayed at home to take care of Linda’s younger sister. In the living room, there were a television set, toys, books, some pencils, note pads, and coloring books. Linda took very good care of her books. Every night, before she went to bed, she put all the books in order in a plastic box and covered it in case that her sister woke up in the morning before her and wanted to tear up her books. Linda had one Chinese book, Journey to the West, and 10 English books, among which were her favorites: Snow White, Cinderella, Mickey Mouse 1-2-3, and Mickey Mouse Colors. Linda’s mother knew these favorite books and the favorite parts of each book, too.
During both interviews I talked mainly with Linda's mother; her father only added some information during our conversations from time to time. Her mother often read Chinese stories to Linda as long as she had time, and Linda loved to be read to. She told me, "Once I have time, she (Linda) always wants me to read Chinese stories to her. She doesn't care when I read books to her." When I asked Linda's mother if she taught Linda Chinese, she replied, "I don't have time to teach her Chinese. I even don't have time to teach her English."

When Linda's mother had time to read English books to/with Linda, she seldom finger pointed at each word. Each book was read many times. Sometimes, the book reading turned out to be a collaborative learning experience for both Linda and her mother. Linda asked her mother questions during book reading if her father was not around. Her mother stated:

If I don't say anything when I am reading, she would ask what this sentence means. . . . When I don't know a word, I stop reading and she would ask what the word means. Later she would say, "You don't even know the words. How can you teach me?" I told her, "I teach you whatever I know". . . . Sometimes, she says, "Wow, you also can speak English. You also understand English, and I will stop saying that you don't understand English."
Linda seemed happy that her mother was making progress while reading to/with her. Linda did not often read English books by herself. She spent more time drawing, coloring, or watching TV. Linda used to watch *Sesame Street* by herself, but she switched to cartoons and other programs, such as *Barney and Friends*. According to her mother, Linda learned English from watching TV.

Linda showed her pride in what she could do. For instance, when she was able to read several sentences from *Mickey Mouse Colors*, she asked her mother to bring the book to school so that she could read the sentences to her teacher. When I was interviewing her mother, Linda proudly read these sentences to me. In addition, Linda was also excited about what she had learned in school. Linda's mother told me, "Once she learns something new at school, she tells me 'I learn something new at school'.” Something new at school might include a new story, interesting facts about a subject in a thematic unit (e.g., dinosaur), and how to make a tie for Father's Day. Linda’s daily learning activities at home were predominantly drawing, coloring, reading books with her mother, and listening to stories if her mother had time. She did not write down words while she was coloring and drawing. But if she was drawing her family, she would write down *Mom, Dad*, and her sister’s and her names.

Due to her limited available time, Linda’s mother could not help Linda more in developing her English literacy skills than just reading
to/with her as much as she could. She never asked Linda to do other reading and writing activities at home to reinforce what Linda had learned at school. She allowed Linda to do whatever she liked, such as watching more TV programs rather than reading books. However, she tried her best to meet Linda’s learning needs and interests by reading to/with her and providing her with writing supplies, coloring books, story books, and a television set. Linda’s parents were supportive of her literacy development in the sense that they created a learning environment, but they were not much involved in Linda’s literacy learning.

Classroom Literacy Support

The classroom and routine literacy activities. Linda was enrolled in a morning kindergarten class at a year-round school. There were 30 children at the beginning of this study when Mrs. Henson was the teacher. Two weeks later, when Ms. Lee came to replace Mrs. Henson, who moved to another state, there were only 15 children, 6 of whom went to Chapter I in the afternoon. Linda and another Chinese boy, who barely spoke any English, were the only children who spoke English as a second language.

In the classroom, there were no signs for any centers. Posters around the room included the colors (with color words), the weather, a calendar, the numbers 1-10, a 100 counting chart, and the alphabet. We
are Friends and Happy Birthday were the two teacher-made bulletin boards. Environmental print included the four sentences such as Reading is Cool, and the six labeling words such as piano and pocket chart. The big shelf with about 150 little books was five feet above the floor. Papers, pencils, crayons, and scissors were on the shelf far away from the tables where the children were sitting. Whenever they needed stationery, one leader from each table walked to the shelf to obtain whatever was needed.

During the first two weeks of this study, Mrs. Henson was teaching. She had the same daily learning routine as Ms. Lee, except that Mrs. Henson asked the children to do journal writing at least once a week. Ms. Lee had a very strict classroom rule: Every activity needed to be done quietly. Even when the children were in the block or toy center, they needed to be quiet while playing; otherwise, their blocks or toys would be taken away. Whenever the children were done with their seatwork or center work, they walked quietly to the carpet area and sat down, waiting quietly for further instruction. When the worksheets were passed out, she first called on those who behaved themselves in large group learning to get their worksheets. She started the daily routine with the weather, the calendar, and counting. Activities for the rest of the morning included alphabet learning, reading, math, and art and crafts.

At the beginning of this study, alphabet learning occurred through children's singing an ABC song every morning as a whole class.
Occasionally, Ms. Lee asked individual children to sing. Often, the children practiced their alphabet in worksheets. The common activities were (a) dot-to-dot alphabet (in uppercases and/or lowercases) in which the children connected each dot under a letter to the one under a next letter, (b) tracing and writing the upper- and lower-cases of a letter, and (c) coloring the upper- and lower-cases of a letter in different colors.

Sometimes, children's alphabet knowledge was reinforced in other activities. For instance, before Father's Day, the children made a tie for their fathers. Each child received a piece of paper with Dd on it along with the shape of a tie to be cut out. Ms. Lee asked, "What does Dd stand for?" Most of them replied, "D is for dinosaur," "Long neck animal," "D is for dog," "D is for Dad," and "D is for day." Ms. Lee replied, "For today, let's say D is for Dad only."

Almost every day Ms. Lee did 5-10 minutes of large group book reading at the beginning of the class if a book was related to a theme the children were studying. Otherwise, Ms. Lee read a storybook to them after they came back from recess to, as she said, "calm them down." Ms. Lee read a book from cover to cover with occasional stops to show the pictures and to make some comments or ask some literal comprehension questions, such as "Is ... happy?" Ms. Lee read a book just once. Then she put the book on the edge of the chalkboard. The children never got any chance to listen to it again. Even during center time, reading was not one
of the centers. Sometimes a few children were allowed to read the book that Ms. Lee had read in the morning after they were done with center work.

If the children were studying a thematic unit, in addition to listening to the books related to the theme, they and Ms. Lee read a poem or sang a song written on a flip chart. She often finger pointed at each word once. For instance, when they were doing the dinosaur theme study, they read the following poem first and then sang it to the tune of Mary Had a Little Lamb:

Dinosaurs lived long ago; Long ago, long ago; Dinosaurs lived long ago; And now they were extinct.

Fossil hunters find their bones; Find their bones, find their bones.

Fossil hunters find their bones. And take them carefully.

Ms. Lee echo read and sang the poem with the children several times. However, the children never got any chance to read the poem or sing it on their own. Then they moved to a brainstorming activity. Ms. Lee asked the children to talk about what they knew about dinosaurs based on the books they were read; then she wrote down those facts on a big piece of dinosaur-shaped paper under the title Things about Dinosaurs. These sentences told different characteristics of dinosaurs: Live in water, eat grass, eat trees. Some have horns. Some have long necks. Some have sharp teeth. They stomp on their feet. They are heavy.
T-Rex is the king. Some have long tails. Some have long legs. Some can fly. Ms. Lee read with the children once, pointing at each word. Then the paper was hung at a place close to the ceiling of the room.

In addition to book reading routines, Ms. Lee also introduced the children to new stories from the I Can Book series published by Teddy Bear Press. Each story contained several short sentences with the sight words introduced on different pages but lacked any actual story elements. Each story seemed to be more like a piece of disconnected text. Ms. Lee copied each book on a flip chart and echo read several times; however, she only finger pointed at each word once. Here were two pages from one of stories in the I Can Book series:

(on 1st page) I, a, see, can

(on 2nd page) I see (a target word on this page); I see (a picture of a cat); I see a heart. I see a happy face. I see a pencil.

Then Ms. Lee wrote down the sight words from the story on a flip chart. Once a week she asked the children to read these words chorally; then she called on individual children to come up to the front to read and finger point at each word. Except for the once-a-week exposure to these words, the children never got to use these words or even to copy them.

Linda's participation in literacy activities. When I asked Ms. Lee why Linda and another Chinese boy did not go to Chapter I in the afternoon as the other six children did, she told me that they were not
qualified since they only had the language barrier and nothing else.

According to Mrs. Henson, Linda "was quiet but very smart." Her
impression of Linda was further supported by Ms. Lee's observation:

There are not any special needs (of Linda). She isn't talking to
anybody. She would never, um, play with anybody. She stays
isolated. Today, she played with another student, that was great.
But she is always by herself. . . . I wish she could talk some more,
be bonded with other students, and be part of the group. . . . I
usually put her in a group, the same level as hers. And I have a
few who are above her. I want her to talk a little bit more. She
does pretty good with that. Sometimes, she is too shy.

The observation data revealed that the classroom literacy activities
unfortunately did not support collaborative learning, through which Linda
and other children could be blended and she could have more
opportunities to communicate with others. Linda was always sitting at
the end of the first or second row, far away from Ms. Lee. She seldom
volunteered her answers to any questions, but once she was called on she
usually had the right answer to Ms. Lee's question. When she was doing
seatwork or occasionally reading a book read earlier by Ms. Lee and she
did not know a word, she always went to Ms. Lee for help rather than to
the other children. Ms. Lee told me:
She always comes to me and she goes, "I don’t know." And she would tell me and she would ask me, "How do you say it?" I tell her how to say it and she repeats it and she does fine.

According to Ms. Lee as well as my observations of Linda’s coloring, drawing, and worksheets for the alphabet, her work and handwriting were always very neat and her pictures were usually pretty and colorful. She was also among those who were very focused during seatwork and was done with it earlier than other children. However, like other children, she was never encouraged to write anything down beside the pictures except her name on the top of a paper. At the beginning of this study when Mrs. Henson was still teaching, the children did journals at least once a week and they were asked to write down words or letters in their journals. I observed that Linda was able to write something next to the pictures she had drawn. During my second classroom observation, I stopped at Linda’s table and sat down next to her on the floor. She was drawing three people. I asked her who they were. She told me, “This is my dad. This is my mom. This is me.” Then she drew a little face on her mother’s belly and told me that it was her sister. I asked, “Do you want to give each person a name?” She wrote her Chinese name next to her in the picture and said, “This is my name. What is your name?” I wrote my Chinese name on another piece of paper. She smiled at me.
Later, after the children left school, I asked Mrs. Henson for Linda’s journals. In her journals, most entries seemed to be about her family members, shapes, and nature, such as the sun, grass, and flowers. She did write her English name often in different ways such as with all letters in upper-case, in lower-case, or in a mix of upper- and lower-cases. She also included in her journals a group of letters (e.g., CL, and mY), numbers, and occasionally her Chinese name in Pinyin. Since what was written down in Linda’s journals were single names, a group of letters, and numbers, it was impossible for me to observe her awareness of word space. Linda’s journal writing never moved beyond pictures and a few letters, numbers, and her name. Such a fact was also evident from her drawings (i.e., family members with names).

Although Linda was described as quiet and shy in nature, she was observed participating in literacy activities with other children with whom she felt comfortable. Katie was one of the two girls with whom Linda liked to be in a group. Linda and Katie were done with their cut and paste dinosaur craft. Linda wanted to play with the shapes. Katie wanted to read one of the dinosaur books displayed on the edge of the chalkboard. Linda did not want to. Katie said, “I am a teacher.” Then she sat down in Ms. Lee’s chair. Katie said to me, “You want to sit down and listen to the story? But I don’t know how to read these words yet. I just pretend to read.” I replied, “I think you know how to read just like
Ms. Lee.” Katie started reading by telling the story from the pictures. Linda was listening very carefully. After Katie was done, I asked Linda, “Do you want to be a teacher just like Katie did?” Looking at me, Linda took the book from Katie and was about to open the first page when Ms. Lee shouted, “Clean up time! Ten, nine, eight, . . .”

Linda’s shy nature may have prevented her from actively communicating with others; however, if she had been given more learning opportunities such as the one in the above example, she could have talked more and communicated more with others. The lack of true writing experience in her classroom, in which the children could experiment with expressing ideas and writing down their spoken words, failed to promote the children’s development in word space awareness. From my observational and interview data, I could not obtain any evidence showing that Linda’s teacher was using any informal instruction (e.g., providing the children with enough experience with print via reading and writing activities) or formal instruction (e.g., talking about the difference between a letter and a word or what a word is) to promote Linda’s acquisition of concept of word.

**Overall Summary**

Based on Linda’s ability to recognize Chinese characters from the list, her Chinese was at the beginning level. By looking at the 12 Chinese characters in the pre-assessment session and 6 characters in the post-
assessment session that she wrote, her level of Chinese was a little bit above the beginning level. However, in general, her Chinese literacy experience was limited to only being able to write some Chinese characters and to understand Chinese stories read to her by her mother.

Toward the end of this study, Linda seemed to have made some progress in her performance of five tasks intended to assess her performance-based and reflective word knowledge. Her progress was most evident in performance-based word knowledge. She was able to finger point at more words in the two lines of a nursery rhyme and identify more words from a list of nine words and three phrases. Her understanding of what a word is was related to word structure knowledge (e.g., Table is a word because it has a t.), which was at the third level of word awareness (Templeton & Spivey, 1980). In addition, Linda had great difficulty memorizing the two lines of a nursery rhyme and finishing the one-sentence dictation. She was unable to explain any word space in her copied text.

Based on two parent and teacher interviews, my classroom observations, and the informal talks with Linda's teachers, I was able to examine the influence of Linda's home and school literacy support on her acquisition of concept of word in English. Linda's home literacy support included providing her with a television set, writing supplies, and books. Linda's mother's reading to/with her seemed to be the only literacy event
that happened in her home. She did not nudge Linda to read books by herself and to use words she knew in her drawings. But her mother did value Linda's pride in what she could do and was willing to learn to read English with her.

Linda's classroom seemed to provide her with more literacy activities (e.g., alphabet learning or book reading), most of which were teacher centered. However, child-child and child-teacher social interaction was minimal. Learning the alphabet and sight words were often done out of context and seldom required children's active involvement. Linda was not able to take advantage of her peers to further develop her English orally. Linda's love for stories seemed not to be nurtured in her classroom as books were often read once for only 5-10 minutes every day. Although finger pointing was used in any initial reading of a poem or singing of a song, a piece of disconnected text (e.g., a story from the I Can Book series), or whatever was written for a thematic unit, Linda's limited exposure to and interaction with the words later on made it difficult for her to make a connection between a spoken and a written word.

Case Two: Edna

Linguistic Background

Edna was born in mainland China and moved to the United States when she was two years old. At the beginning of this study, she was 5
years and 6 months old. At home, she spoke Cantonese, one of the
Chinese dialects, which I did not understand at all. English was seldom
spoken at home except for the occasions when Edna talked to her
classmates over the phone or to other Chinese children who did not speak
Chinese at all. Sometimes she also spoke English to her 13-year-old
brother. When Edna’s mother asked her something in English, she
sometimes replied in English. Edna did not know how to read Chinese in
Pinyin. Additionally, she was unable to recognize any Chinese in
character from the list of Chinese words in the pre- and post-assessment
sessions. In the pre-assessment session, however, she was able to write
12 basic Chinese characters in a horizontal direction with somewhat
distinct space between characters. In the post-assessment session, she
was able to write only nine basic Chinese characters. Possibly, as time
went by, Edna spent more time doing activities related to her English
learning than practicing writing Chinese characters.

According to my observation of Edna’s communications with other
children in her classroom as well as my interaction with her, Edna did not
have any trouble speaking fluent English although her English had a
little Chinese accent. Edna was able to recite the alphabet without
mistake and to write the 26 letters in both upper- and lower-cases with no
distinct space between each set of letters.
Performance of Five Tasks

In the pre- and post-assessment sessions, Edna was asked to perform the tasks of Pointing, Word Identification, Word Awareness, Sentence Dictation, and Sentence Dictation Explanation. Her performance on the first and last two tasks indicated some improvement over the period of this study. Edna did not perform the second and third tasks in the post-assessment session as well as she did in the pre-assessment session.

Pointing Task. Edna had trouble memorizing the two lines of a nursery rhyme. In the pre-assessment session, Edna repeated the lines twice after me; then we recited them together five times before she was able to remember the two lines. In the post-assessment session, in addition to repeating the lines twice after me, Edna and I recited them together seven times before she was able to memorize the lines.

Edna seemed to have made no improvement in her skills of memorizing the lines of a nursery rhyme. However, her finger pointing while reading the lines indicated her progress in the performance-based aspect of concept of word. In the pre-assessment session, Edna was able to finger point at only three monosyllabic words, Sam, Sam, and the and moved her finger through underneath the rest of the words. In the post-assessment session, Edna correctly finger pointed at seven monosyllabic
words, Tom, Tom, the, son, stole, a, and pig, and one multisyllabic word, piper's. She pointed at weighed twice and moved her finger through a ton.

Word Identification Task and Word Awareness Task. In the pre-assessment session, while I was asking Edna to identify words from the list of nine words and three phrases, she could identify seven out of nine words, table, give, night, put, the, took, and with, six of which were content words and one of which was a function word. She also identified three phrases, from the house, up and down, and hide and seek as words. Edna made her efforts to explain to me "Why is/isn't . . . a word?" She never gave me the simple answer, "I don't know." Edna's explanations for "Why is . . . a word?" mainly fell into four categories: (a) relating a word to an object or action, (b) relating a word to saying or talking that word, (c) relating a word to its written form, and (d) relating a word to the fact that someone said that it was a word. For instance,

Researcher: Why do you say table is a word?

Edna: Because you sat at the table. (category a)

Researcher: Why is took a word?

Edna: Because someone needs to took the book and see it. (category a)

Researcher: Why is with a word?

Edna: Because someone tries to say with that word. (category b)
Researcher: Why do you say hide and seek is a word?

Edna: Because that is written there (referring to the list).

(category c)

Researcher: Why do you say children is not a word?

Edna: Because someone tries to say children is not a word.

(category d)

In the post-assessment session, Edna's performance on Word Identification and Word Explanation Tasks may not reflect her authentic understanding of the difference between words and phrases and her ability to explain "Why is/isn't . . . a word?" Expecting Edna to perform better in the post-assessment session, Edna's mother asked her to think twice before Edna answered "yes" or "no" to "Why is . . . a word?" and explain "Why is/isn't . . . a word?" For several times, Edna was so confused and not sure if she had answered my questions correctly. She kept changing her answers while figuring out her mother's reactions to her answers. It was difficult for me to ask her mother not to get involved in the assessment session and not to coach Edna. It was well understood that Edna's mother just wanted Edna to do well in all school-related activities.

As a result of Edna's mother's involvement and coaching, Edna could identify 5 out of 9 words, table, night, put, took, and with, four of which were content words and one of which was a function word. Edna
also distinguished one phrase from words, from the house. Edna's explanations for "Why is . . . a word?" formed two categories: (a) relating a word to an action or object and (b) using the term, word, in her explanations. For instance,

Researcher: Why do you say table is a word?
Edna: Because of the shape like that (pointing at her table). (category a)

Researcher: Why do you say put is a word?
Edna: Because you put down something. (category a)

Researcher: Why do you say night is a word?
Edna: Because that looks like a beautiful word. (category b)

Researcher: Why do you say took is a word?
Edna: Took is a word. (category b)

Researcher: Why do you say give is not a word?
Edna: Because give is not a word. (category b)

Researcher: Why do you say from the house is not a word?
Edna: Because those are the words. (category b)

Sentence Dictation Task and Sentence Dictation Explanation Task.

In both the pre- and post-assessment sessions, Edna did not have difficulty memorizing the sentences, The monkey ran up the tree and The puppy went out the door, after repeating them once after me. However, she could not write anything for these two sentences. In the pre-
assessment session, after I encouraged her to write whatever she could, she wrote is, it, and on on a piece of paper. There were no spaces between the three words. Edna could not give me an explanation for the lack of space between the three words.

In the post-assessment session, Edna told me that she did not know how to write puppy. I asked her to sound it out and listen to it carefully. After a moment of silence, she told me that she could not write anything. I showed her a book that I brought and asked her if she wanted to copy a picture and some lines next to the picture. The lines were: Rain, rain, go away; come again some other day. Little Johnny wants to play. Edna finished copying at Johnny of the last line. Her lines did not always finish at the same word as the ones in the book. Her first line stopped at away, the second one at some, and the last line at Johnny. However, she always wrote a complete word at the end of a line. Edna left space between rain and go, go and away, come and again, and again and some. She could not give me the explanations for her leaving and not leaving space between words copied from the book.

Home Literacy Support

Edna lived with her parents and 13-year-old brother in a three-bedroom house. I saw Edna's father in the pre-parent interview; but we never talked. I could communicate with Edna's mother in English and Chinese. She used to be a doctor of Chinese traditional medicine before
she came to the United States. Wanting to open her own practice, she
frequently traveled to a neighboring state to get further training for her
license. Toward the middle of this study, Edna's mother stayed in a
neighboring state sometimes as long as one month. She told me that she
did not help Edna with her English as much as she had done at the
beginning of this study. While Edna's mother was away, Edna's
grandmother, who did not speak English at all, mostly helped Edna with
homework by reminding her that she needed to do homework before going
to play. Sometimes Edna's brother answered Edna's questions and read
with her.

In the living room of Edna's home, there was a television set. Edna
stored her books and writing supplies in her room upstairs. Edna did not
have any Chinese books of her own, but her brother had lots of Chinese
books that he had brought with him when he came to the United States.
According to Edna's mother, these Chinese books were too hard for Edna
even to be read to. Edna's mother taught Edna Chinese if she had time,
starting with simple characters and environmental print (e.g., calendar).
She explained:

I teach her Chinese starting with the simple characters. For
instance, how to write water in Chinese and hand in Chinese. I
also teach her how to write sun and moon in Chinese when Edna
and I reviewed the English words, sun and moon. . . . On the
calendar, there are Chinese characters for Monday, I teach her each character; then we review these characters for Monday when the next week comes.

Evidently, Edna's Chinese learning occurred along with her English learning in a natural setting. When I asked Edna's mother if she had ever sent Edna to a Chinese school for formal instruction, she told me, "No, because her English is not good enough. . . . English is the major goal right now." Actually, Edna's mother had less and less time to teach Edna Chinese once she began traveling often to the neighboring state. Edna also received less help in her English learning once her mother's out-of-state travels started.

At the beginning of this study, Edna's mother employed different methods to help her with English. Almost every day, she asked Edna to repeat after her one page from one of the books related to what Edna was learning at school, such as the alphabet and color words. She told me:

If colors are taught at school, I go to a library to borrow books on colors and teach her; if days of the week are taught, I borrow books on days of the week and teach her. Anyway, I teach her according to the content of the school. She also spelled words aloud for me.

In the pre- and post-interviews, Edna's mother asked her to spell the color words aloud for me. Edna easily spelled most of the color words except for yellow and purple. Edna's mother often finger pointed at each
word once or twice while Edna and her were echo reading. Edna's mother always made sure that Edna knew how to read the words on one page from a book before Edna went to the next page. She stated:

As soon as she finishes one page, she wants to read the next page. I tell her, "You need to understand everything on this page and then you can turn to the next page." So she is reading this page all day. After she finishes reading, she needs to copy those words. She needs to write five times what is taught about ABC at school, like Aa, airplane. I ask her to do this type of homework. After she is done, I give her a reward—I put 100 on the top of the paper.

When Edna's mother was away for a short or long period of time, she asked Edna's grandmother to take the responsibilities of making sure that Edna finished the homework that she brought from school. Although her grandmother did not know English at all, she sat down with Edna while she was doing her homework. Toward the middle of this study, Edna's mother no longer gave Edna extra homework at home; Edna just did homework given by Mrs. Dallas from school. Sometimes, Edna's brother helped her out with homework and read books to her.

Once or twice each week, Edna read books by herself. Her mother was very observant of Edna's reading behaviors. "When she is reading a book, she says nonsense using the tones and pitches of American English and facial expressions of Americans. She doesn't read what is written but
says what she is imagining.” When I asked Edna’s mother what Edna would do if she did not know a word in the book that she was reading, she answered:

In the beginning, Edna wanted to use an electronic bilingual Chinese-English translator and I did not allow her to. Because once she used it she would depend too much on it and she was not going to memorize words. So I did not allow her to use the translator. I teach her those words that she doesn’t know. I teach her once and she understands. Then she needs to copy the words five or more times.

When I was at Edna’s home, she brought all her books downstairs and put them on the kitchen table. She told me that her favorite ones were Sheep in a Jeep, He Bear, She Bear, Everyday Garden, and On the Farm. According to Edna, these books helped her to know more animals. Edna’s mother seemed not to have any knowledge of Edna’s favorite books.

In addition to echo reading with her mother, reading books by herself, and copying English words from books, Edna loved drawing. Her mother encouraged her to write on her drawings what she had learned from school. From the drawings that Edna proudly showed me, I found that most things written down along with the drawing were the letters, numbers, and some color words. Although Edna’s mother was confident
that Edna could spell some color words, she hoped that Edna could improve her spelling skills. She asked me to tell Edna’s teacher, Mrs. Dallas, to work more with Edna with her spelling skills. Additionally, Edna’s mother expressed her uncertainty about her guidance for Edna in areas of learning English other than spelling words.

Like most children at her age, Edna enjoyed watching TV. Edna watched Sesame Street and Barney and Friends every morning before she went to school. When she came back from school, she watched cartoons. Edna watched TV all by herself. After the post-parent interview, I asked Edna, “Edna, Can you tell me more about Sesame Street and Barney and Friends?” She replied, “Sesame Street is too easy.” “Then, how about Barney and Friends?” I asked again. Edna answered, “I don’t know. You need to sit down with me and watch it.” Her answers suggested that she may have sensed the difference in the difficulty level of the two programs.

According to the data from the post-parent interview, English was used more often at home as there were more occasions when English seemed to be a more appropriate communication tool. When Edna’s mother spoke English to her (e.g., asking about Edna’s school work), Edna would respond to her in English. When Edna’s cousins or friends came over for play, they all spoke English. Edna enjoyed learning and speaking English. Often, she corrected her mother’s pronunciation. She even tried to teach her grandmother the alphabet although her attempt often turned
out to be frustrated. Her grandmother had already forgotten A when Edna was teaching her to remember C.

Edna lived in a home where she was supported in her literacy learning by her mother, grandmother, and brother. Her mother's support was most evident. She had high expectations for Edna and made efforts to assist Edna to meet the expectations. She taught Edna to read Chinese and English words, echo read books with Edna, and reinforced what Edna learned at school. She emphasized memorization in Edna's learning of English words. Her being away so often may have limited her ability to provide Edna with as much guidance as she needed. However, Edna's mother asked Edna's grandmother and brother to get involved in Edna's school work. Her efforts showed that she cared about Edna doing well in school.

**Classroom Literacy Support**

The classroom and routine literacy activities. Edna was enrolled in a morning kindergarten class at a year-round school. There were 30 students in her class. Edna and Fred were the only two Chinese students who spoke English as a second language. In the classroom, there were four bulletin boards: (a) children's names, (b) children's birthdays, (c) posters for thematic units (e.g., dinosaurs or spiders), and (d) basic sight words (e.g., and, the, said, ran, Nan, ram, in, is, did, and man). Other posters around the room contained the colors, the weather, a calendar, the
numbers 1-10, a 100 counting chart, the alphabet, and short and long
vowels. There were six signs hung from the ceiling to identify learning
centers: Computer, Listening, Puzzles, Blocks, Math, and Science. A
bookcase of 100 books and three shelves of books were placed next to Mrs.
Dallas' desk. Stationery was on each table. There were usually six or
seven children of varied academic abilities at each table. Mrs. Dallas did
not like the children talking during the large group reading and whole
class instruction (e.g., reviewing letters on flashcards). She even brought
in the principal to discipline some of the children.

Daily literacy instruction included: (a) learning and reviewing the
alphabet by using a basal reader or worksheets, (b) learning/reviewing
number and color words as well as other sight words, (c) thematic unit
activities, (c) large group reading, and (d) centers. The alphabet learning
started with tracing and copying a target letter in a basal reader, Buckle
My Shoe. If Mrs. Dallas used worksheets for the target letter, she often
asked the children to watch her writing it in upper- and lower-cases on an
overhead projector. Then they picked up their pencils and wrote the letter
in the air. Next they traced and copied it on a worksheet. Finally, the
children circled some pictures of objects whose beginning sound started
with the target letter and crossed out those whose beginning sound did
not. Additionally, they compiled an A to Z book, in which a picture of an
object was cut out and pasted under a letter matching the beginning sound of the object.

Mrs. Dallas used flashcards to teach number and color words. She introduced one number and one color word per week and reviewed the others that the children learned in the previous weeks. After she finished teaching all the numbers (1-20) and color words, she wrote down each word on a big piece of paper and pasted it on the board. Every morning, she pointed at some of the words and asked individual children to read them. All the words were arranged in the same order every day.

The children learned sight words from three sources. The first source was from the basal reader, *Buckle My Shoe*. One lesson, for instance, consisted of a series of pictures with complete and incomplete sentences. Under the first picture of a dog who was sniffing, there was the sentence: *The dog can* (a picture of a sniffing dog). Under the second picture of the dog who was looking, there was the sentence: *The dog can look*. The third sentence said: *Look!* Under the last picture in which a dog was running away, there was a picture of a dog running away. After echo reading the sentences with Mrs. Dallas, the children traced the words, *the dog*, and then they copied them in the lined space of their basal reader workbook.

The second source for the children to learn sight words was from their little books. Every week, Mrs. Dallas allowed each child to take one
little book home to read with a parent. When the child brought the book back, Mrs. Dallas asked him/her to read to her or a parent volunteer. Each child needed to finger point at each word while reading. There were two kinds of books. The following lines were some examples from the first type of books:

In Bed
I am in bed.
I am not asleep yet;
I can hear the television;
My dad and mom were watching television;
I can hear the baby next door;

The second type of books started with a list of review words (e.g., I, Sam, and see). The next page provided the summary of a story. For instance, Mat the Rat gives Sam the Lion a cape and crown. When Sam wears them he thinks that he can do anything he wants. . . . For the rest of the book, there was a word or short sentence on each page. The following were some examples:

(on the 1st page) I (the picture of Mat pointing to himself)
(on the 2nd page) I (the picture of Rat pointing to himself)
(on the 3rd page) Sam (the picture of the Lion pointing to himself)
(on the 4th page) See (the rat showing the lion the crown)
The third source of sight words was thematic unit activities and large group reading. For thematic unit activities, Mrs. Dallas often started with reading books or asking the children to listen to relevant information from the basal reader. Then the children colored pictures of a subject in the thematic unit, such as spiders and dinosaurs. Often Mrs. Dallas asked the children to draw the animals following her model shown on an overhead projector. For the spider unit, Mrs. Dallas first drew a black widow on the overhead projector and then wrote the sentences: It is poison. Do Not Touch! The children echo read with Mrs. Dallas the sentences and copied the drawing of the black widow and sentences on their worksheets.

The large group reading usually lasted about 10-15 minutes. Mrs. Dallas often read the same book several times and finger pointed at each word at least once. If the book was a pattern book, she invited the children to read chorally. In addition to asking literal comprehension questions, Mrs. Dallas talked about the similarities and differences between various versions of a popular book (e.g., Jack and the Beanstalk) and asked the children to identify the linguistic features of the book (e.g., rhyming words in A Beautiful Feast for a Big King Cat). The rhyming words were reviewed in the children's homework.
Activities at the centers of Listening, Math, and Science were related to a thematic unit. Throughout this study, I never observed the children assigned to the Computer center. Mrs. Dallas told me that once a week, the children went to a computer lab for 45 minutes where they played alphabet and counting games. Because some of the children could not stop talking in the lab, Mrs. Dallas stopped letting the children go there. Furthermore, reading was never a choice for a center. The children were allowed to pick books to read only when Mrs. Dallas said so, usually after at least half of the class were done with their seatwork. Few children were able to finish their books because the time was so short.

Mrs. Dallas always gave the children homework on Tuesdays and Thursdays. They finished it at home and brought it back with a parent's signature. The homework was often a review of what they had just learned at school. Most activities were from the basal reader. The first type of activity was to ask a parent to read with a child the basic words, including the color words, family words (e.g., Ted, bed, and red), days of the week, or others (e.g., the and has). The second type was to ask a child first to look for a list of words in a puzzle and then to pick one out of two words, both of which were from the list, to complete a sentence. For instance, for the sentence, The frog is . . . , the two words were green and swim. This type of activity became common toward the end of this study. The third type was to ask a child to write a sentence/phrase in the lined
space about a picture by using the given words (e.g., at, look, book, and my). The fourth type was to review vowels and consonants—filling in a beginning or ending sound of a word under a picture and copying the word in the lined space. The fifth type was to match a word with its rhyming word. Mrs. Dallas checked the children’s homework the first thing on Wednesdays and Fridays. If they made mistakes, they would make corrections before they went home.

**Edna’s participation in literacy activities** At the beginning of this study, when I asked Mrs. Dallas if Edna was different from the rest of the class, she told me that she was just an average child and did not have any special needs. She stated:

I know she understands everything and I think the little girl (Edna), she just writes beautifully. And she is smart. . . . I don't see any special needs. She, I think, is right on target. . . . The little girl, as a matter of fact, is even more advanced. She starts writing cursive already. She always finishes her task faster than the boy (Fred). . . . She is always fast.

However, during a few of my last observations and the post-interview with Mrs. Dallas, she expressed her increasing concerns about Edna’s behavior. She commented:

The little girl, . . . she talks too much. She talks and constantly interrupts me. Lately, I notice even more so. She would come up to
my desk, you know all the time, just constantly asks me, “What are you doing, Mrs. Dallas?” I kind of nail her for a few times (It’s a terrible word, you know). But I have to discipline her a few times. I have her name got on the board for a couple of times for talking. I also observed what Mrs. Dallas had described. I assumed that maybe Edna wanted Mrs. Dallas’ attention since her mother was constantly away from her. Furthermore, Edna also talked to me a great deal while I was in her classroom observing. She called me “Teacher” as her mother had asked her to. She always remembered to ask me, “What’s up, teacher?” This greeting occurred in her first conversation with me at each observation. She often showed me her finished seatwork and was very proud of it. One day, she showed me her copied words, the dog, and commented, “Teacher, I remember the in Sam, Sam, the baker man; Washed his face in the frying pan.” I was astonished at her good memory because I had used the sentences in the pre-assessment more than two months before. “Wow, I am so impressed!” I praised her. She replied, “Teacher, you know, my mom asked me to practice saying Sam, Sam. Next time when you come to my house, I can remember it.” After that day, Edna said these two sentences to me every time I was in her classroom.

Whenever Edna was doing her seatwork, she talked with other children at her table. She shared her finished work (e.g., comparing her coloring with others’). She often got along with other children at her
Whenever she finished her seatwork, she mostly talked to herself or idled by stretching her legs and arms all the way, halfway lying on her bench. Edna was not allowed to go to a center or pick a book to read unless Mrs. Dallas said so when at least half of the class were done with their seatwork. She had to wait for the rest of children to finish and then they went to an assigned center. Whenever I walked to her table to see how she was doing, she sat up and proudly showed me her work.

According to Mrs. Dallas, Edna often participated in most literacy activities and was right on task. However, in the large group reading, she liked to sit next to Fred, and they often started talking in Cantonese; sometimes, they started arguing. Both of them liked to sit at the end of the group and tended not to answer Mrs. Dallas’ questions. Unlike the rest of the children in Edna's class, she did not have a little book to take home to read. Mrs. Dallas told me that since Edna never brought back the book that she took home at the beginning of the school year, she stopped giving Edna any books to take home. Therefore, Edna was never asked to read a little book to Mrs. Dallas or a parent volunteer.

Since Mrs. Dallas asked the children to copy words in the lined space in their basal reader workbooks or on worksheets, I had various opportunities to examine Edna's understanding of word boundaries. Edna had not fully developed her knowledge of word space. She did not always leave space between words copied from the board, overhead projector, or a
basal reader workbook; but she never split a word while copying. For instance, when she was copying the sentence, *Wolf Spider has 8 eyes*, she put 8 and *eyes* together. I asked her for an explanation. She replied, “I don’t know.” Five minutes later, Edna came to me and showed me her copied sentence, stating, “8 and *eyes* must go together. We say *8 eyes* together.” Edna’s explanation for the lack of space between 8 and *eyes* suggested that Edna had some knowledge of space concept but still confused the space in oral language with the one in written language.

**Overall Summary**

Edna was at the beginning level of Chinese as she was unable to recognize any Chinese in Pinyin and character. But her ability to write 12 characters in the pre-assessment session and 9 characters in the post-assessment session indicated that her Chinese may have been above the beginning level.

During the period of this study, Edna’s performance on the five tasks showed that she made most progress in performance-based word knowledge. She could finger point at more monosyllabic words and started to include finger pointing at a multisyllabic word once. Her performance on Word Identification and Word Awareness may not have completely reflected her reflective word knowledge due to her mother’s involvement and coaching. However, her reflective word knowledge was evident in her multiple levels of understanding: (a) relating a word to an
action or object, (b) relating a word to saying or talking that word, (c) relating a word to its written form, (d) relating a word to the fact that someone said it was a word, and (e) using the term, word, in an explanation. The first three categories of explanations were consistent with Templeton and Spivey’s (1980) first and second levels of reflective word knowledge. The third explanation showed that Edna had some knowledge of a connection between a spoken and a written word. The fourth and fifth explanation suggested that Edna may not have understood the abstractness of such a concept as word. While performing the Sentence Dictation Task, Edna could not write anything for the sentences. Furthermore, she could not explain the space between words in the copied lines from a book.

Edna received support in her literacy learning from her family and her mother in particular. Her mother had high expectations for Edna, and she worked with Edna to meet these expectations. Her efforts were most evident in (a) reading to and with Edna, (b) reviewing and reinforcing what Edna had learned at school, (c) encouraging Edna to write some letters or words next to her drawing, and (d) asking Edna’s grandmother to make sure Edna was doing her homework while she was away from home. Edna’s mother’s methods of teaching Edna English words included: learning the Chinese equivalents and vice versa, copying words, and spelling words aloud. Generally speaking, Edna’s home
literacy support was more than her mother's creating a literacy-rich environment (i.e., providing her with a TV, writing supplies, and books). Her mother was actively involved in Edna's literacy learning.

Although there were various literacy events in Mrs. Dallas' classroom, she mainly focused her instruction and the children's learning on sight words. Children's sight vocabulary was expanded through a basal reader, worksheets, thematic unit activities, large group reading, reading little books, and homework. The importance of finger pointing was evident in Mrs. Dallas' reading, reviewing color and number words, and asking a child to read a little book. She spent much time allowing children to practice handwriting of the alphabet and some sight words, but the children had no chance to write their own words.

In general, Mrs. Dallas created a learning environment where the children were exposed to sight words through mostly disconnected texts (e.g., a little book) and some connected texts (e.g., a trade book). Her finger pointing assisted the children in developing the concept of spoken-written word connection. Asking the children to copy words, phrases, and sentences might have led the children to becoming aware of word space. However, the children's limited encounter with connected texts and no opportunities to write words could have hindered them from developing their understanding of word space.
Case Three: Fred

Linguistic Background

Fred was born in the United States. At the beginning of this study, he was 5 years 11 months old. At home, he often spoke Cantonese. Occasionally English was used for communication between him and his brother as well as between him and his grandmother. He had studied Chinese in a local Chinese school five or six times but refused to go there any more. According to his mother, Fred did not like the way that the teachers taught Chinese—using the Mandarin Phonetic System, which often confused him. Fred was unable to recognize any Chinese written in Pinyin and in character in the pre- and post-assessment sessions. However, in the pre-assessment session, he was able to write his Chinese name with distinct space between the two characters. At the post-assessment session, he could easily recognize 41 Chinese characters in a Chinese book with Pinyin above each character.

At school, according to his teacher as well as my observation and communication with him, Fred spoke fluent English with no accent. When I asked him to recite the alphabet, he did so without any difficulty but refused to write down the upper- and lower-cases of the alphabet.

Performance of Five Tasks

In the pre- and post-assessment sessions, when I asked Fred to perform the tasks of Pointing, Word Identification, Word Awareness,
Sentence Dictation, and Sentence Dictation Explanation, he performed the four tasks according to the directions. He came up with some lines of a nursery rhyme for the Pointing Task to demonstrate his ability to finger point. Although Fred did not make significant progress in all the five tasks, his performance allowed me to examine his developmental pattern of word knowledge in English. I also gained a great deal of information on Fred as a strategic learner.

**Pointing Task.** In the pre-assessment session, Fred got frustrated at trying to memorize the two lines of a nursery rhyme. He could not say them back to me after repeating them after me three times and reciting them with me five times. Not to make him experience too much frustration at the beginning of the assessment session, I asked Fred if he knew how to say *Mary had a little lamb*. He told me that he did not want to do that one. I asked him to try with *Twinkle, twinkle little star*. I got no response from him. As soon as I asked him if he wanted to try *Humpty, Dumpty sat on the wall*, he shouted, "I know how to finger point at words in *Little Miss Muffet sat on the tuffet*. But I didn't want to do it right now. But I can do *Hickory, dickory, dock, the mouse ran up the clock." I wrote down the two lines on a big piece of paper after he said the two lines for me. Then, I demonstrated finger pointing while reading. When it was Fred's turn, he was able to finger point at *Hickory, dickory, and two* the's. He did not move his finger until he reached the second the.
He pointed at the but not clock. He correctly finger pointed at the only two multisyllabic words in the line. But he moved his finger through mouse, ran, and up and skipped dock and clock.

In the post-assessment session, Fred was happy to see me and willing to be assessed according to the directions. After repeating the two lines after me twice and reciting them with me six times, he was able to memorize them and correctly finger point at each word except weighed. Although the lines for the pre- and post-assessments were different in rhyme pattern, they both contained mostly monosyllabic words and one or two multisyllabic words. His willingness to try to memorize two brand new lines from a nursery rhyme indicated his increasing comfort level with unfamiliar linguistic input.

Word Identification Task and Word Awareness Task. Over the period of this study, I discovered that Fred was able to identify most words from the list of nine words and three phrases but confused words with phrases. In the pre-assessment session, Fred identified give, night, put, and children as words, which were content words. He considered from the house and up and down as non-words. Although Fred could identify four words and two phrases, he was unable to provide any explanations. "I don't know" was his response to the question, "Why is/isn't . . . a word?"
In the post-assessment session, Fred could identify more words, two of which were function words, table, give, night, put, and, the, children, and took. But Fred also identified from the house, hide and seek, and up and down as words. While answering my question, “Why is/isn’t . . . a word?” Fred provided several explanations, which were (a) “I don’t know.” (b) “I want to.” and (c) defining a word in a conventional way. The following were some examples of (b) and (c) categories of explanations.

Researcher: How about give? Is give a word?

Fred: Yep.

Researcher: Why do you say “Yep”?

Fred: Because I want to. (category b)

Researcher: Is table a word?

Fred: Yep.

Researcher: Why do you say “Yep”?

Fred: I mean, the table is a word.

Researcher: Why do you say table is a word?

Fred: It’s a name.

Researcher: Oh, it’s a name. A name for what?

Fred: I don’t know. (category c)

Researcher: How about night? Is night a word?

Fred: Yeah.
Researcher: Why do you say night is a word?
Fred: Because I try to say a name.
Researcher: A name for what?
Fred: A name for a word. (category c)

As shown in the above examples, Fred's category (c) explanation implied his developing level of understanding that a word is a name for something. Still, he was not yet clear about the relation between a name and an object.

Sentence Dictation Task and Sentence Dictation Explanation Task.
After repeating the sentence after me once, Fred did not have any difficulty memorizing the sentences. The monkey ran up the tree in the pre-assessment session, and The puppy went out the door in the post-assessment session. However, he could not write down anything on a piece of paper even after I encouraged him to.

Researcher: The monkey ran up the tree.
Fred: The monkey ran up the tree.
Researcher: Very good. Can you write down the sentence for me?
Fred: I don't even know all these words. I can't write.
Researcher: You can try to write some beginning letters. You want to give it a try?
Fred: Writing the letters?
Researcher: Yes, those letters in the sentence.

Fred: I can't write that name. Okay?

Fred did not write a single letter in this session but carried out a conversation with me. From the conversation, I discovered that Fred knew that there were letters and a name in a sentence. His willingness to converse with me assisted me in understanding his language ability beyond the content that I was assessing.

In the post-assessment session, Fred made great efforts to write down the sentence: The puppy ran out the door.

Researcher: Can you repeat the sentence after me? The puppy ran out the door.

Fred: The puppy ran out the door.

Researcher: Can you say the sentence by yourself?

Fred: The puppy ran out the door.

Researcher: Very good. I would like you to write down the sentence.

Fred: Where?

Researcher: On this piece of paper, please.

Fred: I know how to spell a dog, but I don't know how to spell a puppy.

Researcher: Can you try your best?
Fred: Maybe, I should go to my ABC book. Maybe, I should go to my wordbook on the floor.

Researcher: I know you can spell the.

Fred: But I don't write puppy very good. If I have my animal books, I can try them.

Researcher: Are you drawing a puppy?

Fred: I am not drawing a puppy. I am not good at drawing animals. I am good at drawing dinosaurs.

Researcher: Okay, just try your best.

Fred: See, I told you I can't write puppy very good?

Researcher: Why don't you spell the for me?

Fred: T-h-e. (writing the)

Researcher: How about puppy?

Fred: I don't know how to spell puppy. Oh, maybe, I can go to my animal book.

Researcher: Do you think you can find the word puppy there?

Fred: Yep. I just need to find the page, Pet. (turning the pages) Almost there. Now I find them.

Researcher: Which one says puppy?

Fred: Those ones (referring to the word puppies under the picture of three puppies.)
Researcher: Can you write the word down?
Fred: (while copying the word) I don't have to spell s.
Researcher: Why?
Fred: Here is puppies. I need to spell puppy (writing down puppie under the)

I asked Fred why he wrote puppie on a separate line. He said he did not know. The above conversation indicated that Fred was very familiar with the books he read. He knew how to look for the words that he needed. Later, after we read Polar Bear, Polar Bear, What Do You Hear?, I asked him to copy down some sentences from the book. I wanted to see if he was aware of space between words while he was copying.

Researcher: I would like you to copy some sentences from this book.
Fred: Which page?
Researcher: Which pages do you like most?
Fred: All the pages.
Researcher: Why don't you pick any page that you like and copy down the sentences?
Fred: I like all the animals. But for now, I just copy down the peacock. (He was copying, Peacock, Peacock, What do you hear?). There is no room here. There is a little room left. I am not good at writing. (He started What on the second line.)
Fred left no space between words except some space between c and k in peacock as well as between do and you. I asked him for an explanation. "I don't know" was his answer.

Home Literacy Support

Fred lived with his parents, 12-year-old brother, and grandmother in a house of a gated community. I did not learn about his parents' occupations. His mother was always at home during the day. I met his father once and exchanged greetings. He spoke fairly good English. In the pre- and post-assessment sessions, I interacted with Fred's mother and his grandmother. Occasionally, I asked his brother some questions. Fred's mother told me that she did not know how to speak English; but actually she did know how to speak English. It was just a matter of fluency. Fred's grandmother spoke very good English.

In the living room of Fred's house, there was a big screen television and a big toy chest turned into a box for books and stationery. Fred's favorite books were: Brown Bear, Brown Bear, What Do You See?, Words about Animals, How to Draw Dinosaurs, and My First Word Book. At the beginning of this study, Fred's mother taught him to read a Chinese book, which contained some nursery rhymes, sight words, and numbers. There was Pinyin above each character. When she was teaching him, she did not finger point at each character. Fred could recite some of the nursery rhymes and recognize 41 characters from the book. According to Fred's
mother, he did not like learning to read Chinese. He quit attending a local Chinese school. In the post-assessment session, I learned that Fred was no longer reading the Chinese book. Additionally, his mother had stopped reading the Chinese book to him.

His mother often made sure that Fred finished his homework before he watched TV. Fred spent a considerably large amount of time watching TV. When I was at his house, he listed his favorite programs: Kratts' Creatures, Reading Rainbow, Power Ranger, Wishbone, Carmen San Diego, and Barney and Friends. Almost everyday, Fred watched TV by himself from 3 o'clock until 6 o'clock. He told me that Sesame Street was too easy and was no fun. According to Fred's mother, watching TV was one of Fred's three major learning activities at home. She stated:

During this time (from 3 p.m. to 6 p.m.), he doesn't want to go anywhere with us. If he goes with us, he is so fussy and wants to come home early. If we go outside, and he doesn't want to go, we have to have someone stay with him. He watches TV all the time and learns from TV. Then he practices saying what is learned every day. He talks to himself. I don't know what he is talking about. When he is talking, nobody can be talking. If somebody does, he becomes so angry. He says, "You interrupt my story and now I have to start from the beginning." He was so absorbed in the story because he likes it so much.
When I was at Fred's house, he asked me, "Finish your job quickly. Watch Kratt's Creature with me." After I told him that I would love to watch TV with him but I had to go to another child's house to do my job, he started talking about Kratt's creature.

Fred's other major learning activity at home was reading by himself. His mother was very observant of his reading behaviors. She commented:

He reads books by himself. I don't know English, and I can't teach him. He likes reading books. He brings a book to me and says, "Mommy, teach me." ... He also picks a newspaper to read. There are no pictures but words. He is reading it for a long time. I don't think that he understands, but he likes reading. When he doesn't understand, he asks me, "Mommy, teach me." I don't know English so he has to read by himself.

As a result of his vast reading at home, Fred was able to recognize many sight words in and out of context. After Fred and I read Polar Bear, Polar Bear, What Do You Hear?, I asked him to finger point at some words.

Researcher: Can you tell me which word says you?

Fred: You? Over there.

Researcher: Which word says what?

Researcher: Which word says hear?

Fred: Hear? I don't know... (after a while) Over there?

(He pointed at the word hear.)

Fred was willing to show me the words that he could read. He recognized the words of body parts next to the illustration of a body as well the ones in the list. The words were nose, cheeks, eyebrow, finger, teeth, and thumb.

Fred was also a very strategic learner. When he did not know a word in a book that he was reading, he sought different resources to help him out. First, he went to his mother. Often he was told that she could not help him because her English was not good. Next Fred asked his grandmother, who had lived in Hong Kong for many years and spoke good English. She often told Fred how to pronounce the word and also explained its meaning to Fred in English and Chinese. If she did not know, she and Fred would use an electronic bilingual Chinese-English translator to get the word's pronunciation and meaning.

Fred's strategic learning was also evident in his ability to locate a word in his book, My First Word Book. He was able to use his alphabet knowledge to assist him in locating the words I asked for.

Researcher: Fred, which word says peacock?
Fred: Peacock, peacock, over here. No, on the other row.
Maybe over here. Oh, that row.

Researcher: Oh, that's so great. How about kangaroo?
Fred: I go to the K row. There.
Researcher: How about caterpillar?
Fred: Caterpillar, go to the C row. Here.
Researcher: Great job.

Another learning activity at home was drawing. Fred liked
drawing animals and doing paper cut-outs. He did not write down any
letters or words in his drawing. He seldom practiced handwriting. When
I asked him if he could recite the alphabet for me, he did so with great
fluency and accuracy but refused to write down the 26 letters in the
upper- and lower-cases. Although Fred's brother had learned his English
after his arrival in the United States, he spoke beautiful English; but he
seldom read with or to Fred. According to Fred's mother, Fred and his
brother often did their own readings and rarely read together. Fred's
father was never mentioned during my conversations with Fred's mother.
I assumed that he did not help Fred much with his English.

Fred lived in a literacy-rich home. His mother furnished him with
a TV, writing supplies, books, an electronic bilingual Chinese-English
translator, newspapers, and ample opportunities to enjoy TV. Although
Fred's mother was not involved in his literacy learning at home, she was
very observant of Fred's behaviors while he was reading and watching TV. Fred's grandmother played an important role in assisting him with learning words. With his family's support, Fred enjoyed such learning experiences as watching TV, reading, and drawing animals.

**Classroom Literacy Support**

Fred's participation in literacy activities. Fred was in the same classroom as Edna. He was described by his teacher, Mrs. Dallas, as a very smart and polite boy. Fred participated in most of the daily literacy activities. Sometimes, however, he did not show his willingness to do what he was asked to do. Fred's teacher remembered:

The other day, I asked him to read something and he turned around and said, "I don't think I want to." I said, "You need to do this for me, and I would really appreciate that." He replied, "I don't think I want to." I think that he should really try harder, so I said, "Mrs. D really needs to hear you and read this sentence for me." Then he said, "Okay, I'll do it."

According to Mrs. Dallas and my observations, Fred liked to do his seatwork alone, and he became very upset at being teased. At the beginning of this study, I observed several occasions when he was asked by other children at his table if I was his mother. He was very upset and kept telling them that I was not his mother but another teacher who went to his house to read with him. Although Fred was quiet while doing his
seatwork, he was not always among the group who finished the seatwork ahead of or on time. Often, he remained in his seat to finish his work while the rest of the class was doing large group reading. After several observations, I discovered that he was very particular about his seatwork. He traced or wrote his words and numbers in a slow and careful fashion. If he did not like what was written, he would erase the words or numbers and start them all over again. While he was finishing his seatwork, he would stop doing what he was doing and listen to the story that Mrs. Dallas was reading with the rest of the class. Listening to a story while finishing his seatwork made him even slower at his work. Sometimes he did not finish his work even after the story was finished. Therefore, Fred often missed the story reading time. But whenever he was with the large group during the story time, he liked to sit next to Edna at the back of the group. Often they talked to each other in Cantonese. They seldom participated in the discussion and question-answering activities.

At his table, Fred was willing to help other children. Once, one child asked him about the color of a crayon.

Child 1: Does this crayon say yellow? (referring to the word on the crayon wrap)

Fred: Let me see. (After examining the wrap) It is not. See, it says yellow green (pointing at each word on the wrap).
Child 1: Oh.

Fred: Got you! Got you!

At the beginning of this study, Fred was not very open to me and he refused to let me see his work by covering it with his hands and arms. After several contacts with Fred, he seemed to become more open with me. He was willing to talk to me and allowed me to look at his seatwork. All the seatwork included tracing and copying letters and words. Fred was never able to get a chance to write words that he knew as he was not required to. By observing the words that he traced and copied down from a basal reader workbook or Mrs. Dallas' model on an overhead projector, I was able to learn his understanding of word boundaries. Generally speaking, Fred's knowledge of word boundaries was developmental. For instance, he copied down the dog with space between the words while head and chest with no space. Sometimes Fred wrote each letter of a word too big and ran out of writing space before he realized. Then he erased and rewrote the word again. Often he again ran out of space. This situation may have been true with the case of no space between head and chest.

In addition to not leaving space between words, Fred sometimes split words. For instance, while copying Wolf Spider has 8 eyes, he wrote as, 8, and eyes together without any space. I asked him, "Why do you put as, 8, and eyes together?" He shouted, "They are all words. They are not
pictures. They should go together!” Although I did not get an explanation about word space from Fred, I at least discovered Fred’s beginning level of concept of print—the difference between words and pictures.

**Overall Summary**

Fred’s Chinese was at the beginning level as he could not recognize any Chinese from the list of Chinese in Pinyin and in character. But based on his ability to write his Chinese name with distinct space and recognize 41 Chinese characters from his Chinese book, his Chinese was obviously beyond the beginning level.

Fred made progress in his performance on most of the five tasks. Over the period of this study, he was able to finger point at more monosyllabic words and identify more words. Fred did better at pointing at multisyllabic words and distinguishing phrases from words in the pre-assessment session than in the post-assessment session. Fred demonstrated his significant growth in explaining “Why is/isn’t . . . a word?” His explanation in the post-assessment session suggested that his reflective word knowledge was developing conventionally. Furthermore, in the post-assessment session, Fred made a connection between what he had read from a book (i.e., puppies) and the word, puppy, that he was going to write for a sentence. Fred’s effort indicated his English proficiency was far beyond the content that I was assessing. However, Fred could not explain space between words that he copied from a book.
Fred enjoyed his activities at home, watching TV, reading books, and drawing. His enjoyment was made possible by his mother and grandmother. Although Fred’s mother did not read to/with him or watch TV with him, she provided him with a television set, writing supplies, books, newspapers, an electronic bilingual Chinese-English translator, and ample time for Fred to enjoy his learning activities. Fred’s grandmother’s working with Fred to learn words assisted him in becoming a strategic learner. Fred’s grandmother’s involvement in his literacy learning showed that Fred was well-supported by his family in addition to just a literacy-rich environment.

In Fred’s classroom, Fred did not always get to the large group reading as he was not quick at his seatwork. Therefore, he missed some opportunities for his love of reading to be nurtured and for expanding his sight words in connected texts. Furthermore, since Fred did not write at home, it might have been beneficial to him to have some opportunities to write in addition to copying words and sentences. Writing experience might have aided Fred in exploring the relation between spoken and written words as well as word boundaries.

Case Four: Dick

Linguistic Background

Dick was born in the United States but had lived in Taiwan when he was 2-years-old from August, 1992, to August, 1993. After returning to
the United States, he and his family went back to Taiwan for a visit for about two months during each summer. At the beginning of this study, he was 5 years 11 months old. His father told me that he was 24 days short of the age for him to go to the first grade. He had been in the preschool of a local university all day since he was 3-years-old. Often he spoke to his parents in Mandarin and Taiwan dialect at home. Occasionally, when he did not know how to say the Chinese equivalents for some English terms (e.g., show-and-tell), he spoke English to them. Half of the time, he spoke English to his two sisters. Dick could not recognize any Chinese in Pinyin and in character. He was unable to write his name in Chinese either.

Nobody at home taught him how to read Chinese.

Dick spoke very good English at school; his voice was always soft and low. He did not have any trouble communicating with his teacher, classmates, and me. Dick smiled a lot while he was talking. In the pre- and post-assessment sessions, he was able to recite the alphabet for me. However, he was willing to write the alphabet for me only in the pre-assessment session. He wrote the alphabet in uppercase without leaving any space between the letters.

Performance of Five Tasks

Dick's performance on the tasks of Pointing, Word Identification, Word Awareness, Sentence Dictation, and Sentence Dictation Explanation indicated that his performance-based and reflective word knowledge was
developmental. Over the period of this study, he made progress as well as regression.

**Pointing Task.** In both the pre- and post-assessment sessions, it did not take Dick very many times repeating the two lines after me and reciting them with me before he was able to memorize them. Dick repeated the lines after me twice and recited them with me three times. Obviously, Dick was good at memorizing English nursery rhymes. However, his finger pointing at each word while reading along indicated that Dick's performance-based word knowledge was developmental. In the pre-assessment session, he correctly finger pointed at Sam, Sam, and the. He pointed at baker twice, skipped man, pointed at washed twice, and moved his finger all the way toward the end without finger pointing at any of other individual words: his, face, in, the, frying, and pan. In the post-assessment session, Dick finger pointed at more monosyllabic words. He was able to correctly finger point at Tom, Tom, the, a, and ton. He pointed at piper's twice, skipped son, and moved his finger all the way through stole a pig that weighed.

**Word Identification Task and Word Awareness Task.** In the pre-assessment session, Dick was able to tell the three phrases, from the house, up and down, and hide and seek, from the other nine words. However, he did not identify all the words as words. He identified only four words: table, give, and, and with. In the post-assessment session,
Dick still could identify the three phrases as non-words. He was able to identify all the words except children and table.

Dick's reflective word knowledge fluctuated between the pre- and post-assessment sessions. In the pre-assessment session, his responses to my question, "Why is/isn't . . . a word?" indicated his various levels of word knowledge: (a) "I don't know." and (b) relating a word to an object or action.

Researcher: Why do you say table is a word?
Dick: because . . . because you eat on it. (category b)

Researcher: Why do you say night is not a word?
Dick: Because, because, . . . no one goes out. (category b)

Researcher: Why do you say give is a word?
Dick: Because it gives some persons some presents. (category b)

Researcher: Why do you say took is not a word?
Dick: Because you took it. (category b)

In the first two examples, Dick related a word to an action associated with the meaning of the word. In the last two examples, Dick used the word in a sentence describing an action related to the meaning of the word.

In the post-assessment session, his answer to my question, "Why is/isn't . . . a word?" was always "I don't know." I had no clue as to why I
got the same answer. Maybe he was tired of being tested, or he was not interested in being tested at all.

**Sentence Dictation Task and Sentence Dictation Explanation Task.**

It was very easy for Dick to memorize the sentence *The monkey ran up the tree* in the pre-assessment session and *The puppy went out the door* in the post-assessment session. Although Dick did not write the sentence at first, he did write down something on a piece of paper after I encouraged him to write whatever he could. In the pre-assessment session, he wrote T, B, C, A, T, and R for *The monkey ran up the tree*. There was no space between the letters. B, C, and R were written backwards. Dick was unable to provide me with an explanation for why he did not leave any space between the letters. In the post-assessment session, Dick first wrote down P, left a lot of space, and wrote The and Dro for the sentence, *The puppy went out the door*. He sounded out door several times while writing it. The words and a string of letters were closer to the sentence than the letters he had written in the pre-assessment session. When I asked Dick why he left a lot of space between P and The as well as a space between The and Dro, he replied, "You are supposed to do like that!" I asked, "What do you mean you are supposed to do like that?" He shrugged his shoulder and replied, "I don't know."
Home Literacy Support

As Dick's parents did not invite me to their house, I conducted the pre- and post-interviews in a local restaurant. Both his parents were present along with Dick. Dick's father was a math professor at a local university; his mother was a registered nurse at a local hospital. Since they had different work shifts, their communication was not as frequent as other couples. In the pre-and post-interviews, I found that the mother did not always have any knowledge about what the father mentioned as Dick's activities at home, and vice versa. Dick's younger sister was in third grade and his elder sister was in junior high school. Dick's parents voiced two different views on his speaking Mandarin and the Taiwan dialect rather than English at home. Dick's father stated:

I am a Taiwan native. I speak to my parents in Taiwan dialect. At home, most of time, we speak Mandarin. Dick speaks to my parents in Taiwan dialect as well as Mandarin. My parents would like to teach him Taiwan dialect since it is the root of Taiwan. It's important for him to know Taiwan dialect; otherwise, it's impossible to communicate among us in the near future.

On the other hand, Dick's mother had a different reason for not speaking and teaching English to Dick and his sisters. She explained:

I don't want to teach them English because we have our own accent. I don't want them to learn my English with an accent. So
we seldom teach them English. We help them with grammar when they reach the third grade. We explain to them the grammar points.

Dick's major learning activities at home were doing math worksheets, being read to, reading books by himself, drawing, cutting and pasting, and watching TV. Doing math worksheets was almost Dick's daily routine. During the summer break, he had a math workbook to finish. Although there was no school work sent home for Dick to do, his father did ask him to do a lot of copying. For instance, if the number that Dick was going to copy was 1, he copied it only once; if the number was 25, he had to copy it 25 times. But according to Dick's mother, she never asked her children to copy anything. She even asked me what copying was for. It seemed that Dick's mother and father really did not know that they had different requirements for Dick. They possibly seemed not to ask Dick about what he had done when one of them was not at home.

During an interview, Dick told me that he had 1,000 books at home. His favorite ones were Cinderella and Reindeer. I asked him, "Tell me why you like these two books?" He smiled at me, stating, "I don't know." His mother commented, "Maybe, he has read these two books a lot. I saw my eldest daughter reading these two books to him many times." Once a week, Dick's father drove Dick and his two sisters to a public library to check out six books. Each of them was required to read one book per day.
Dick's sisters often helped him choose his six books. Dick liked to read books of animals, Mother Goose, and folk tales. Often, Dick's eldest sister read books to Dick. She did not finger point at each word. If Dick liked the book, she read it more than once.

Sometimes, Dick also read books by himself. At the beginning of this study, according to his mother, Dick made up a story while reading a book. What he said was not exactly what was written in a book. Toward the end of this study, Dick's reading was closer to a story because he knew more words. About one month before the end of this study, Dick started reading books on dogs and chows in particular. I asked Dick, "Can you tell me a little bit about what you have read about the dogs?" He responded, "Oh, they are just dogs. They have different colors. I draw their pictures." As his mother told me later, Dick liked imitating pictures. I assumed that reading books or stories might have been one of the ways for him to explore different pictures.

If Dick had some questions about a book that he was reading, he always asked his mother or whomever he saw. The focus of his questions changed from pictures to words. At first, when Dick did not understand a book, he went to his mother and asked, "What are the pictures about?" His mother answered his question with a description of the pictures. In the post-interview, Dick's mother told me that he showed the pictures to her and asked, "What do the words say?" His mother then read that page...
to him. Sometimes he tried to sound out an unknown word by himself before he went to anybody for help.

Another favorite activity of Dick's at home was drawing. He drew all different kinds of animals. He could imitate very well and never missed any details, but he seldom wrote down any words or letters next to his drawings. Toward the end of this study, Dick's mother told me that he sometimes asked her how to spell a word (e.g., *dinosaur*) that he wanted to write next to a drawing. Dick also did a lot of cut and paste. He made his own crafts (e.g., airplane) to bring to school for his show-and-tell. Dick sometimes was doing what his sisters were doing. For instance, while his elder sister was practicing cursive, he was doing it with her. As a result, Dick's name in cursive was beautifully written. Dick's mother, teacher, classmates, and I were all very impressed by his accomplishment.

Dick used to watch *Sesame Street* a lot before the program changed to a different schedule. Everyday, the time from 5 p.m. to 6 p.m. was his TV time. He watched *Kratts' Creature* and *Wishbone*. He was especially excited about *Wishbone*. He often called his mother, "Mom, *Wishbone* is on," but his mother never watched TV with him. Sometimes Dick watched TV with his sisters. He talked little while watching. His mother commented, "Dick seldom asks questions while watching. Maybe he is so concentrated that he does not think about his questions."
Dick's parents expected him to do well in his English but not to forget his native language. They played different roles in supporting Dick's literacy learning. His father took him to a library to check out books and required him to copy words. His mother helped him with questions about books that he was reading and was very observant of his reading behaviors. Dick's two sisters, and the older sister in particular, were actively involved in his literacy learning by reading to him and watching TV with him.

**Classroom Literacy Support**

The classroom and routine literacy activities. Dick was enrolled in a morning kindergarten class at a nine-month school. There were 29 children in his class. He was one of the two children speaking English as a second language. The other child was Hispanic. Dick's teacher, Mrs. Peterson, had taught kindergartners for more than 15 years. This year was her first year at Dick's school. Mrs. Peterson had strong beliefs about what should be taught to kindergartners. She explained:

Fine motor skills are important. I want to provide them with an environment where they have fun with learning, and they enjoy a lot of songs and games. Two-hours and 30-minutes does not allow me to do a lot of things.

Mrs. Peterson's teaching, as I observed on different days of a week, reflected her strong beliefs. Mrs. Peterson's room was full of various kinds
of posters: the alphabet, numbers, colors, shapes, the weather, and a calendar. There were about 100 books on a book shelf. The books included all-time children's favorites such as *The Cat in the Hat* and *Winnie the Pooh*. Uniquely, on the calendar, there was one theme per month. For instance, a picture of a Valentine heart was under the month of February. There were no centers except the kitchen. All the learning activities were done in the front of the room or at the children's tables.

There was one little bulletin board where Mrs. Peterson put up children's drawing, writing, or pictures cut out of a magazine. The children did all that at home and brought them to school to show Mrs. Peterson. There was also a very special place with many different kinds of teddy bears around. The place was for children to do silent reading but, according to Mrs. Peterson and my observations, not one single silent reading was done during this study.

The daily literacy events included sharing, show-and-tell, learning and reviewing letters and sight words, and seatwork. Each day, before Mrs. Peterson called the roll, she asked the children to share whatever they wanted to tell their classmates. During my 10 observations, I discovered that the same group of children always volunteered to share. Sometimes Mrs. Peterson called on other children who did not volunteer their information, but Dick was never called on to share. The sharing usually lasted about 15 minutes.
Unlike sharing, show-and-tell was more formal and structured. Each day, three or four children were scheduled to do their show-and-tell. They must focus their show on three questions: "What is it?" "How would you like to play with it?" and "What do you think it is made up of?" After the show, the children in the audience asked each child questions. The show-and-tell lasted from 15-20 minutes.

Mrs. Peterson taught one letter per week. She integrated subject area learning into letter learning. For instance, activities on the letter Ff included the following. On the first day, she introduced Ff by sounding it out, tracing its upper- and lower-cases on the lined space on the board and asking the children to repeat the sound after her several times. On the second day, she brought some posters of a fox and different kinds of fish. She talked about a fox and different kinds of fish. Then she asked the children to give her words beginning with the /f/ sound (e.g., fish, funny, fluffy, and face), which she wrote on the board. If a child gave a word that did not begin with the /f/ sound, Mrs. Peterson asked him/her to sound out the word and hear it. If the child still did not know the beginning sound of the word, she would ask the whole class to say the beginning sound. Next Mrs. Peterson read each word with them, finger pointing at it. Sometimes she stopped reading to explain the meaning of a word or draw a picture next to it.
On the third day, she again asked the children to give words starting with the /f/ sound. Often they remembered the words from the previous day and came up with about the same group of words. She read those words with them. Then they were given a piece of paper to trace the upper- and lower-cases of Ff. On the fourth day, the children were asked about the information on fox and different kinds of fish. After this review, they were given a piece of paper to practice writing upper- and lower-cases of Ff. Then the children were asked to draw a picture of an object, animal, or a person whose beginning sound was /f/. Mrs. Peterson encouraged them to write a word next to the picture, but few children did that. Most just wrote the letter, F or f. At the end of the fourth day, Mrs. Peterson asked the children to cut out pictures of objects with the beginning sound of /f/ from magazines at home. On the fifth day, those who brought the pictures and words from magazines shared their new F-words. Mrs. Peterson then put their pictures and words on the bulletin board. The study of a letter per week finished with an art project (e.g., making a paper fish).

Every day, Mrs. Peterson and the children reviewed the 26 letters. She asked them quickly, “Name of the letter” and “Sound of the letter,” while she was holding up a letter card. When Mrs. Peterson was holding a vowel card (e.g., a), she reminded them of the special features of a vowel. “Remember, what kind of letter is a?” “What is special about a vowel?”
“Who can say the two sounds of a?” “What other sounds are vowels?” Most children were good at saying one sound of a vowel. Mrs. Peterson then gave them some words other than those shown on a letter card representing two different kinds of a sound (e.g., carrot and city).

In addition to the formal review of letters, Mrs. Peterson helped the children become aware of the words that started with a letter during large group reading, show-and-tell, calendar, and games. When Mrs. Peterson and the children were reading, There was an Old Lady Who Swallowed a Fly, she stopped at Why? on one page and asked what the word was. When there was no one who could say it, she suggested, “Look at the first letter and the question mark. Then try to guess the word.” At show-and-tell, a boy brought a Wishbone toy from Wendy’s. After he finished his show, Mrs. Peterson asked what sound Wishbone began with. Seeing that not every child was very familiar with the /w/ sound, Mrs. Peterson reviewed the /w/ sound and asked them to come up with words that began with that sound.

During the calendar time, after Mrs. Peterson and the children spelled November, pointing at each letter, she reminded them, “Listen carefully at the sound of November. Do you hear all the sounds? Remember e and r are a team, and they always go together.” Furthermore, Mrs. Peterson used different kinds of games to motivate the children to learn letters. For instance, in one game, a pair of children
were in a circle with the rest of the class. One was standing behind the other who was sitting. When Mrs. Peterson showed them a letter card, the one who said its name and sound first and accurately was the winner. The winner got to sit down while the loser had to be standing behind another child.

The children learned new words through thematic unit activities and pattern books. For each month, there was a thematic unit related to that particular month. While Mrs. Peterson and the children were studying apples and Johnny Appleseed, she allowed the children to examine the features of apples by showing them different types of apples. Later, she and the children brainstormed the features of apples. After she wrote down the words and phrases (e.g., delicious, red, have stumps, and round) on a piece of apple-shaped paper, she echo read the words and phrases with the children several times. She always finger pointed at them at least once. However, she did not ask them to copy down the words and phrases. Next, the children colored the apples in a pattern book, My Apple Book. On each page, there was a group of phrases, Red Apples, Red Apples, Mmmm, under a picture of several apples. Mrs. Peterson echo read with the children the phrases on each page. Then she asked, “What color is r-e-d?” In response to Mrs. Peterson’s question, the children picked a red crayon and colored the apple.
Mrs. Peterson reviewed the sight words by using flashcards. She first asked the children to say a word in unison and then called on some children to say a word, too. Other informal ways of reviewing sight words included the seatwork and daily routine. For instance, when Mrs. Peterson was giving directions for coloring, she said, “Color the big tree with g-r-e-e-n.” Before the children went home, she called on them to line up at the door based on the colors of their clothes. “Those who are wearing o-r-a-n-g-e, please line up at the door.”

Large group reading was done when there was time. Mrs. Peterson told me:

I try to read every single day. Again, if we have more time, I want to start daily silent reading. . . . If they can read, it’s great; if they can’t, just look at the pictures and try to find some of the letters. You know. We want to do that, but you know, just like I said, two and a half hours away is too short.

On 3 out of 10 occasions, I observed Mrs. Peterson reading to the children. She used the books in her room as well as the books that the children checked out of the school library. The children were not supposed to take the library books home to read. When she was reading a book, she talked about the title, author, and illustrator. Often, she finger pointed at the words in the title and then read along the text. She stopped at some pages to ask the children yes-no and what questions. Mrs. Peterson also
talked about the linguistic aspect of a book. For instance, when they were reading *In the Dark*, Mrs. Peterson asked them to sound out *in* by thinking about two sounds of *i*. While reading the title of *The Cake That Mack Ate*, Mrs. Peterson told the children that this was a book about the *a* sound. Then she and the children played with different letter combination of the *a* sound. "Here is a long *a* in *ate* and *cake*. If we cover *th* in *that*, what do we get?" "At." "If I put *h* in front of *at*, what do we get?" "Hat." According to Mrs. Peterson, she and the children also read little books published by Scholastic, but never during the entire study did I observe them reading these little books. A little book started with: *I see Sam. I see a cat. I see a dog.*

If there was time left after the reading, Mrs. Peterson and the children would do finger play. Some finger plays were based on the books they read (e.g., *In the Dark*) and some were directly from songs (e.g., *The Three Black Cats*). If the story or song was familiar to the children, they and Mrs. Peterson would do finger play together; otherwise, she called on some children to play in front of the group.

Writing activities were sequentially planned. Mrs. Peterson started with asking the children to practice handwriting the 26 letters in upper- and lower-cases as well as their names. Then she introduced to them three sentences, *My name is... Today is..., and I feel...*, respectively. Each sentence was written with dots on a piece of lined
paper. They traced the words and filled in a blank (e.g., their names in the sentence, My name is...). During this study, I observed the children tracing the first and second sentences. Toward the end of this study, Mrs. Peterson started with the third sentence, I feel... Mrs. Peterson and the children finished brainstorming the feeling words (e.g., happy, sad, mad, funny, and grumpy) and wrote them down on a piece of paper, which was put on the wall. The children copied down the words when they filled in the blank in the sentence.

Dick's participation in literacy activities. In the post-interview with Mrs. Peterson, she described Dick as a quiet and smart child:

Seems likely at the beginning of the year, he was kind of withdrawn. You know he was very quiet. He did not do much; he did not volunteer things. Once in a while, he will bring a show and tell. A lot of times, he doesn't. He did not really participate, and he just kind of sat there, watched. But he is really quiet, as far as quiet meaning he does not volunteer for information. I think that's normal for kindergartners.

Over the period of this study, consistent with what Mrs. Peterson knew about Dick's participation, I observed that Dick tended to engage himself more in various learning activities. Dick brought his show and tell more often than before. The objects were usually the crafts that he made at home by himself. Mrs. Peterson and I both thought that his
objects were very creative. Dick's show and tell always followed the format of the three basic questions: **What is it?** **How would you like to play with it?** and **What do you think it is made up of?**. Dick often did echo and choral reading with the class and started to volunteer information. For instance, when Mrs. Peterson was holding up flashcards, Dick raised his hand to read some of the words. The words that Dick could recognize were **at, can, on, know, and then**. Every word was read accompanied by Dick's cute smiles. Furthermore, according to Mrs. Peterson, "Dick was always among the best," and his handwriting in print and cursive was beautiful. Dick mastered the name and sound of each letter and was able to recognize the color and number words as well as most sight words.

While Dick did not like to volunteer his information in public, he was very focused on his seatwork. Both Mrs. Peterson's and my observations confirmed that Dick was quiet while he was doing his seatwork and often finished his work ahead of other children. After he finished with his work, he liked to show it to other children at his table. Once, he was writing his name in cursive on the back of a clown he had just made,

Lisa:  **We don't learn cursive until the fifth grade.**

Dick: **I am already in the fifth grade. I know how to do cursive.** (He erased his first name and rewrote it)
Lisa: (Grabbing Dick's clown) See, Dick knows how to do his cursive.

Dick: (Smiling broadly and burying his head in his folded arms)

According to Mrs. Peterson, Dick liked to play with the children whose ability level was about the same as his. Since there were no group activities in Dick's class, it was impossible for me to observe much interaction between Dick and other children other than the brief interaction between Dick and Lisa.

Dick loved reading books as his parents told me in the pre- and post-interviews. I observed only one occasion when Mrs. Peterson allowed the children to pick a book to read by themselves after seatwork as she was busy testing individual children. Dick picked the book, *What's in the Dark?* I asked him what book he was reading. He turned to the cover and pointed at the title, saying, "Here is the title." I read the title, finger pointing at each word. Dick then read through the book from cover to cover, just looking at the pictures. About five minutes later, he returned that book and picked another one, *Cinderella*. I knew, from my pre-interview with his parents, that the book was one of his favorites. I asked him what the book was about, and he told me it was *Cinderella*. He was reading the pictures again but with much focus. After he had read a few pages, I asked him to point out any words that he knew. He smiled at me
and replied, “I don’t know how to read yet!” I responded, “I know you can read many words, like the.” Dick was smiling at me, shyly. Then, I said, “Maybe, you can tell me the story.” He was surprised, “What? You don’t know this story? You’ve got to read it.” I stated, “Okay. That sounds like a good idea. But you need to show me how to read this story.” Dick was happy to start his storytelling. He was describing to me the pictures on each page. When he finished with the fifth page, Mrs. Peterson told the children to clean up and get ready for seatwork.

Since Mrs. Peterson asked the children to copy down only individual words or letters on their worksheets or to trace sentences with dots (e.g., My name is . . .), I was unable to gather complete information on Dick’s understanding of word boundaries. The only two words that Dick had ever written in his class were his name. He left distinct space between these words.

**Overall Summary**

Dick’s Chinese was at the beginning level as he was unable to recognize any Chinese from the list of Chinese in Pinyin and in character or to write his Chinese name. He was never taught how to read Chinese.

Over the period of this study, Dick made progress in his performance of the tasks of Pointing, Word Identification, Sentence Dictation, and Sentence Dictation Explanation. He could finger point at two more monosyllabic words but no multisyllabic words. Dick was clear
about the difference between words and phrases. He was able to identify more content and function words. His ability to dictate a sentence improved from writing individual letters without space to writing a word and a string of letters with space. Although Dick did not give the reasons for leaving or not leaving space in his writing, his answer, “You are supposed to do like that,” indicated that he may have had implicit knowledge of word boundaries. Dick’s performance of Word Awareness Task suggested that he was at the first level of reflective word knowledge (Templeton & Spivey, 1980): relating a word to an action.

All of Dick’s family members participated in his literacy learning to varying degrees. Dick’s two sisters were with him in many literacy activities: checking out books from a library, reading books, practicing handwriting, and watching TV. Dick’s mother supported Dick when he needed assistance in understanding pictures and words of a book. Dick’s father showed his care about Dick’s learning through taking him to a library to check out books and asking him to copying words. Dick’s parents had different views about which language Dick should be taught at home, Chinese or English. Dick’s mother was afraid that her accent might have some influence on Dick’s English. His father, however, was more concerned if Dick was able to communicate with him and his parents in Mandarin.
Mrs. Peterson focused her literacy instruction on promoting children's development in oral language, alphabet knowledge, and fine motor skills. Daily sharing and show-and-tell allowed the children to use their language to express themselves. The three basic questions for show-and-tell guided the children to organize their oral presentation well. The children acquired their alphabet knowledge through activities in one letter per week, flashcards, and worksheets. Most importantly, Mrs. Peterson valued the children’s prior knowledge. She asked them to give her the words of a target letter rather than her giving them words to memorize. She encouraged but did not require every child to work with parents to look for pictures or words of a target letter in magazines. Furthermore, she integrated children's acquisition of alphabet knowledge into other daily routines (e.g., show-and-tell and games). Mrs. Peterson also cultivated the children's metalinguistic awareness through daily letter review (e.g., what is so special about a vowel?) and talking about linguistic features of words in a book that they were reading (e.g., at family in hat).

Mrs. Peterson did large group reading only when she had time. The children rarely had time, except once, for silent reading. Dick's love for stories was not further supported in his classroom. Lack of reading experience may have prevented the children from applying alphabet knowledge and developing their love for reading. Toward the end of this
study, Mrs. Peterson limited writing activities only to practicing handwriting of the alphabet, names, and tracing sentences (e.g., *My name is ...*). Although Mrs. Peterson asked the children to copy words that began with a target letter, they did not have opportunities to write on their own. The few writing activities allowed Dick access to exploring a connection between spoken and written language and, thus, to developing reflective word knowledge.

**Case Five: Susan**

**Linguistic Background**

Susan was born in the United States. At the beginning of this study she was 5 years 2 months old. At home, she spoke Cantonese to her parents. English was spoken only when Susan told her mother something about school (e.g., *show-and-tell*) or asked her mother some words in an English book that she was reading. Susan could not recognize any Chinese in Pinyin and in character from the list of Chinese in the pre- and post-assessment sessions.

At school, Susan spoke fluent English to her teachers, classmates, and me although her voice was always low and soft. At the beginning of this study, Susan was able to recite the alphabet in the form of singing. At the end of this study, Susan could recite and write the alphabet. She left distinct space between each set of letters, which were also neatly written.
Performance of Five Tasks

In the pre- and post-assessment sessions, Susan did not always successfully perform the tasks of Pointing, Word Identification, Word Awareness, Sentence Dictation, and Sentence Dictation Explanation. However, I allowed her to demonstrate her ability assessed by the five tasks through other assessment alternatives. Therefore, I was able to discover her developmental patterns of performance-based and reflective word knowledge in English.

Pointing Task. In the pre-assessment session, I asked Susan to first repeat after me Sam, Sam in Sam, Sam, the baker man. She did not have difficulty repeating Sam, Sam. When I asked her to repeat after me the whole sentence, she did not do it. Susan’s mother even modeled repeating the sentence for her. But Susan did not want to try. Then I saw one of her favorite books on the table, The Beauty and the Beast. I asked her what the title of the book was. She said, “The Beauty and the Beast.” After I demonstrated finger pointing at each word while reading the title, I asked her to do the finger pointing. She was willing to do it. She correctly pointed at two the’s. She pointed at Beauty and Beast twice.

In the post-assessment session, Susan repeated after me the lines, Tom, Tom, the piper’s son; Stole a pig that weighed a ton three times and recited them with me seven times. She was then able to recite them by herself. When she was doing finger pointing, I was not sure if she was
reciting the lines from her memory or she was decoding every word of the lines. Susan correctly finger pointed at Tom, Tom, the, son, stole, a, pig, a, and ton; she stopped at piper's, that, and weighed for a while and then slowly sounded out each word. She pointed at piper's three times, that one time, and did not point at weighed but moved her finger through it.

**Word Identification Task and Word Awareness Task.** In the pre-assessment session, Susan answered “I don’t know” to nine words and two phrases when I asked her to identify words. She identified hide and seek as a non-word, but responded “I don’t know” to the question, “Why is/isn’t . . . a word?” In the post-assessment session, Susan told me that hide and seek, children, and with were words, but she could not provide any explanation.

**Sentence Dictation Task and Sentence Dictation Explanation Task.** In the pre- and post-assessment sessions, Susan did not have any difficulty repeating after me and memorizing the sentences, The monkey ran up the tree and The puppy went out the door, respectively. But she did not write down anything for the first sentence even when I asked her to write whatever she could write. Then I asked her to copy down whatever she liked from her favorite book, The Beauty and the Beast. She did not feel like doing it. In the post-assessment session, she wrote the for the whole sentence, The puppy went out the door. She did not spell out the other words. When I asked her to copy whatever she liked
from the book I bought for her. *The Three Billy Goats Gruff*, she copied this sentence, *So Middle Billy Goat Gruff went into the meadow to eat the sweet green grass*. She left distinct space between the words. When I asked her to explain to me why she did so, “I don’t know” was her response.

**Home Literacy Support**

Susan lived with her parents in a new house. Her mother spoke very fluent English but not very good Chinese. Her father spoke very good Mandarin but little English. Her mother worked at a night shift. In the pre- and post-interviews, Susan’s father was never present but was somewhere in the house, doing something. Susan’s mother preferred our interviews to be done in English. Occasionally, she spoke to Susan in Cantonese to explain something.

Neither of Susan’s parents taught her how to read Chinese, but her mother told her Chinese fairy tales in Chinese. Sometimes when she was reading an English book, she translated it into Chinese. Later in this study, her mother read Susan the English version of the story first and then translated it into Chinese. When I asked her mother how often English was used at home, she told me, “She speaks English at school. I try not to speak English at home. We try to teach her to speak more Chinese because she can get English from school.” Therefore, English was
used at home only when Susan demonstrated what she had learned at school or asked her mother questions about some English words.

Susan's mother supported her literacy learning in many different ways. First, she read to her stories in English whenever she had time. Usually, story reading happened just before they went to bed. The books were from home as well as from her school. Her mother did not finger point at each word while reading but just read through the story. Often, she translated the story from English to Chinese to help Susan with comprehension.

Second, Susan's mother often checked what Susan had learned at school. Every day, Susan brought home three pieces of paper that had been finished at school. One was reading, another was a letter of the week, and another was a math worksheet. The reading sheet was a copy of a little book: I can kiss a cat. I can kiss a kitten. Can a cow kiss me? No, a cow cannot kiss me. A cow can lick me. Can a cat lick a kitten? Susan's mother asked her to read the little book three times if there were no mistakes or 10 times if there were mistakes. When I was there, Susan read this little book to me without making any mistakes. She was also able to finger point at a word that I asked her to. On the sheet of a letter of the week, there was a target letter and pictures of objects whose names began or did not begin with that letter. Susan had colored those objects whose names began with the target letter. Susan's mother asked her to
say the name of each picture. Sometimes Susan did not know the name of a picture. Then she and her mother discussed the name, usually in Cantonese. Her mother told me that it was not always easy for her to name a picture as it sometimes could have more than one name.

Third, Susan's mother asked Susan to copy words and numbers that she had learned at school. She explained:

The first time, write her name, after that, ABC, 123, Monday, Sunday, and things like that. I make her to write one page on her school days and two pages on her days off.

Susan's mother showed me a notebook where she had written for Susan the words for a target letter in manuscript on one page and in cursive on another page. For instance, for the letter, Mm, she wrote mitten, moon, mouse, and mom. Every day, Susan copied these words, following her mother's examples. She had to finish the pages before her mother woke up. Sometimes, when she did not finish the pages, she was asked not to watch TV but to finish writing the pages first. Then Susan's mother asked her to spell out each word for her. Susan's mother told me that she did not know how to leave space between words she copied. Susan's mother added, "I think that it will help her leave a space after a word. So I ask her to put a dot after each copied word." She showed me one page of Susan's copied words with a dot after each word.
In the post-interview session, Susan’s mother showed me the book, *The Big Get Ready Book for Grade 1*, that Susan had started using at home about 1 month earlier. The book contained handwriting practice of the 26 letters, basic sight words (e.g., numbers, colors, and shapes), and words related to a target letter as well as vowels and consonants. Susan’s mother stated, “I want her to be very ready for the first grade.” Susan spent most of her time doing copying in this book.

Susan’s knowledge of letters and words was also reinforced at home through a game. Toward the middle of this study, Susan and her mother started a guessing game. She told me:

I ask Susan to give me a five-letter word beginning with this letter or the name for an animal that doesn’t have legs. Mostly, I try to say something that she has already known. It’s kind of review. After she made a guess, she asked me for another. Like yesterday, I asked a word that begins with an *o* and has a bunch of hands. She did not know how many letters in that word and she just asked what kind of word was that. I told her that word was *octopus*.

Fourth, Susan’s mother showed her support through buying Susan many books, although she did not think that Susan was ready to read those books yet. These books included: *Mickey Mouse ABC*, *Mickey Mouse 123*, *The Beauty and the Beast*, *The Treasure of Fairy Tales*, *The Little Mermaid*, and *Aladdin*. Susan’s favorites were *The Little Mermaid*.
and Aladdin. Susan liked looking at pictures of animals. Her mother tried to meet Susan's interests and help her develop a habit of wanting to have and read books. She commented:

She doesn't read English. I know she doesn't read English but she likes to when we go outside. She wants to turn the pages and look at the pictures. And if she sees something, she just asks me. She loves this kind of time. Anyway, if I go to Wal-mart or a supermarket, she asks me to go to the book section. She just turns the pages and looks at the pictures. If she loves the book, she wants me to buy it. Just like The Messy Room, The Big Dinosaur Book, and The Amazing Poisonous Animals. These books are too hard for her, but she wants them. I cannot say no. She wants books. I know she does. She is not ready for those books, but she likes them. I want her to have the habit of wanting to read. That's what I want.

Fifth, Susan's mother often watched TV with Susan. Their favorite channels were PBS (e.g., Sesame Street), Nickelodeon, Disney, and Discovery. While they were watching TV, they talked about the content, usually in Cantonese. Susan often asked her mother what was happening. After Sesame Street changed to a different schedule when Susan's mother was having a nap, they did not watch it together as often
as before. Her mother also tried to limit the amount of time that Susan could watch TV when she had a lot of copying to do.

In addition to being read to and watching TV with her mother, Susan liked to read books. Often her reading focused on pictures; she liked to know what the pictures were about. If she asked her mother about the pictures, her mother would read the book to her. Susan also loved drawing. According to her mother, she drew every day and all the time, including the time when she was watching TV or the minute before she went to bed. She did not write down anything except her name on the drawings.

Evidently, Susan’s mother cared very much about Susan’s literacy learning in her kindergarten year. She also expressed her concerns about the type of class to which Susan was going in the first grade. Susan’s mother called me after she learned that Susan was going to an ESL class for her first grade.

Susan’s Mother: Her teacher says that she is perfect in every area. But why is she going to an ESL class? My husband’s co-worker told him that an ESL class is not good. The students are pulled out for several hours each day to learn English. The teachers speak Spanish. I don’t want Susan to be confused by Spanish. I am afraid that her English will
become poor. I think that a regular class will be good for her.

Researcher: I have been in that ESL class for a whole morning. Every child is speaking English. Two teachers are teaching the children reading and writing in English. You also can go to the room to observe. If you don't like what Susan is learning, you can pull her out and put her in another room of your choice. That's your right.

Susan's Mother: Is that right?!

After I finished this study, I called Susan's mother about her decision on which class Susan was going to. She replied that she would enroll Susan in an ESL class.

In addition to providing Susan with a TV, writing supplies, and books that she loved, Susan's mother was actively involved in her literacy learning. As long as she had time, she read to Susan in English and told her a Chinese version of the book. She also helped Susan review the content that Susan learned at school (e.g., using a guessing game for a review of words). Susan's mother cared about her learning in the kindergarten year as well as in the first grade (e.g., which class she was going to). In general, Susan was extremely well supported by her mother in her literacy learning.
Classroom Literacy Support

The classroom and routine literacy activities. Susan was enrolled in an afternoon kindergarten class at a nine-month school. There were 30 children in the class. Susan and one Hispanic girl were the only two children who spoke English as a second language. The classroom had different kinds of posters: the alphabet, a calendar, the weather, money, numbers, colors, and the sentence, *Kids are Special People*. There were also two shelves of books and one box of big books close to Mrs. Shaw's desk. Underneath the chalkboard, there was a rack where various folders of activities (e.g., matching an upper-case letter with its lower-case) were hung. One large bulletin board had each child's birthdate; the other one changed its content with seasons. For instance, when it was Halloween time, there were cut-outs related to that holiday.

The daily literacy events included learning and reviewing letters, color and number words, learning sounding out, and reading books. Mrs. Shaw taught one letter per week. The activities for learning a target letter included the following. Mrs. Shaw started a new letter by reading to the children a poem with a lot of words beginning with the target letter. For instance, the poem for *Mm* was: *Mr. M must munch and munch. Sandwiches made a marvelous lunch. His mouth is munching all day long. He eats so much he is mighty strong.* Mrs. Shaw read the poem once, finger pointing at each word. Then she asked the children to give
her the words from the poem that began with the /m/ sound. Next the children gave Mrs. Shaw other words that started with the /m/ sound. After that, Mrs. Shaw went to a poster on the easel with pictures of objects whose names started with the /m/ sound. She asked the children what each picture was and then pointed at the word underneath it. She and the children choral read each word. The next day, the children practiced writing the upper- and lower-cases of a target letter on a piece of lined paper. They also did worksheets on which they either colored a picture or put a target letter on the picture whose name started with the target letter.

There was also a booklet that went along with each target letter. The booklet was from the Macmillan Series: Beginning to Read, Write, and Listen. The activities in the booklet contained: (a) naming the objects/people in a picture whose names started with a target letter, (b) putting a target letter on a picture after listening to its name from a tape, (c) distinguishing one target word from another or selecting it from a group of words after listening to the tape, and (d) tracing and writing the letter and, sometimes, a word or phrase that began with the letter. At the end of the letter learning, Mrs. Shaw read at least one book that had a lot of words that started with the target letter (e.g., Dinosaurs for the letter D). The weekly letter lesson ended with an art project (e.g., a clown for the letter C).
Mrs. Shaw used flashcards to review letters. She held up a letter card and asked the children for the name and sound of a letter. Similarly, Mrs. Shaw reviewed the color and number words. In addition, she also did one color per week. She and the children sang a song of a color from a big book. The song of Red went like this: R-e-d, red, R-e-d, red, I can spell red. I can spell red. Fire trucks are red. Stop signs are red, too. R-e-d, red, R-e-d, red. Mrs. Shaw finger pointed at R-e-d in print.

Mrs. Shaw used a Distar program to teach the children to read.

One month after this study started, Mrs. Shaw spent at least 20 minutes each day teaching the children to sound out. One part of the program was to teach individual sounds. Pointing at a letter in the Teacher's Guide, Mrs. Shaw asked the children to repeat it after her. Then the children sounded out the letter when Mrs. Shaw pointed at that letter. Another part of the program was to teach blending. For instance, Mrs. Shaw started with the /a/ and /m/ sound respectively and asked the children to sound out am. Mrs. Shaw often modeled moving her finger slowly across a word while she slowly pronounced the word. For instance, she pronounced peanut butter as pee-n-u-t bu-t-er, and she asked them to say the phrase fast. Then, the children practiced sounding out letters, words, and phrases. Mrs. Shaw encouraged them to use a word/phrase in a sentence.
Mrs. Shaw also took some sight words and sentences from the Distar program and wrote them on a flip chart. Every day she called on some individual children to read the words and sentences that they had read together on the previous days. Then she asked them to come up to the front to try to sound out the new words and phrases. They were to finger point at each word. Then she and the children chorally read the words and phrases. The examples of the words were sad, is, sick, rake, Mac, if, it, and sack. The sentences were: This is a rock. The rat sat, and Sam is mad. Mrs. Shaw told me the importance of reading the sentences with those words. “Those words that I put together to make sentences, because those are the words we are working at to sound out later on. So I want them to see now how they can use them in the sentences, what does the word mean.”

Furthermore, Mrs. Shaw asked the children to pay attention to the features of words. After the children sounded out am, she asked, “Who can tell me which word rhymed with am? Remember rhymed words have the same ending. We don’t care about the beginning sound.” Mrs. Shaw also read with the children a booklet from this program. Later, the children took it home and practiced reading at home with their parents. The example of this booklet was: A rat sat on a rock. The rock is fat. The rat is not sad.
Everyday, Mrs. Shaw read books to the children at least once. She liked to alternate reading with seatwork. The children would go to their seats to practice handwriting and then come back to listen to a story. The books were either from Mrs. Shaw's own collection or from the children. She encouraged the children to bring their favorite books to school so that every child could enjoy the books. Some books had many words beginning with a target letter; some were informational types. Often Mrs. Shaw read the title of a book, finger pointing at each word. She stopped two or three times to ask comprehension questions. She also talked about the linguistic features of a book. For instance, while reading *Mr. Doodle Had a Poodle*, she asked the children, "Is this a rhyming book? Who can tell me a pair of rhyming words from this book?" Additionally, Mrs. Shaw gave the children worksheets to review rhyming words (e.g., coloring a pair of rhyming words, *cook* and *book*).

To help the children learn and review color words, Mrs. Shaw copied *Brown Bear, Brown Bear, What Do You Hear?* on loose sheets. She and the children read one page each day and the children colored that page. After they were done with all the pages, they took the book home and practiced reading with their parents.

Mrs. Shaw integrated reviewing the letters and words into the daily calendar. For instance, when they were talking about *January*, she would ask them to spell it and give her a word beginning with each letter of
January. While learning and reviewing letters or color words, she would ask the children to stand up if their last/first name began with a target letter or if they wore the clothes of a target color. She always asked the children to spell a new word, "Spell green." On Fridays, Mrs. Shaw let the children watch videotapes. Most were children's favorites. One time they watched *Winnie the Pooh: The Spooky Pooh.*

Susan's participation in literacy activities. According to Mrs. Shaw, in the first couple of weeks, Susan did not participate but just sat there. "After I talked to her mom and told her mom how she was doing, her mom talked to her and she is good now. She would raise her hand, and she would volunteer something. She is doing better." Most of the time when I was observing, Susan was sitting in the front of the group and raised her hand as much as possible. Occasionally, she did not volunteer the answers to Mrs. Shaw's questions. As Mrs. Shaw put it, sometimes Susan was shy and quiet, but she knew the answers. Mrs. Shaw told me, "She will observe when she is not participating. She is watching the rest of us doing. And the next time we do it, she would try it."

Mrs. Shaw had full confidence in Susan's academic ability. "I think that she is probably high. When it gets to the end when she is speaking more and doing more, I think she will be excellent. Because she is on task and she is paying attention. So she will be good at it." According to Mrs. Shaw, Susan had problems with prepositional words at the beginning of
this study. Mrs. Shaw attributed Susan's difficulty to the fact that Susan probably did not use English very often at home. In the post-interview, Mrs. Shaw told me that Susan was able to understand the prepositional words. As shown in the mid-semester tests at school, Susan was at the top of her class. Mrs. Shaw's accounts were consistent with my observations.

"Susan knows a lot. If we go to our seat, she can do everything we do. She can do correctly, you know. And she listens to the tape to the sounds. She can do that. Her fine motor skills are beautiful. She needs to verbalize more and talk to me more."

Although Susan was quiet most of time, she did like to work and play with other children whose academic level was usually the same as hers. Her best friend was Alice. They sat across from each other at the same table and played together during recess. Once, when Susan was done with her seatwork, she went to the carpet area where two girls were testing each other on numbers. Susan said, "That's nine," while one of the girls was holding up a number card. "Then you don't need to be with us," replied the girl. Susan sat next to one of the girls, observing them for a while. As soon as Susan saw Alice coming to the carpet area, she ran to the rack to pick the alphabet folder. Alice said, "You can ask me these letters. I know all of them." Susan did not respond but started holding up the letter cards. I also experienced Susan's unique way of communication (i.e., acting rather than talking). Once, to show me her art design, Susan
walked to my back and pulled my shirt. I turned around and saw her pointing at her design. "What a pretty design!" I praised. She smiled at me, saying nothing.

Susan was always fast at her seatwork, which was always of high quality in terms of neatness and correctness. One month before the end of this study, I observed that Susan had moved from sitting in the front of the large group to the back of the group. I asked Mrs. Shaw if she knew of any reason for this change. She explained to me, "If Susan sat in the back of the group, she was always the first one to get back to her seat at table. She often grabbed the worksheets as soon as she sat down so that she could finish the work early."

Susan was not only fast on her seatwork but was willing to help her peers at her table as well. After Susan was done with putting a C on the picture whose name began with the /k/ sound, she looked at Mat's worksheet. Finding that Mat had not put a C on the picture of a cup, she moved her sheet to Mat and pointed at the C on the picture of a cup. Mat said, "Oops."

Since Susan's only writing activities during the period of this study were practicing handwriting of the alphabet and copying words, I had only limited data to learn about her knowledge of word boundaries. By examining Susan's copied letters and words, I found that she always left distinct space between letters or words.
Overall Summary

Susan could not recognize any Chinese in Pinyin and in character from the list of Chinese in both pre- and post-assessment sessions. Her parents never taught her how to read Chinese. Her mother just told her Chinese fairy tales in Chinese or a translated Chinese version of an English book.

Susan did not perform all the tasks as required. Not to frustrate her, I came up with alternative assessment materials (e.g., using The Beauty and the Beast to replace Sam, Sam, the baker man; washed his face in the frying pan). Generally speaking, Susan made progress in the five tasks over the period of this study. She could finger point at more monosyllabic words and identify one content and one function word, but she failed to provide an explanation for “Why is/isn’t . . . a word?” In both pre- and post-assessment sessions, Susan was unable to write the sentences. In the post-assessment session, she was able to copy one sentence from a book, leaving distinct space between words. But “I don’t know” was her response to my question, “Why did you leave space between words?”

Susan lived in a literacy-rich home. Her mother created a supportive learning environment. She bought Susan books that she loved although she knew that Susan was not yet able to read them on her own. She read to Susan in English and, sometimes, in Chinese to enhance her
comprehension. In addition, Susan's mother reinforced what Susan had learned at school by asking her to review the worksheets and do extra copying of words related to a target letter. Furthermore, Susan's mother engaged her in learning in various interesting ways. She used a guessing game to motivate Susan to review words. She watched TV with Susan, talking about the content. Such an activity promoted Susan's love for knowledge and exposure to the English language. Although her mother emphasized that Susan must speak Cantonese as much as possible, she cared about how much English Susan would get from her school. Her concern was evident in her decision on which class Susan should attend for her first grade, a regular or an ESL class.

Mrs. Shaw emphasized letter learning, sounding out, sight words, and handwriting of the 26 letters and children's names. She used varying materials, including poems, posters, the booklet from the Macmillan series, Beginning to Read, Write, and Listen, and children's books. Mrs. Shaw also integrated letter learning and review into other daily routines (e.g., the calendar). Mrs. Shaw combined sounding out and learning sight words using a Distar program. She modeled sounding out an unknown word for the children and encouraged them to try. Additionally, Mrs. Shaw used songs and flashcards to teach color words.

Although Mrs. Shaw did large group reading at least once a day, the children lacked the time for encounters with connected texts on their
own. Therefore, Susan’s love for stories and books seemed not to be further supported in her classroom. Mrs. Shaw always finger pointed at words while reading words on a flip chart, poems, and singing songs. She also introduced the concept of rhyming words to the children to promote their metalinguistic awareness. The only writing activities that the children did was practicing writing the upper- and lower-cases of the 26 letters and their names as well as copying words in their booklets and worksheets. However, Susan still needed writing opportunities in which she could develop understanding of spoken-written word connection and word boundaries.

**Case Six: Willie**

*Linguistic Background*

Willie was born in the United States. At the beginning of this study, he was 5 years 1 month old. At home, he spoke Cantonese most of the time. Sometimes he spoke English, especially when he asked his parents questions about school. Toward the end of this study, his parents complained that he had spoken too much English. Willie’s mother told me that he could read Chinese characters in a book about clothes, food, and utensils. Willie demonstrated his ability by asking me to point at a picture for him to name it. He could name all of the pictures. However, when I wrote one character on a separate piece of paper, he could not
recognize it. Willie had no knowledge of Pinyin. He did recognize one Chinese character, \( \text{\textasciitilde} \), from the list of Chinese.

At school, Willie often spoke English, but his teacher, Mrs. Carter, and other children sometimes had trouble understanding him because of his accent and fast speaking speed. Willie was able to recite the alphabet. In the pre- and post-assessment sessions, he could write the 26 letters in upper-and lower-cases. The space between each set of letters written in the post-assessment session was clearer than those written in the pre-assessment session. In the pre-assessment session, he drew shapes, animals, and flowers. In an octagon, he wrote stop. I looked around his room and did not find such a sign. However, there was a stop sign not far away from his house. He also copied down the sentence from a flyer pinned on the refrigerator, School's Open, with almost evenly divided space between each letter.

**Performance of Five Tasks**

Willie completed the tasks of Pointing, Word Identification, Word Awareness, Sentence Dictation, and Sentence Dictation Explanation. His performance on the five tasks demonstrated his growth in performance-based and reflective word knowledge in English.

**Pointing Task.** Willie showed great interest in performing this task. He was smiling while repeating the lines after me and reciting them with me. His voice was loud and clear. In the pre-assessment session,
Willie repeated the two lines after me twice and recited them with me four times before he could recite the lines on his own. Willie correctly pointed at Sam, Sam, the, man, his, face and in. He pointed at baker and the twice, and washed three times. He moved his finger through underneath frying pan. In the post-assessment session, Willie repeated the lines after me three times and recited them with me five times. Then he was able to recite the lines by himself. He correctly pointed at Tom, Tom, the, son, stole, pig, that, and ton. He pointed at piper's and weighed twice. He did not point at two g's at all.

**Word Identification Task and Word Awareness Task.** While performing these two tasks, Willie verbalized himself very well. In the pre- and post-assessment sessions, he answered “yes” to the question, “Is .. a word?” for the nine words and three phrases. However, his explanations for “Why is .. a word?” showed that his reflective word knowledge had changed over a period of this study.

In the pre-assessment session, Willie had five different categories of explanations for the question, “Why is .. a word?”: (a) no response, (b) an incomplete answer, (c) relating a word to an action, (d) using a word in a sentence, and (e) relating a word to its written form. The different categories of explanations indicated Willie's multiple levels of word knowledge. The following were some examples of the categories b, c, d, and e:
Researcher: Why do you say from the house is a word?
Willie: Because . . .
Researcher: Because of what?
Willie: . . . (category b)
Researcher: Why do you say night is a word?
Willie: Sleep. (category c)
Researcher: Why do you say and is a word?
Willie: It's mommy and daddy. (category d)
Researcher: Why do you say the is a word?
Willie: Because it is the there (pointing at the in the title of his book, Life in the Sea.) (category e)

In the post-assessment session, Willie had only one explanation for “Why is . . . a word?”—relating a word to an action. But his explanation was detailed; his sentences were getting longer. For instance,

Researcher: Why do you say table is a word?
Willie: At a table you have to get something to eat.
Researcher: Why do you say give is a word?
Willie: If someone give you a book, you want to see what's inside. Because someone wanted to see it and had to open it. You have to see it by your book.

Sentence Dictation Task and Sentence Dictation Explanation Task.

Willie could recite the sentence, The monkey ran up the tree, with ease.
after repeating it after me once. When it was time for him to write down the sentence, Willie stated:

Willie: I can't write it. You write it for me.

Researcher: I know you can do it. Just try your best.

Willie: Write like this (referring to the words in the book, Life in the Sea). I can't do it.

Researcher: Just try your best. Thanks!

Finally, Willie wrote three groups of letters with larger than necessary space between each group. The three groups of letters were W, SLGi, and NGL. Willie could not provide any explanation for the space left between the groups.

In the post-assessment session, Willie did not write the complete sentence, The puppy went out the door, but he tried his best, using his alphabet knowledge to represent the sentence.

Researcher: Could you please write down the sentence that you just said?

Willie: I don't know what a puppy is. I think that I am going to write a dog.

Researcher: That's great! (after he wrote dog on a piece of paper)

Willie: Can you spell the door for me?

Researcher: Door, you just listen to the sound of door.
Willie" Do? Dog?

Researcher: You think so? Just write it down.

After Willie wrote dog, he drew a picture of a dog that was going toward a door. Since Willie had written only one word and I could not tell if Willie understood space, I asked if he would like to copy something from his book, Life in the Sea. He replied, "I can write some words." He wrote his English name with distinct space between the two words. Then he wrote nine color words and three color phrases with a circle around each one. The nine color words were orange, yellow, black, red, white, blue, violet, brown, and pink. The three color phrases were red violet, blue violet, and yellow green. Willie vacillated in leaving space between words in these three phrases. Willie left no space between red and violet, put a space between blue and violet, and put a dash between yellow and green.

I asked Willie to explain to me his different ways to indicate space. His explanations, which were related to school instruction or the meaning of a phrase, indicated that he had not developed his conventional knowledge of word boundaries.

Researcher: Why did you leave no space between red and violet?

Willie: It's the color, called red violet.

Researcher: How come you separated blue from violet?

Willie: It's just like Mrs. Carson's card. It says blue violet.
Researcher: Then why did you put a line between yellow and green?

Willie: Because they go together.

Home Literacy Support

Willie lived with his parents, grandmother, and two-month-old brother in a house. His grandmother spoke fairly good English. His father's English was better than his mother's. In the pre- and post-interviews, both parents were present and provided me with information. They were very concerned if Willie could speak Chinese at home. At the beginning of this study, Willie spoke a little English at home. When he asked questions about English, his parents tried to answer his questions in English. They worried that Willie might not be able to keep up with his peers at school because of his limited English. In the post-interview session, Willie's parents expressed their fear that Willie would eventually lose the Chinese language. Willie's mother said:

Because he is a descendant of the Chinese and he must be able to speak Cantonese. Everyday, when he is at school, he speaks English. If he also speaks English at home, he will forget his Chinese. Is that right?

What made Willie's parents very sad was that Willie decided to speak only English when he grew up. When I first met Willie in his classroom, I asked him, "How do you say Good Morning! to your mom and
"Do you say something different from Good Morning?" I asked again. Willie stated clearly, "Here, I am an American. I speak English. I go home. I am a Chinese. I speak Chinese."

Although Willie's parents were concerned about his ability to speak fluent Chinese, they did not teach him to read Chinese. Willie's mother commented:

It was enough if Willie could speak and understand Chinese. Chinese is what we talk in daily life. Willie repeats after us and listens to us talking. We don't teach him to read Chinese. Since he was born in the United States, it's no use for him to learn to read Chinese. But he must understand what we are talking in Chinese. That's enough.

Toward the end of this study, the amount of Chinese that Willie used at home decreased as the amount of English increased. In the beginning, he used a mixture of Chinese and English when he could not express something clearly in English (e.g., the term, show and tell). Later, there was more use of English at home. He even corrected his parents' English. When I was at Willie's house, I heard him correcting his father's pronunciation of hospital.

Willie's father read to him one or two times each week or whenever Willie brought a book from school and asked his father to read it to him.
At first, Willie’s father never finger pointed at each word. He later learned from his sister that finger pointing was important as it helped Willie with sounding out words and making a connection between a spoken and written word. After that, Willie’s father finger pointed at words one or two times while reading a new book. Often Willie’s father read a book to him one or two times. Then Willie read it by himself. According to his mother, Willie remembered a book easily.

In addition to reading books to Willie, his parents helped him with his homework; they checked his homework every night. Willie read everything on the homework to his mother or father. His mother usually asked him to copy the letters/words that he had just learned at school. Willie regarded copying letters/words as a routine at home. After Willie got home, his parents asked him, “What did you learn today?” He said, “We learned Bb today. How many times do you want me to write that Bb?” His mother replied, “20 times.” While Willie was writing his Bb, he did his counting. As soon as he reached the 20th Bb, he felt relieved and said, “Now, I can go to play.”

Willie read books by himself once or twice each week. His mother was very observant of his reading and told me, “I don’t know what he is reading. He is holding the book, blah, blah, blah . . . I don’t know what he is reading. He doesn’t follow the words in the book.” If Willie did not know a word, he went to his father for help. Willie’s father told me,
“When he asks me a word, I must answer. Otherwise, he will get very upset, lose his temper, and hit me. Often, if I don’t know, I will look it up in a dictionary.” When I was at Willie’s house, he showed me some of his favorite books: Life in the Sea, Power Ranger, I Think that it’s Wonderful and other Poems, and A Book of 3. He even read one page from Life in the Sea.

Willie loved drawing. Animals, a stop sign, and different shapes were the main content of his drawing. If he loved a book, he copied the pictures. He seldom wrote down letters/words in his drawings. Willie’s room was full of papers of his drawing. Willie’s mother urged him to clean up his room by telling him that I, the teacher, was coming to his house. Later, I learned that Willie always had so many pieces of paper to write on because his father often bought him a ream of 500 sheets.

In addition to loving drawing, Willie enjoyed watching TV. His favorite TV program was Power Ranger; he never missed one single episode. His father was concerned because “There was too much violence in the program. He spent most of his TV time on Power Ranger. The other day, I called the TV station and asked them to cancel this program. Obviously, they didn’t listen to me.” He felt a little relieved because Willie also watched cartoons on Nickelodeon. Unfortunately, neither of Willie’s parents knew what Sesame Street was. In the post-interview, I told them its schedule and asked them to watch it with Willie.
Willie’s parents believed that Willie’s ability to speak and understand Chinese was part of his cultural heritage. Their beliefs had some impact on Willie as evident in his responses: “Here, I am an American; I speak English. I go home; I speak Chinese.” In addition to providing Willie with writing supplies, books, and a TV, both parents were involved in his literacy learning. His mother checked his homework daily and made sure that he did extra copying of a target letter and its words. His father sometimes read books to Willie and explained unknown words to him if he asked. He was also concerned about the quality of TV that Willie was watching daily. Neither parents knew of Sesame Street.

**Classroom Literacy Support**

The classroom and routine literacy activities. Willie was enrolled in a morning kindergarten class at a nine-month school. There were four children who spoke English as a second language. Three children were Chinese and one was Polish. One of the three Chinese children spoke hardly any English. The other child spoke perfect English. Willie was about the average. However, he never communicated with the two children in Chinese.

The classroom had many different kinds of posters: the alphabet, numbers, colors, a calendar, and the weather. There were two teacher-made bulletin boards. One was for each child’s birthday; the other was for Meet Me, when each child told the teacher, Mrs. Carson, the words to fill
in the blanks in My name is ..., I like to ..., My favorite color is ..., and I can .... There was one student-made bulletin board on which each child drew himself or herself and wrote his/her name under the picture. In the front of the room, there was a bulletin board, Star of the Week. Three children were chosen each week to put their pictures on a piece of big paper to post it on the board. Some children wrote their captions under the pictures; others asked their parents to write. There were also one shelf of books and five shelves of educational toys. Some books were for adult readers (e.g., The Complete Book of Baby Crafts); other books were at young children's interest and reading levels (e.g., Bugs Bunny Too Many Carrots).

Mrs. Carson's daily literacy events included the review of letters as well as color, number, and shape words, a letter of the week, group reading, sight word reading, and centers. Often Mrs. Carson started her class with a review of letters, color, and number words. She held up a letter card and asked the children to say its name and sound. Then Mrs. Carson used Zoo-Phonics to reinforce the review of letters. There was one animal friend for each letter (e.g., Cutina Cat for the letter Cc). Mrs. Carson encouraged the children to act out while singing the Zoo-Phonics. While reviewing color and number words, Mrs. Carson asked the children to sound out the words if they could not recognize them. She consistently reminded them of the sounding out strategy.
Mrs. Carson had many activities while introducing one letter per week. First, she reminded the children of the letter animal from the *Zoo-Phonics*. Second, they sang the song of the letter friend (e.g., *Mr. Cotton Candy* for the letter *Cc*). After singing, Mrs. Carson asked them for *C* words from the song and other words that they knew. Third, Mrs. Carson read the children books that had many words with the target letter in the title or in the text (e.g., *Cinderella* for the letter *Cc*). After reading, she asked the children *C* words from the book. Fourth, Mrs. Carson used letter stories to reinforce the target letter. A story card contained some drawings on the front and story lines on the back. Five or six cards completed a story. For instance, for the letter *Ii*, the first card said: *Once upon a time, there was an inchworm named Inkv*. *There were many things in Inkv’s life that made life impossible for him*. *This is the story of Inkv’s troubles*. Mrs. Carson read the story and asked the children for *Ii* words.

Fifth, Mrs. Carson used the booklet of a target letter from the Macmillan series of *Beginning to Read, Write, and Listen*. The activities in a booklet included: (a) tracing and writing a target letter in upper- and lower-cases, (b) naming objects in a picture whose names began with the target letter, (c) putting the target letter on a picture whose name began with it after listening to the name of the picture, (d) distinguishing one word from another based on the beginning sound of a target letter, (e)
cutting out pictures and pasting them under different target letters based on the beginning sounds of the names of these pictures, and (f) tracing and copying some words that began with the target letter. The children finished all these activities in a week and then took the booklet home. They read the words or named the pictures for their parents.

While Mrs. Carson was reading books that were related to a target letter or a theme, she always asked the children about the title, author(s), illustrator(s), and the front and back of a book. Most of these books had repetitive language so that the children could join in Mrs. Carson after several echo readings. After she finished reading aloud, she asked the children about the words that began with a target letter, the characters, and the main idea. She often read the books more than once. Sometimes, while Mrs. Carson was reading a big book, she used a post-it sticker to cover a word and asked the children to guess it.

Teaching sight words was one of the main literacy events. Mrs. Carson picked sight words from the Teacher's Manual of Beginning to Read, Write, and Listen, the books she read to the children, and the reading program she used in her class, the name of which she did not remember. There were first 100 words, second 100 words, and so on. Mrs. Carson usually taught the first 100 words and some of the easy words from the second 100. She wrote the words on a big flip chart. Usually, the words were accompanied by some sentences with these words.
on the following pages of a flip chart. For instance, the words, I, a, the, this, is, man, am, and Sam, were accompanied by the sentences, This is a man. This is a fan. I fan Sam, and I am Nan. Mrs. Carson introduced the words first and the children practiced reading them for a whole week. Mrs. Carson wrote these words on flashcards and sent them home for the children to practice reading at home before they were introduced to the story that would appear after the word page. Mrs. Carson echo read the words and sentences with the children, finger pointing at each word. Then the children choral read them several times. Finally, Mrs. Carson asked individual children from the boy/girl group to come to the front and read the words and sentences with a pointer.

Furthermore, Mrs. Carson also taught the children the strategy of sounding out unknown words by showing them how to blend sounds. For instance, for the word stop, she pointed at individual letters and asked the children for the corresponding sounds. Then, she said, “Put /s/ and /t/ together. What sounds do you get? Now, add /op/ to /st/ and see what sounds do you get.” In addition, Mrs. Carson showed the children how the sounds of a word changed with an addition or a deletion of its beginning sound. When she was reviewing the color word, pink, she covered p and asked the children, “What is the new word? .... What if I put g in front of the new word? .... How about I put l in front of the new word?” Mrs. Carson also reminded the children of the uniqueness of some letters in
words. When they were reviewing the color word yellow and the number word nine, Mrs. Carson asked, "Do we say the w in yellow? Do we say the e in nine?" Additionally, Mrs. Carson incorporated the sounding out strategy into spelling. After the children finished drawing a bird in their letter booklet, Mrs. Carson asked them how to spell bird and tweet. She enunciated each sound in each word with them and wrote the words on the board.

If it was a five-day week (i.e., no holidays or a field trip), Mrs. Carson usually had centers. The centers included: Listening, Playing House, Toys, Math, Arts, and other seatwork. Once the children were done at their centers, they could go to pick a book to read or play with clays. On Fridays, there was usually show-and-tell. Mrs. Carson asked the children to bring the objects related to the colors or a letter that they were studying that week. Mrs. Carson asked the child who brought the show-and-tell to say its name and/or color. For instance, one boy brought a clown. She asked him what the object was. The child said, "Clown." Mrs. Carson said, "k-k-k-l-l-ow-n." If there was time left after the centers, Mrs. Carson showed them video tapes of Sesame Street or the alphabet (e.g., Rusty and Rosy's Letter Sound Songs). The children were encouraged to participate in the singing, acting, or writing letters in the air.
One of the seatwork assignments was to color a mini-book. A mini-book had one word, phrase, or sentence on each page. The children colored the picture on each page and then took the mini-book home to read to and with their parents. Two examples of such a mini-book were: *Leaves on Pumpkins* and *Leaves on Me*.

Toward the end of this study, Mrs. Carson's journal writing still focused on asking the children to practice writing numbers and handwriting twice a week. However, she said that she planned to ask the children to write a story after they came back in January when the children “knew how to blend the sounds together and how to recognize the sight words.”

*Willie's participation in literacy activities.* Willie was always willing to communicate with his teacher and other children; however, his efforts were not always successful at the beginning of this study. Mrs. Carson stated that his oral language was not perfect and had a little accent. “Sometimes, he said his sentences and words too fast for a listener to catch on. Willie’s language was a big difference between him and his peers.” Mrs. Carson tried to help Willie by often reminding him that “you know how to say and okay, slow down and let me hear you say that again.” Except for his language difference, Willie could “fit in like any other children.”
Willie was always sitting in the front of the group, listening attentively to Mrs. Carson, volunteering information, and asking questions if he did not understand words/sentences. In the beginning, Willie did not ask questions about what he did not know. For instance, when Mrs. Carson asked if the children understood the word *orchestra*, Willie nodded his head along with his peers. When Mrs. Carson asked Willie what an *orchestra* was, he could not explain it. Then she explained the word to him. After several times of Mrs. Carson’s asking Willie questions to make sure that he understood words, Willie developed a habit of asking questions.

According to Mrs. Carson and my observations, Willie always participated in the activities and was usually fast on his seatwork. “He rushes his work and tries to get it done and go to read a book or go to a center. . . . At times, his coloring and writing are kind of scribbling. I know he can do better if he settles down and has more patience.”

Furthermore, Willie liked to help others with their work. Mrs. Carson considered Willie one of the children high in academic achievements. On one occasion, I observed a parent helper testing Willie on letters and sight words. He passed everything except for the sound of *r*. Mrs. Carson encouraged Willie to help others. In the post-interview, Mrs. Carson told me, “Willie is high so I have him sitting next to a person who was low medium. Because Willie was helping him, and he is getting
high. Willie is the leader of the center. He is able to help other kids. His language hasn't been much hindrance for him at all."

Willie was proud of his accomplishments. After he finished his work, he liked to show it to his peers at his table and sometimes Mrs. Carson. If I was in his room, he would run up to me and show me his seatwork. When I walked away, he ran after me, saying, "Teacher, look at my paper." Once, after he had finished his listening center, he walked over to me and started pointing at the posters of A, B, C, and D on the wall and reading them. He continued saying the rest of the 26 letters although they were not on the wall.

Willie's love for reading was evident in his choice of activity during free time. After he finished his center or seatwork, the first place he went was the bookshelf. He picked a book without looking at the pages, ran to the couch, and sat down to read it. Often he looked at the pictures in a book from cover to cover and put it back on the shelf within five minutes. If a book had a lot of print but few pictures, he often made a comment to himself, "That's a library book. I can't read it." He put that book back on the shelf and picked another one to read. I never observed him giving up reading a book and going to another center.

Through observing Willie's reading words and sentences with a pointer as well as his copying words, I was able to gather some information on his performance-based and reflective word knowledge.
When Willie was reading the sentences on a flip chart, I noticed that he could finger point at each word in patterned sentences (e.g., *This is a man* and *This is a fan*). But once the pattern changed, Willie pointed at the wrong words. For instance, when he was reading *I fan Sam* after *This is a man* and *This is a fan*, he pointed at *Sam* twice. He used the pattern in the first two sentences to predict that of a new sentence. His finger pointing relied on memorizing patterns rather than on recognizing words or at least the initial sounds of words in a sentence.

Although Willie had done many copying activities, most of them were one or two words. Due to the number and time of my observation, the only time when I observed Willie copying more than one word was when he was copying *bird* and *tweet* from the board. I noticed that he did not leave space between the words. Later, when Willie was lining up at the door, I asked him why he put *bird* and *tweet* together. He replied, "Mrs. Carson said *Tweet* is the sound of a bird." From his perspective, something related should be together.

**Overall Summary**

Willie's Chinese was definitely at the beginning level as he could recognize only one Chinese character from the list of Chinese. He could not recognize any Chinese in Pinyin.

Willie was interested in reciting the two lines of a nursery rhyme and answering my questions. He tried his best in every task. Over the
period of this study, Willie learned to finger point at more monosyllabic words. He answered “yes” to all the questions for nine words and three phrases, “Is . . . a word?” His explanations of “Why is/isn’t . . . a word?” in the pre-assessment session indicated his multiple levels of understanding. Two of his five categories were at Templeton and Spivey’s (1980) first level of reflective word knowledge (i.e., relating a word to an action and using a word in a sentence). His explanation of relating a word to its written form was at Templeton and Spivey’s third level of reflective word knowledge. In the post-assessment session, his explanation narrowed down to only one category: relating a word to an action. The change in his explanations may have shown that his reflective word knowledge was becoming relatively stable. In his writing three strings of letters for the sentence, The monkey went up the tree, he left space larger than necessary between each string of letters but was unable to provide me with an explanation. In writing his color words and phrases, he used a circle around each word/phrase, left one space between the words in one phrase, and no space between the words in another one. He also put a dash between the words in another phrase. Although he could not provide me with a conventional explanation about spacing, his answers reflected his having made a connection between what he knew and what was being assessed.
At home, Willie's parents provided him with books, writing supplies, and a television set. Both parents were concerned at first about Willie's English and later about his losing Chinese as he spoke more English at home. However, they expected him to do well in English at school. His mother helped him review what he had learned at school; his father read to him one or two times each week and explained to Willie the unknown words in his books. Furthermore, his father stressed the quality of TV programs that Willie was watching every day.

The main literacy events in Mrs. Carson's room were one letter per week, learning sight words, reading, and practicing handwriting of the 26 letters and names. She taught one letter per week, using multiple materials and methods. The materials were songs, flashcards, books, story cards, booklets, and worksheets. She integrated reading to children, echo reading, acting out, signing, tracing, copying, and listening into letter learning. Children learned sight words mainly through flashcards and reading words on a flip chart. Finger pointing was emphasized in her and the children's reading words and sentences on the chart. She exposed the children to connected texts by reading books at least once daily and by allowing them to pick books to read after a center although the reading time was very short.

Mrs. Carson stressed the importance of sounding out strategy by showing the children when and how to use it. Additionally, she asked the
children to be aware of the unique features of some letters (e.g., w in yellow). She promoted the children’s development in oral language via show-and-tell as well as viewing *Sesame Street* videotapes. Furthermore, she was very observant of Willie and nudged him to develop a habit of asking questions.

In Mrs. Carson’s classroom, the children had different chances to interact with print, some of which was disconnected texts (e.g., a minibook) and some of which was connected texts (e.g., books used in large group reading). Books at children’s age, reading, and interest levels might have enhanced Willie’s understanding of written language. In addition, writing opportunities that went beyond copying letters, names, and words might have assisted Willie in developing reflective word knowledge.

**Cross-case Comparison**

In the cross-case comparison, the data from the six cases served to answer the two research questions that guided me in my data collection and data analysis. The two research questions were:

1) What are the similarities and differences in the process of acquisition of concept of word in English between native English- and Chinese-speaking children?

2) What significant factors influence Chinese-speaking children’s acquisition of concept of word in English?
Similarities and Differences

In this study, the six participants' concept of word was assessed through their performance on the five tasks: Pointing, Word Identification, Word Awareness, Sentence Dictation, and Sentence Dictation Explanation. The participants were assessed at the beginning and end of this study. The data from their performance on the five tasks illustrated the similarities and differences in acquiring concept of word in English between native English- and Chinese-speaking children.

The Pointing Task. In the performance of the Pointing Task, there were three similarities between the six participants and native English-speaking children: (a) finger pointing at more monosyllabic words than multisyllabic words, (b) a change from moving a finger through a group of words to finger pointing at individual words although a word may have been pointed at more than once, and (c) a change from feeling comfortable with familiar alternative assessment materials to feeling comfortable with unfamiliar assessment materials.

I assessed the six participants, except Fred and Susan, using the assessment materials. To encourage Fred and Susan to participate in the assessment, I allowed Fred to choose the line with which he was familiar, Hickory, dickory, dock, the mouse ran up the clock; I suggested that Susan finger point at the title of her favorite book, The Beauty and Beast. In doing so, I did not make Fred and Susan experience frustration at the
beginning of the assessment session, and I was able to obtain data on their ability to finger point at words.

Over the period of this study, the six participants could finger point at more monosyllabic words than multisyllabic words. In the pre-assessment session, four participants could finger point at a minimum of 3 monosyllabic words. Linda, Edna, and Dick finger pointed at the first three words in *Sam, Sam, the baker man; washed his face in the frying pan*. Willie pointed at *Sam, Sam, the, man, his, face, and in*. Although Fred did not want to finger point at the two lines that I asked him to, he did finger point at two *the’s, Hickory, and Dickory* in *Hickory Dickory Dock, the mouse ran up the clock*. Similarly, Susan pointed at two *the’s* in *The Beauty and the Beast*. Fred was the only participant who finger pointed at two multisyllabic words in the pre-assessment session.

In addition, when the participants came to the multisyllabic and monosyllabic words at which they could not point once, they moved their finger through a word or a group of words, pointed at a word more than once, or skipped pointing at a word. Both Linda and Edna moved their fingers through the rest of the words in the two lines except the three beginning words at which they pointed correctly. Fred did not point at any word after the first *the* in *Hickory, dickory, dock, the mouse ran up the clock* until he reached the second *the*. He pointed at *the* but not *clock*. Dick pointed at *baker* and *washed* twice, skipped *man*, and did not point
at any words in the rest of the line. Susan pointed at Beauty and Beast twice. Willie pointed at baker, the, and face twice and washed three times as well as moved his finger through the rest of the words.

The results from the post-assessment session showed that the six participants had made progress in performing the Pointing Task, pointing at more monosyllabic words. Linda, Dick, Susan, and Willie could finger point at 9, 5, 9, and 8 monosyllabic words, respectively. Edna could finger point at seven monosyllabic words and one multisyllabic word. Fred was able to finger point at nine monosyllabic words and one multisyllabic word. For the words at which each participant did not correctly point, there was less finger moving through these words without pointing at each word but more pointing at each word more than once. Linda pointed at piper's and weighed twice. Both Edna and Fred pointed at weighed twice. Edna also moved her finger through a ton. Dick, Susan, and Willie pointed at some words more than once in addition to moving their fingers through other words or not pointing at any words at all. Dick pointed at piper's twice, skipped son, and moved his finger underneath stole a pig that weighed a ton. Susan pointed at piper's three times and moved her finger underneath weighed. Willie pointed at piper's and weighed twice and skipped two a's.

In the post-assessment session, both Fred and Susan felt comfortable with the unfamiliar assessment materials; they performed
the Pointing Task as required. The ability to accept the unfamiliar linguistic input in an assessment session indicated the progress made by Fred and Susan, whose linguistic abilities went beyond the content that they were being assessed.

In general, the participants' growth in their ability to perform the Pointing Task was consistent with the existing research on native English-speaking children. Young children first move their fingers through a group of words rather than pointing at each word. This implies that they can not yet match a spoken word with a written word (Morris, 1983, 1993). Their ability to point at individual words, sometimes more than once, indicates that they are aware of at least the initial sound of a word and have some knowledge of consonants (Morris, 1993). Later on, they at first finger point at monosyllabic words and then move to multisyllabic words (Bear, Invernizzi, Templeton, & Johnston, 1996). In addition, the increase in the comfort level with and acceptance of unfamiliar linguistic input showed that with time, these second language learners benefited from exposure to English.

In the pre- and post-assessment sessions, the only difference between the participants and native English-speaking children was that all six participants had great difficulty memorizing the two lines of a nursery rhyme even after repeating them after me and reciting them with me more than three times. It may be easier for native English-speaking
children to recite these lines because they are probably more familiar with the rhyme and rhythm of the English language and have been exposed to English through communicating with others from a very young age. Such a difference indicated that these six children had not been exposed to much spoken English. To them, school seemed to be the only main source of spoken English since English was not often used at home.

**Word Identification Task and Word Awareness Task.** The participants' performance on Word Identification Task and Word Awareness Task in the pre- and post-assessment sessions shared three similarities with native English-speaking children: (a) being able to identify some words but still confusing words with phrases, (b) having difficulty explaining "Why is/isn't . . . a word?", and (c) having unconventional explanations.

In the pre-assessment session, Linda, Edna, Fred, Dick, and Willie identified some words from the list of nine words and three phrases. The number of words ranged from two to nine. Susan was the only one who did not identify any words but did identify one phrase. Among the five participants who identified some words, Linda was the only one whose two words were function words (**the** and **and**). Edna had two function words (**the** and **with**) out of seven identified words. Dick's two function words out of his four words were **and** and **with**. Willie identified all nine words. Fred's four words were all content words. Linda, Edna, Dick, and
Willie identified three phrases while Fred identified only two phrases (from the house and up and down).

In the post-assessment session, Linda, Fred, Dick, and Susan made progress in their abilities to identify words. Linda identified three more content words; Fred identified three more content words and one function word; Dick had two more content words and one more function word; Susan identified one content and one function word. Edna could identify five words, including one function word. As discussed in the case of Edna, her mother got involved during the post-assessment session and coached her a little bit. Thus, her performance on the tasks of Word Identification and Word Awareness may not have been a reflection of her true ability. Willie still identified his nine words. Linda, Dick, and Willie could still identify three phrases from the list. Edna could identify only one phrase (from the house); Fred and Susan did not identify any phrases.

Generally speaking, the five participants, except Edna whose mother may have had some impact on her performance, made progress in identifying words. Three participants, Linda, Dick, and Willie, were consistent in differentiating three phrases from words over the period of this study; the other three participants identified fewer phrases in the post-assessment session. Edna, Fred, and Susan identified 1, 0, and 0 phrases, respectively. The regression in these participants indicated that
their implicit understanding of the difference between words and phrases was still developing.

When asked to explain “Why is/isn’t . . . a word?”, the five participants, except Susan who answered “I don’t know” in both the pre- and post-assessment sessions, demonstrated their developing multiple levels of reflective word knowledge over the period of this study. Linda, Edna, Fred, and Willie made progress in their explanations for “Why is/isn’t . . . a word?” The explanation of both Linda and Fred in the pre-assessment session was “I don’t know.” In the post-assessment session, Linda’s explanation jumped from “I don’t know” to Templeton and Spivey’s (1980) third level of reflective word knowledge, a response reflecting structure knowledge of the word in print and/or sound. Linda used the presence of ‹ in a word/phrase as a criterion to judge if it was a word. Fred had three categories of explanations: (a) I don’t know, (b) I want to, and (c) defining a word in a conventional way (i.e., it’s a name). His third category was at Templeton and Spivey’s fourth level of reflective word knowledge, the highest level. The progress in categories of Linda’s and Fred’s explanations showed that they were developing their reflective word knowledge, and their knowledge was becoming conventional.

Edna and Willie had more categories of explanations in the pre-assessment session than in the post-assessment session. Edna, in the pre-assessment session, had four different categories of explanations: (a)
relating a word to an action/object, (b) relating a word to telling or saying a word, (c) relating a word to its written form, and (d) relating a word to the fact that someone said it was a word. The first three categories were at Templeton and Spivey’s first, second, and third levels. The fourth category indicated that she tried to answer the question, “Why is/isn’t . . . a word?” conventionally by including the term, word. In the post-assessment session, Edna’s explanations narrowed down to two categories: (a) relating a word to an action/object and (b) using the term, word. The second category further suggested that Edna had implicit understanding of word as a unit of language.

Similarly, Willie had five categories of explanations in the pre-assessment session: (a) no response, (b) an incomplete answer (i.e., because . . . ), (c) relating a word to an object or action, (d) using a word in a sentence, and (e) relating a word to its written form. His third and fourth categories belonged to Templeton and Spivey’s first level; his fifth category was consistent with Templeton and Spivey’s third level. In the post-assessment session, Willie had just one explanation for “Why is/isn’t . . . a word?”—relating a word to an object or action. Edna’s and Willie’s having fewer explanations may suggest that their reflective word knowledge was becoming consistent across different linguistic inputs—words and phrases.
Dick was the only participant who changed his explanations from "I don't know" and relating a word to an object or action in the pre-assessment session to only "I don't know" in the post-assessment session. The change may suggest that his understanding of word knowledge was still developing and unstable.

In a comparison of the six participants' performance on Word Identification Task and Word Awareness Task with that of native English-speaking children as discussed in existing research, two differences emerged. The first difference was the number of function words that the participants identified. According to many researchers (e.g., Estrin & Chaney, 1988), it was relatively challenging for young children to identify function words because of their abstract nature. Function words were hard to attach to any concrete referents. In this study, however, each of the four participants identified two function words in the pre-assessment session. Three out of four participants kept the two function words in the post-assessment session; one participant kept one function word. Two participants who did not identify any function words in the pre-assessment session identified one in the post-assessment session.

It seemed likely that identifying function words was not as difficult for the six participants as assumed. Because English was the focus of their study rather than a pure communication tool as used by native
English-speaking children, the participants may have paid more attention to memorizing individual words. Furthermore, as supported by my observations in participants’ classrooms, it could be possible that the participants may have learned the function words as the ones on flashcards, flip charts, and in disconnected texts.

The second difference was that, due to developing English proficiency of the participants, their performance on Word Awareness Task may not have truly reflected their ability to explain “Why is/isn’t . . . a word?” I speculate that they may have had difficulty verbalizing themselves. Possibly, they had higher reflective word knowledge than what was demonstrated in the assessment sessions.

**Sentence Dictation Task and Sentence Dictation Explanation Task.**

In the pre- and post-assessment sessions, the six participants' performance demonstrated the similar patterns of writing development and understanding of word boundaries as native English-speaking children do. The similar patterns were: (a) the children’s writing skills were developmental, (b) their understanding of word boundaries was developmental and more implicit than explicit, and (c) their explanation of spacing was often unconventional.

First, as the participants’ knowledge of sound-letter relationship and exposure to the English language increased, they could use letters and/or words to represent a sentence. Their writing skills improved over
the period of this study. Three out of six participants grew from not being able to write anything for *The monkey ran up the tree* in the pre-assessment session to being able to write at least one word for *The puppy went out the door* in the post-assessment session. Linda wrote dog; Edna wrote the. Fred did not have trouble spelling out the but looked in his word book to get the spelling of puppy. Dick used letters, TBCATR, to represent *The monkey ran up the tree* in the pre-assessment session. In the post-assessment session, he wrote P, the, and Dro to represent *The puppy went out the door*. Edna and Willie did not write anything to represent the sentence in the post-assessment session. In the pre-assessment session, Edna wrote is, it, and on for *The monkey ran up the tree*. Her case may be unusual due to the fact that her mother got involved in the post-assessment session and tried to get her to perform better in the post-assessment session. Willie wrote a string of letters, W, SLGi, NGL, to represent the sentence. In the post-assessment session, he could not write down anything to represent the sentence but nine color words and three phrases. Although the color words and phrases were not the same as the sentence, *The puppy ran out the door*, his ability to spell all the words correctly indicated his growth in writing and spelling skills. Overall, the participants showed their developmental pattern in writing skills.
Second, the participants demonstrated their developmental and implicit understanding of word boundaries. In the pre-assessment session, Edna, Dick, and Willie wrote something to represent the sentence. Willie was the only one who left space between letters. However, neither of the three could explain why they left or did not leave space in their writing. In the post-assessment session, some participants wrote some words and letters to represent the sentence; some copied a few lines from a nursery rhyme or book. They all demonstrated their growth in word boundaries. Five out of six participants inconsistently left space or no space in their writing or copying. Susan was the only one who left space in the copying of a sentence from a book. When I asked the participants about their reasons for spacing and no spacing in their writing or copying, 4 out of 6 participants did not provide me with an explanation.

Third, among the six participants, only two provided me with explanations for spacing. Dick told me, "You are supposed to do like that." His understanding of word boundaries was related to instructional information (Roberts, 1992). His response also confirmed the second similar pattern that the understanding of word boundaries was implicit rather than explicit. Willie's explanation of spacing was based on the meaning of a phrase. For instance, he explained, "It's the color" for no space in red violet. In addition, he related his explanation for a space in
blue violet to school learning. Willie told me, "It's just like Mrs. Carson's card. It says blue violet."

I speculate that the difference between the participants and native English-speaking children's performance on the tasks of Sentence Dictation and Sentence Dictation Explanation was language proficiency. The participants' developing English proficiency may have prevented them from clearly explaining spacing in their writing and copying.

In summary, the six participants' processes of acquiring concept of word in English was similar to that of native English-speaking children in many ways. Most of the participants made progress in performance of five tasks over the period of this study. They tended to first identify monosyllabic words and later multisyllabic words (Bear et al., 1996). Confusion between words and phrases continued to exist for some participants. Not all participants were able to explain "Why is/isn't . . . a word?" Those who could provide some explanations were more likely to relate words/phrases to concrete referents (Roberts, 1992). Some demonstrated multiple levels of reflective word knowledge; some experienced regression over the period of this study. The participants' writing skills revealed a developmental pattern, that is, from not being able to write anything, to being able to use a string of letters, to being able to use invented spelling to represent the sentence (Sulzby, 1989). It was a challenging task for the participants to explain word space. The
explanations by a few participants were often related to instructional information rather than their acquired knowledge of word boundaries (Roberts, 1992).

Several differences between the participants and native English-speaking children were due to the participants' unique linguistic backgrounds. With little exposure to spoken English they were, thus, unfamiliar with its rhyme and rhythm, resulting in their difficulty memorizing the lines of a nursery rhyme in the assessment sessions. Their focus on English as a school subject enabled them to have less difficulty with identifying function words. Finally, their developing English proficiency could have limited their ability to express themselves during the assessment sessions.

Significant Factors

The second research question, What significant factors influence Chinese-speaking children's acquisition of concept of word in English?, focused on examining the impact of participants' Chinese literacy learning experience as well as home and school literacy support on their acquisition of concept of word. Evidence from this study showed that, although the participants had experience with Chinese, their literacy experience was relatively limited, and sometimes non-existent for some participants. Chinese literacy learning experience may not have been one of the significant factors that influenced their acquisition of concept of
word in English. For this group of participants, home and school literacy support appeared to be the two significant factors.

**Chinese literacy experience.** Based on the following data, I concluded that the six participants had limited Chinese literacy learning experience, which may have had little impact on their acquisition of concept of word in English. First, according to the participants' performance of recognizing Chinese in Pinyin and in character, their Chinese literacy experience was limited. None of the six participants could recognize Chinese in Pinyin. Fred was the only participant who had been exposed to Pinyin. He had a book with Pinyin above each character but did not know how to read each character out of context based on Pinyin. Four participants did not recognize any Chinese characters except Linda and Willie, who knew the same character.

Second, four participants could write or identify some Chinese characters in context. Linda wrote 12 basic Chinese characters in pre-assessment session and 6 characters in the post assessment session. Edna wrote 12 in the pre-assessment session and 9 in the post-assessment session. Fred could recognize 41 characters in his Chinese book. Willie could name the pictures in his Chinese book of clothes, food, and utensils but was unable to recognize the names out of context. None of the four participants was able to read a Chinese book. Their ability to write or
identify Chinese characters in context could have resulted from practice and memorization rather than ample Chinese reading experience.

Third, three participants had experienced being taught to recognize Chinese characters mainly in disconnected text or being read to/told in Chinese. They lacked Chinese reading experience with connected texts. Fred was the only participant who had gone to a local Chinese school five or six times. Since he did not like the Mandarin Phonetic System, he quit going there. At home, his mother taught him to read a Chinese book of nursery rhymes, sight words, and numbers. As a result, he could identify 41 characters in context. However, what he was reading was mainly disconnected texts. Linda's mother often read to her the Chinese book, The Journey to the West. Susan's mother translated an English book into Chinese and told her the story in Chinese. Although the three participants had experience with Chinese characters and stories, their experience was limited.

Existing research on second language learning has offered compelling evidence to suggest an interdependent relationship between a first language and second language proficiency (Cummins, 1994). That is to say, literacy skills developed in a first language can be transferred to a second language. In these cases, however, the participants had not yet developed their literacy in Chinese, so there might have been little transfer between Chinese and English. The only elements in their limited
Chinese literacy experience that might have transferred were their love for stories, reading, or being read to as well as some aspects of concept of print (e.g., words, not pictures, tell a story).

**Home literacy support.** Although the English proficiency and educational levels of each participant's parents ranged from low to high, they provided their children with as much support as they could. Each participant's home literacy support varied in terms of (a) valuing the use of Chinese and English as communication tools at home, (b) richness of literacy environment, (c) various literacy activities, and (d) parents' involvement in literacy activities.

First, the participants' ability to speak and understand Chinese as well as their English proficiency level were the main concerns of their parents. Although Chinese was predominantly used at each participant's home, there was an increase in English use at some participants' homes toward the end of this study. Dick talked to his sisters in English more often; Willie tended to speak English to his parents, grandmother, and whoever came to visit his home. Their increase in English use at home caused their parents some concerns. The parents of Dick and Willie hoped that their children spoke Chinese at home more often because they were Chinese, and the Chinese language was part of their cultural heritage. In addition, Susan's mother preferred Susan to speak Chinese at home although she never provided an explanation for her preference. The
parents of Dick, Susan, and Willie expected their children to speak more Chinese at home. However, they never overlooked the importance of their children's English learning. Furthermore, Dick's mother even worried that her Chinese accent might influence his English.

Both Linda's and Edna's mothers thought that English proficiency was the major learning goal for Linda and Edna. Thus, Linda's mother felt that it was necessary to find time to work with Linda on her English; Edna's mother would send her to a Chinese school after her English was better. Fred's mother never stated her preference of language used at home. She did feel sorry that she could not help Fred much as her English was not good enough.

Second, based on the data from home visits and pre- and post-interviews, the parents of the six participants provided them with literacy-rich environments. Each participant had a television set and writing supplies at home. The minimum number of books at home was 10. Linda, Fred, and Willie each had one Chinese book. Linda's was a story book; Fred's and Willie's were more like lists of labels for objects although Fred's had a few nursery rhymes. Additionally, Edna and Fred had an electronic bilingual Chinese-English translator. Sometimes Edna's mother took her to a local library to check out books related to what she had learned at school (e.g., colors). Similarly, Dick's father took him to a local library weekly to check out six books of his choice. Susan's
mother bought whatever books Susan loved although some of the books were too hard for her to read. Her mother just wanted Susan to have a habit of wanting books and wanting to read. Five participants' parents, except for Linda's mother, had no knowledge of their children's favorite books.

Third, the six participants had various learning activities at home. Most of the learning activities were to reinforce what was taught at school. The first activity was being read to. Five participants, except for Fred, whose mother was not sure that her English was good enough to read to him, were read to. The books were from home and/or from a library. Dick was the only participant whose eldest sister instead of his parents read to him. Finger pointing was absent in four participants' reading experience. Edna's mother finger pointed at words while reading. Willie's parents started finger pointing while reading to Willie after Willie's aunt told them about the importance of finger pointing.

The second activity was participants' reading books by themselves. There was variability in frequency of reading books. According to their parents' observations, Linda did not read much by herself. Edna and Willie were reading by talking something that was not exactly the same in a book. Dick and Susan focused their reading mainly on pictures. Fred even read newspapers. His mother wondered how he could enjoy reading so much as there were no pictures. If the participants had questions
about books, they always asked their parents, grandmothers, or siblings for help. Dick's questions about books changed from focusing on pictures at the beginning of this study to focusing on words at the end of this study. Willie would get very upset and even lose his temper if his father did not tell him what a word meant. As a result of their reading, the six participants were all able to tell me their favorite books. Linda, Fred, and Willie even read to me several pages of their favorite books.

The third activity was to review what was taught at school through finishing homework or doing extra copying. Linda did not have homework from her school and never copied words. Fred was often required to finish his homework before he went to watch TV; he did not do any copying of words. Edna and Susan were asked to do a lot of copying daily based on what was taught at school. Susan's mother even bought an activity book to help her with the alphabet, numbers, and sight words. The number of pages of words that Susan had to copy was one page on a regular school day and two pages on holidays. In addition, Susan was asked to read to her mother little books from school and to name pictures whose names started with a target letter. Dick, according to his father, was asked to copy some words, but his mother seemed never to ask him to copy. Willie just read his homework to his mother or father as well as copied letters and words as required.
The fourth activity was coloring and/or drawing. Every participant colored or drew, but not everyone wrote down letters or words. Linda wrote down Dad, Mom, and her and her sister's names in her drawing if the drawing was about her family. Edna wrote down numbers, letters, and some color words. Willie often put a stop sign in his drawing along with some color words and numbers. Fred, Dick, and Susan just drew and seldom wrote any letters or words.

The fifth activity was watching TV. All participants spent a great deal of their time watching TV although the parents of Linda and Susan wanted to limit their daughters' time for TV. While the programs that the participants watched were often cartoons, Linda, Edna, and Susan also watched Sesame Street. Fred quit watching it because it was too easy and no fun. Dick did not watch Sesame Street because of its changed schedule. Willie's parents did not know Sesame Street at all; he, however, watched it on Fridays at school. TV seemed to play an important role in these participants' English learning. Linda's mother commented that Linda learned her English mainly from TV. While watching TV, Fred repeated sentences from TV shows and disliked being interrupted because he was forming a story while watching.

Fourth, the participants' parents and other family members were involved in their learning activities at home. Their involvement ranged from minimal to active participation. Fred's mother was least involved in
his literacy learning as she stated that her English was not good and could not help him. Linda's mother read to/with Linda. Dick's father took him to a library to check out books, and his mother answered his questions about books. Willie's parents' participation in his literacy learning was about average. His father read to him and answered his questions about books; his mother checked his homework.

The support from Edna's and Susan's mothers was the greatest compared to that from the parents of Linda, Fred, Dick, and Willie. Edna's mother supported her more than checking her homework. She asked Edna to read and memorize one page of a book. She also taught her Chinese along with English in a natural setting. In addition to checking Susan's homework, her mother bought an extra activity book to ask her to do exercises as well as copy words after her models. She even translated an English book into Chinese to enhance Susan's comprehension. She and Susan played guessing games to review sight words. While watching TV together, Susan and her mother talked about content.

Although there was variability in the levels of parents' involvement in the participants' literacy activities at home, the participants had positive support from their parents, grandmothers, and/or siblings. The literacy-rich environments made their learning activities possible. Reading books occurred in most homes; the participants' inquiries about books were answered by an adult. Finger pointing was present only at
two homes. Maximum interactions between a participant and his/her parent were observed in two homes. Extra homework in the form of copying related to school curriculum was common in most participants' daily learning activities. The participants all seemed to receive much English linguistic input from watching TV.

**Classroom literacy support.** The participants received various degrees of support from their teachers in the classroom. Classroom literacy support included: (a) availability of books, (b) learning activities promoting oral language development, (c) learning activities promoting written language development, and (d) teachers' perceptions of the participants.

First, in the classrooms of the six participants, there were at least 100 books. Except for Linda's classroom where books were placed on a very high shelf, all books were easily accessible for children. However, none of the teachers in these classrooms chose to have reading as a center or an activity for individual students. Edna and Fred were allowed to read books after they were done with a center or seatwork if their teacher said so. Willie could pick books to read as soon as he finished his center or seatwork. Dick read a book of his choice only on one occasion when the teacher had to test individual children.

Second, oral language was greatly promoted in some classrooms but not in others. Dick's teacher had daily sharing and show-and-tell. In
Willie's classroom, Friday was for show-and-tell and watching video tapes. Susan had a chance to watch video tapes and sing songs daily. In the classrooms of Edna and Fred as well as Linda, there were virtually no activities that encouraged children to use their oral language.

Third, each participant's teacher used different kinds of literacy activities to assist them in developing their written language. The first activity was reading to children. Every teacher read to the participants for various purposes. Dick's teacher read only when there was time after daily routine. If so, the books were often related to thematic units. Linda's teacher read books to "calm the children down" or to inform them about the topic in a thematic unit. Edna's and Fred's teacher read books daily that were related to thematic units. Only Susan's and Willie's teachers read books for letter learning and for enjoyment. While reading, all teachers asked literal comprehension questions from time to time. Dick's and Willie's teachers talked about the cover, authors, and illustrators. The teachers of Susan and Dick as well as of Edna and Fred talked about linguistic features of words in a book (i.e., rhyming words). Finger pointing was used more often in the classrooms of Susan and Willie than those of Edna, Fred, and Dick.

In addition to trade books, the participants were exposed to little books with disconnected texts. This type of books had controlled sight words but no story elements. Linda read this type of books on a flip chart.
once a week. Dick had little books when he was doing a thematic unit (e.g., *My Apple Book*). Both Susan and Willie had taken little books home to read with their parents. They also read words and sentences from the books daily on a flip chart. Finger pointing was used while reading words or sentences on a flip chart in the classrooms of Linda, Susan, and Willie.

The second group of activities centered around alphabet learning. The different teachers used multiple materials and methods. Linda's teachers used only the ABC songs and worksheets to teach the alphabet. Edna's and Fred's teacher incorporated a basal reader, flashcards, and worksheets in teaching the alphabet. In Dick's classroom, alphabet learning was done with flashcards, worksheets, words of a target letter from the children, and games. Both Susan's and Willie's teachers provided them with many activities in alphabet learning. In Susan's classroom, poems, posters, books with words of a target letter, flashcards, letter booklets, and worksheets were used to help them with learning the alphabet. In Willie's classroom, his teacher used story cards in addition to the same materials that Susan's teacher used. Willie's teacher also used songs instead of poems.

The teachers of Linda, Edna, and Fred included little whole class participation. The children were more likely passive learners. On the other hand, the children in the classrooms of Dick, Susan, and Willie were more active learners. For instance, the children in Dick's class gave the
teacher the words of a target letter rather than the teacher giving them the words to memorize. Susan's teacher asked those whose last name started with a target letter to stand up. Willie's teacher encouraged the children to act out when they were singing a song of a target letter.

Another activity present in every classroom was rudimentary writing—handwriting practice of the alphabet and copying words. I regarded handwriting and copying as rudimentary writing because, in these activities, children had a chance only to handle pencil and paper as well as to get familiar with letters and words in terms of their shapes and components. However, the children were not required to apply their knowledge of alphabet and word boundaries. The six participants had few true writing experiences when they could express their ideas using their knowledge of letter-sound relationship and word boundaries. Often what was copied were individual words or phrases. In Edna's and Fred's classroom, they sometimes copied a few sentences after their teacher's modeling. Dick's teacher started introducing sentences for the children to trace and write. Generally speaking, none of the participants in this study had real writing opportunities in their classrooms.

The teachers of the six participants knew the participants well. According to their teachers, Linda, Dick, and Susan were smart but too shy and quiet. They did not volunteer information although they were believed by their teachers to know a great deal. Fred was described as
polite and smart while Edna was portrayed as average and talking too much by the same teacher. The teachers of these five participants did not think that they had any language problems although Susan had difficulty with English prepositional words in the beginning. Willie was the only participant whose teacher was worried about his language ability because of his accent and speaking speed. With a frequent reminder to speak slowly and clearly from his teacher, Willie was doing much better toward the end of this study.

All five teachers (Edna and Willie had the same teacher) focused literacy instruction on developing participants' alphabet knowledge and sight words. There was a great variability of types of materials and methods used to teach the children. Some teachers tended to engage the children more in activities; some teachers offered the children opportunities to further develop their oral language, which most of the participants could get mainly from watching TV at home. Some literacy activities nurtured what the participants were doing at home (e.g., book reading). Lack of finger pointing while reading connected texts in most classrooms seemed to prevent the children from understanding speech-to-print match. Copying and handwriting predominated in developing writing skills; few authentic writing opportunities made it difficult for the children to develop writing skills and knowledge of word boundaries. If the teachers had incorporated formal instruction on the reflective aspect
of concept of word into daily reading, which is more than just asking the children to point out rhyming words, they might have facilitated the children's development in knowledge of word and word boundaries.
CHAPTER 4

Discussion

The foci of this study were to compare the processes of acquiring concept of word (i.e., both performance-based and reflective word knowledge) in English between native English- and Chinese-speaking children and to identify the significant factors influencing the acquisition processes. Considering the generalizability of the findings of this study, several limitations of this study need to be discussed. The first limitation concerns the number of participants. This study focused on only six Chinese children's acquisition of concept of word in English. The findings from this study are embedded in the participants' unique home and school contexts as well as their linguistic backgrounds. Therefore, the findings may have been more specifically related to the participants and may not apply to all native Chinese-speaking children, let alone other second language learners.

The second limitation is related to the length of this study. Each participant was involved in this study for approximately six months, and their concept of word was still evolving toward the end of this study. The
investigation time was not long enough for a thorough examination of a complete processes of acquiring concept of word in English. Thus, the findings may have reflected only part of the processes.

The third limitation addresses limited observational data on home environment. This study relied mainly on parent interview data and minimal home observational data to obtain the information on participants' home literacy support. During this study, I did not conduct any home observations, except for the interview time when some parents showed me how to read books to their children or how to review with their children what was taught at school. It was possible that some parents may have failed to provide me with information related to what they had done at home with their children to support school learning.

The fourth limitation raises questions about assessment. While assessing the participants on the tasks of Pointing and Sentence Dictation Explanation, I used alternative assessment materials for some participants, who felt uncomfortable with unfamiliar linguistic input. Thus, the assessment levels may not be uniform across the six participants. As a result, this might have resulted in less precision in the comparison between and among the participants.

Findings

Despite the limitations of this study, the important findings of this study seem to produce more support for previous research. This study
suggests similar patterns of development in concept of word in English between native English- and Chinese-speaking children. Furthermore, this study confirms the important role that school and home play in supporting young children's literacy development. This study also presents a new perspective on the relationship between second language learners' literacy experience in their native language and English literacy development.

Developmental Patterns of Word Knowledge

The first finding is that the six participants' acquisition of concept of word in English follows similar developmental patterns as native English-speaking children. Their performance-based word knowledge, as demonstrated in the performance of the tasks of Pointing, Word Identification, and Sentence Dictation, was consistent with existing research. The participants in this study were able to correctly finger point at more monosyllabic words than multisyllabic words (Bear et al., 1996). If they pointed at a multisyllabic word, they tended to point at it more than once. Like native English-speaking children (e.g., Downing, 1969), not all participants had an ability to identify all words and phrases. Even those who could identify some words and phrases at first may have failed to identify the same words and phrases later. This phenomenon indicated the developmental nature of acquiring concept of word in English (e.g., Estrin & Chaney, 1988; Karpova, 1955). While some participants did not
identify function words until later, some identified function words at first. This may have resulted from school instruction on sight words, some of which were function words. However, the general pattern in participants' inability to identify all function words is still similar to that of native English-speaking children (Estrin & Chaney, 1988; Karpova, 1955; Papandropoulou & Sinclair, 1974).

While performing the Sentence Dictation Task, most of the participants were able to use letters and/or words to represent a sentence. Such an ability showed developing knowledge of letter-sound relationship (Sulzby, 1989). Word boundaries seemed to be challenging to the participants. Some participants seldom left space between words in their writing or copying while others vacillated in leaving spaces. The claim that acquiring knowledge of word boundaries is challenging (Allan, 1982; Meltzer & Herse, 1969) appears to hold true for the participants.

The participants' reflective word knowledge was demonstrated in their performance of the tasks of Word Awareness and Sentence Dictation Explanation. Their performance supports the notion that young children's reflective word knowledge seldom includes the arbitrary labeling feature of words and actually contains more of the relationships of words and objects that they represent (e.g., Roberts, 1992; Templeton & Spivey, 1980). In this study, the participants demonstrated their multiple levels of understanding of reflective word knowledge. These levels were seldom
conventional. However, one of the participant’s explanations (e.g., Table is a name.) for “Why is/isn’t . . . a word?” was close to a conventional definition of word. The inability to provide conventional explanations for “Why is/isn’t . . . a word?” suggests that the participants’ word knowledge was implicit rather than explicit (e.g., Roberts, 1992). Furthermore, the participants may have been aware of the words in the tasks that were units of written language. However, they may not have necessarily known that these units were defined as words (Bowey, Tummer, & Pratt, 1984). The participants’ evolving reflective word knowledge was also evident in their inability to conventionally explain space between words in their writing or copying. Two participants related their explanations to school learning (Roberts, 1992). Dick said, “You are supposed to do like that.” Willie explained the space in blue violet as “It’s like Mrs. Carson’s card. It says blue violet.”

Furthermore, as acquisition of concept of word is part of early English literacy development, the participants’ similar developmental patterns produce more support for the conclusion that second language learners’ English literacy development is similar to that of native English-speaking children (Cummins, 1994). In particular, this study suggests that like native English-speaking children, the Chinese-speaking children’s process of learning conventions of English is developmental—
moving from the implicit or unconscious level to the explicit and conscious level (e.g., Goodman, 1986; Sulzby & Teale, 1991).

Similar to native English-speaking children, Chinese-speaking children are unique individuals and vary on such factors as acquisition rates and acquired English proficiency levels (Wong-Fillmore, 1991). Among Linda, Edna, and Fred, who were at the second semester of their kindergarten year when they participated in this study, it was observed that they demonstrated different levels of performance-based and reflective word knowledge. This also held true for Dick, Susan, and Willie, who participated in this study during the first semester of their kindergarten. Even Edna and Fred, who shared similar classroom experience, demonstrated their different levels of understanding. In addition, it appeared that participants during their second semester of the kindergarten year did not always perform better on the five tasks than those during the first semester of the kindergarten year. For instance, Linda could not provide any explanations for spacing between some words in her copied lines. Dick and Willie, on the other hand, were able to relate their explanations to school learning.

The data from this study showed that there was one difference between native English- and Chinese-speaking children on the performance of the Pointing Task. The difference lies in the pace of memorizing unfamiliar linguistic input. Although there has been no
study to date that has documented how fast a native English-speaking child can memorize the two lines of a nursery rhyme used in the Pointing Task, my experience with using the same task to assess native English-speaking children led me to believe that the participants in this study had difficulty reciting the two lines of a nursery rhyme. It generally took them seven times to memorize the lines. Their difficulty may have been due to their limited exposure to oral English language; as a result, they were not familiar with its rhyme and rhythm.

Home and School Context

The six participants' growth in word knowledge in English further supports the importance of the social context in young children's early literacy learning (e.g., Heath, 1983; Taylor, 1983, Teale & Sulzby, 1986). Little or adequate support from their home and classroom environments could have an impact on children's literacy development (e.g., Barone, 1995/1996; Snow, Barnes, Chandler, Goodman, & Hemphill, 1991). The participants in this study received various degrees of support from their homes. Such support ranged from parents' just reading to them to parents' doing various activities with them to reinforce what they have learned at school. The participants' school support varied from having only a limited number of activities (e.g., doing worksheets) to engaging them in active learning (e.g., asking them for words of a target letter).
Home literacy support. The parents in this study had different English proficiency levels and educational backgrounds. They also differed from one another on such factors as providing resources for their children and participating in their children's learning. However, regardless of their linguistic, social, and economic backgrounds, they were supportive of their children's learning, which was similar to the conclusions from other studies of parents in low-income families (Snow et al., 1991; Taylor & Dorsey-Gaines, 1988). The parents all created literate environments for their children, which was crucial for young children's early literacy development (e.g., Goodman, 1986; Taylor, 1983). In the homes of the participants books, television sets, writing supplies, and other stationery were present. The parents, sometimes grandmothers and siblings, read to/with the participants. Such book reading experience cultivated participants' love for reading. Furthermore, the interactions between a participant and a parent/sibling allowed the participant to observe modeling and effective use of oral language (Snow, 1993).

In addition, most parents supported school learning by supervising homework or asking the participants to do extra homework—copying or reading more books. The parents permitted the participants to watch various educational programs on TV, which might have provided them with a good linguistic model. However, the parents might not always
have confidence in their abilities to help their children in learning English, as shown in the cases of Linda, Edna, Fred, Dick, and Willie.

Although the parents of Dick, Susan, and Willie preferred their children to speak Chinese at home, they never overlooked the importance of their children's English literacy development and assisted them in learning English. Furthermore, home literacy support went beyond the parents of the participants. In this study, due to Chinese culture that grandparents lived with their grandchildren when possible, the grandmothers played an important role in helping some participants learn English. Similarly, assistance from siblings in some participants' learning should be recognized. The assistance from family members other than parents was similar to what was described about literacy support in homes of native English-speaking children (e.g., Snow et al., 1991).

School literacy support. The school literacy support, as shown in each participant's classroom, varied in terms of the number of different learning activities, types of instructional materials, and degree of participants' involvement. The teachers in this study had various literacy learning activities. Some activities were tailored more to the needs of the participants, especially in terms of oral language development. Some did not nurture what the participants had already enjoyed at home (e.g., love for stories). Some teachers promoted the participants' metalinguistic awareness through talking about rhyming words. Such an initial
introduction, which guides the children to pay attention to words, could build a foundation for development in reflective word knowledge. Finger pointing was used in some of the classrooms while reading disconnected texts (e.g., a group of sentences with controlled sight words). With finger pointing while reading authentic and meaningful texts, the participants probably would have had better opportunities to understand the spoken and written word connection (Bear et al., 1996).

A wealth of research has claimed that children's extensive experience with print can cultivate their word knowledge (e.g., Roberts, 1992; Sulzby, 1986; Taylor, 1983). As Ehri (1976) stated, children's experience with spoken language in context enables them to become aware of words. Interacting with print advances their word awareness in spoken language and enhances their understanding of word boundaries in written language. Another line of research (e.g., Johnson, Moore, & Moore, 1986; Templeton & Spivey, 1980) has suggested that formal school instruction after children have had extensive contact with print can promote their word knowledge. To second language learners, especially those who speak little English at home, classroom literacy activities are the main source of receiving English input, observing good linguistic models from their peers and teachers, and interacting with the English language.
However, the five classrooms did not provide many opportunities for the children to interact with print. The teachers in the five classrooms emphasized participants' acquisition of discrete skills (e.g., names and sounds of the 26 letters) through language exercise rather than on authentic language use (e.g., Altwerger & Ivener, 1994). The participants had few opportunities to interact either with their peers in meaningful literacy events or with connected texts through reading books by themselves. While at home, the participants had many experiences interacting with their parents, grandmothers, or siblings during various learning activities as well as reading books by themselves, although the frequency of book reading varied from participant to participant. Therefore, most classrooms did not nurture interactions and love for reading and failed to provide the participants with many opportunities to interact with print as has occurred in their homes.

In addition, the participants' lack of writing opportunities at school and at home seemed to hinder them from exploring a connection between spoken and written language as well as word boundaries. With more authentic writing experience, the participants might have been able to perform better in the tasks of Sentence Dictation and Sentence Dictation Explanation. This finding confirmed the importance of writing experience in early literacy development (e.g., Morris, 1981).
Additionally, the teachers of the participants commented that the participants were doing well at school. They were treated just like other students. Four out of six participants were described as shy or quiet. Their personalities seemed to be more easily observed than their language abilities. Although they were shy, when given opportunities, the participants liked to interact with other children who were at similar ability levels as well as with me.

**Impact of Chinese Literacy Experience**

Although the six participants spoke one or two dialects of Chinese, their Chinese literacy learning experience was limited. One participant was exposed to Pinyin while being read to or reading with a parent a Chinese book. Four participants were able to write or identify some Chinese characters. Five participants were read Chinese books. However, they were unable to read Chinese books by themselves. I conclude that the Chinese literacy learning experience of these six participants may have had little impact on their early English literacy development.

This finding offers a new perspective on the role of young Chinese children's literacy experience on the acquisition of English. Assumedly, the participants may not consider learning English as a challenging task, which is due to the abstract representation of English words (Rozin & Gleitman, 1977). The participants have not had enough experience with
the concrete representation of Chinese as they have had little exposure to Chinese characters. As a result, they may not have observed the difference in representation between Chinese and English. Therefore, they may not have been aware of the abstract representation of English after they have been learning it. They may be able to learn English as well as their native English-speaking counterparts.

Additionally, this finding provides little support for the conclusion from Read et al.'s (1986) study: Experience with Pinyin has a positive impact on manipulation of the phonological aspect of an alphabet language. In this study, one participant had a little experience with Pinyin; five participants had no experience at all. If the participants were older and had had experience with Pinyin, this study might have reached a similar conclusion as presented in Read et al.'s study.

This study, on the other hand, supported the notion proposed by Hsia (1992). In her comparative study of bilingual Chinese-speaking and native English-speaking children, bilingual Chinese-speaking children performed in a similar way as their native English-speaking counterparts in the segmentation tasks. This study seems to be consistent with Hsia's conclusion that young children with limited Chinese literacy experience may not differ greatly from their native English-speaking counterparts in performing linguistic tasks.
This finding about the role of Chinese literacy learning experience was not consistent with research on the transfer relationship in literacy between a first language and second language (e.g., Cummins, 1989, 1994; Krashen & Biber, 1988). I argue that, since the participants were too young to have had enough Chinese literacy learning experience, their limited experience had little impact on their English learning. In addition, as Fitzgerald (1995) stated, the relationship of reading achievement between a first language and second language varied across different languages. Chinese and English seem to share relatively less linguistic commonality than Spanish and English. However, the participants may have transferred their love for reading or some elements of concept of print in Chinese to English if they were read to often from Chinese books. Furthermore, the way that the parents taught the participants to learn English reflected the partial impact of the parents' Chinese literacy learning experience—memorization, as evidenced in learning activities at home such as copying English words for a certain number of times.

Conclusions

This study has contributed to existing research in four important ways. First, it has expanded research on performance-based and reflective word knowledge to include native Chinese-speaking children. It has indicated similar developmental patterns in acquiring word
knowledge in English between native English- and Chinese-speaking children although some differences do exist among these two groups due to different linguistic backgrounds. Second, it has confirmed the similar developmental processes in acquisition between a first and second language and recognized diversity among the participants in terms of acquiring rates and acquired English proficiency levels. Third, this study has produced more support for the importance of social context for English literacy development of second language learners. Classrooms should be the place where children have ample opportunities to interact with others and the English language and to engage themselves in meaningful activities for effective language use. Children's homes should also support school learning in various ways. However, what is nurtured at home may not always be supported at school. Fourth, young children's Chinese literacy learning experience may have little impact on their English literacy development.

Instructional Implications

The findings of this study suggest some instructional implications. The first instructional implication is related to classroom environments. Second language learners follow similar developmental patterns in word knowledge as their native English-speaking counterparts. Their word knowledge evolves toward a conventional stage as a result of experience with oral and written language and formal classroom instruction. Second
language learners need to be provided with learning activities that actively engage them in meaningful contexts just like native English-speaking children and that allow them to have extensive interaction with the English language. As Cummins (1994) claimed, second language acquisition is "an active process of construction in which one is driven by the need and desire to communicate . . . in naturalistic contexts" (p. 36). Second language learners need to use English more often rather than doing language exercises (Altwerger & Iverner, 1994).

Classroom teachers can provide second language learners with a variety of activities promoting development of word knowledge such as the language experience approach, shared book experiences, and journal writing. The quality and quantity of oral language input in a classroom seem more important for those whose parents permit them to speak only their native language at home. These children often lack enough English linguistic modeling. Additionally, handwriting practice of the alphabet or copying words do not seem to help the children much with word knowledge. In these activities, the children do not pay much attention to space as they are just passively writing or copying after a model. Journal writing, in particular, allows second language learners to explore sound-letter relationships, word boundaries, and meanings.

The second instructional implication concerns communication between teachers and parents of second language learners. This study
provides evidence that school and home both play a crucial role in children's literacy development. The parents of second language learners should be informed by teachers what their children are learning at school and how parents can help their children at home. In this study, five of the six parents expressed a lack of confidence in helping their children with English. Teachers should demonstrate for parents various activities that they can do with their children at home.

Similarly, it is also important for teachers to know what kind of literacy activities parents and their children are doing at home. Teachers can create classroom environments that nurture or support what children have accomplished through learning activities at home. Teachers can also adjust their daily instruction to include those literacy activities that are seldom done at home. Literacy-rich classroom environments are more crucial for those who lack a solid literacy foundation in their native language or for those who speak mostly in their native language at home.

Further Research

The findings of this study have indicated some possible directions for future research. Future research should focus on a larger number of native Chinese-speaking children and include such variables as types of classrooms (ESL vs. Non-ESL), ages (young vs. old), and diverse classroom contexts (e.g., active child-child and child-teacher interactions vs. minimal interactions). A thorough examination on homes and schools where
journal writing is part of daily routine may provide the potential to explore the relationship between development of word knowledge in English and the writing experience of second language learners.

A longitudinal study is needed to examine a continuum of native Chinese-speaking children's development in every aspect of early English literacy, including concept of word. The children from diverse home and school backgrounds should be included. In this longitudinal study, some assessment materials can be developed with a consideration of alternative assessment materials and second language learners' relative unfamiliarity with rhyme and rhythm of the English language.

A final study should investigate the role of TV programs in second language learners' English acquisition. Specifically, the study should examine how young children understand TV programs and use the linguistic input as a model for their learning. Roles of parents and/or siblings who are watching TV programs with the children need also to be explored.

These studies would all strengthen the findings from this study. They would produce more evidence to support similar developmental patterns in performance-based and reflective word knowledge in English between native English- and Chinese-speaking children. These studies would also explore in depth the relationship between Chinese literacy learning experience and English literacy development. Finally, these
studies would further confirm the crucial roles of home and school support in English literacy development of children who have varying Chinese literacy learning experiences.
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Appendices
Appendix A Definition of Terms

For the purpose of this proposed study, the following terms are defined:

**Alphabetic system.** A writing system consisting of a limited number of letters and representing phonemic units of a language (Downing, 1986).

**Chinese.** A language where each character stands for one syllable with a tone. One syllable with one tone can represent more than one character. There is no correspondence between a sound and its written form, a character (Norman, 1988).

**Concept of word.** In a narrow context, the speech-to-print match (Morris, 1983); in a broad context, it includes both performance-based word knowledge (Templeton & Spivey, 1980) and reflective knowledge (Papandropoulou & Sinclair, 1974).

**Linguistic awareness.** An awareness of language which consists of familiarity with the writing system, including morphemes, syllables, or phonological segments that a reader needs to successfully comprehend a text (Mattingly, 1972).

**Logographic writing system.** A writing system consisting of characters and representing morphemic units of a language (Downing, 1986).
Mandarin phonetic system. A variation of Pinyin used in Taiwan consisting of square shaped strokes (Chen & Yuen, 1991).

Performance-based word knowledge. An aspect of concept of word demonstrated in a child's ability to match spoken words with written words (Morris, 1983), to be aware of boundaries of written words (Meltzer & Herse, 1969) or spoken words (Allan, 1982), and to distinguish words from nonwords (Templeton & Spivey, 1980).

Pinyin. An invented alphabetic system made up of 26 Roman alphabet letters, used in the early years of schooling to help Chinese children living in mainland China make connections between the sounds and characters. There are 37 different phonemes in Pinyin (Chen & Yuen, 1991).

Reflective word knowledge. An aspect of concept of word demonstrated in a child's ability to talk about what words are (Papandropoulou & Sinclair, 1974; Templeton & Spivey, 1980).

Transfer. "The influence resulting from similarities and differences between the target language and any other language that has been previous (and perhaps imperfectly) acquired" (Odlin, 1989, p. 27).

Word. One type of language unit, like syllables and sentences, and an arbitrary label (Estrin & Chaney, 1988); a word is made up of a string of letters, separated from other strings of letters by white spaces (Meltzer & Herse, 1969).
Appendix B Literature Review

Introduction

This review examined the existing research on native and non-native English speaking children’s acquisition of concept of word (i.e., performance-based and reflective word knowledge) from an emergent literacy perspective. First, the importance of concept of word development in relation to early reading acquisition was discussed. Second, the studies investigating children's understanding of word units in spoken and written language were presented. Third, investigations which focused on factors influencing young children's concept of word development were examined. Fourth, the theories of second language acquisition were described. Finally, the studies pertinent to the proposed study concluded the review.

Emergent Literacy

Since Marie Clay coined the term emergent literacy in 1966 (Adams, 1990), researchers have shifted their focus of study on how children learn to read and write from looking for mastery of sequential skills to looking for continuously developing processes. Scholars (e.g., Goodman, 1986; Sulzby & Teale, 1991; Teale & Sulzby, 1986) have presented some strong premises on how young children learn to read.

First, children's abilities in reading, writing, and oral language develop spontaneously and are woven together. Oral language allows
young children to demonstrate their understanding of written language (e.g., Goodman, 1986; Strickland, 1989); reading and writing further assist young children to discover the oral models for language reflected in books (Holdaway, 1979).

Second, young children start learning to read at a very young age. They experiment with environmental print, such as signs, labels, and logos (e.g., Ehri, 1991; Harste, Woodward, & Burke, 1984). Most children are fortunate enough to be exposed to story reading by parents or older siblings (e.g., Clark, 1976; Durkin, 1966; Sulzby & Teale, 1991; Taylor, 1983).

Third, children's initial exposure to oral and written language is functional. Young children learn through active participation in interactions with parents or older siblings in literacy or daily routine activities. They are not just imitators of other knowledgeable persons' language use; they actively construct their own meanings through hypothesis-testing and engagement (e.g., Heath, 1983; Snow, 1993). Additionally, an environment where literacy events happen is important. Child-child and child-parent interactions are the necessary support that children need for literacy development (e.g., Morrow, 1989; Taylor, 1983).

In addition to the importance of a literacy-rich home environment, storybook reading has been regarded as the most beneficial activity in terms of developing children's understanding of written language and
motivating them to explore reading and writing on their own. In her review of the previous studies on the effect of storybook reading on young children's literacy development, Sulzby and Teale (1991) found that children's being read to was positively related to prereaders' language development (e.g., Chomsky, 1972), motivation to read (Mason & Blanton, 1971), developing literacy before entering school (Clark, 1976; Durkin, 1966), and successful beginning reading (Durkin, 1974-1975).

To summarize, the emergent literacy perspective explores young children's literacy and oral language development since birth with an emphasis on their implicit and functional use and understanding of language. However, the perspective also values the crucial role of metalinguistic awareness, that is, "reflection upon language" (Sulzby & Teale, 1991, p. 745), in young children's developmental process of becoming literate (Goodman, 1986; Sulzby & Teale, 1991).

**Concept of Word**

One aspect of metalinguistic awareness (Cazden, 1974; Templeton & Spivey, 1980) or linguistic awareness (Mattingly, 1972) is word awareness or concept of word. In existing research, there are various definitions for concept of word. In this study, concept of word had two aspects. One aspect was performance-based word knowledge, which can be demonstrated in a child's ability (a) to match spoken words with written words in a memorized text (Morris, 1983), (b) to identify words in
a text as individual objects (Henderson, 1980), or (c) to understand one spoken word corresponding to one written word, written as a string of letters separated by white spaces from other strings of letters (Estrin & Chaney, 1988). The other aspect of concept of word was reflective word knowledge (Papandropoulou & Sinclair, 1974; Templeton & Spivey, 1980; Templeton & Thomas, 1984). A child can demonstrate such knowledge by talking about words.

**Importance of Acquisition of Concept of Word**

As soon as children enter school for formal instruction, they are required to develop their written language in school and use written language as a tool for learning. The link between spoken and written language and the ability to match speech with print are crucial to their literacy development. Researchers, from various aspects of literacy development, have emphasized that it is important for children to acquire concept of word.

Ehri (1979) emphasized that the task of matching speech with print was the first task that beginning readers should achieve. They needed to know that one spoken word was matched to one written word. Adams (1990) viewed the ability to match speech with print as a starting point for children to become literate. Templeton & Bear (1992) related the importance of concept of word to conventional spelling. "Concept of word is the benchmark, the singular event that advances dramatically

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children's acquisition of conventional literacy, as they move from syllable to word spelling" (p. 338).

Furthermore, Morris (1980, 1983, 1993) argued that acquisition of concept of word was the prerequisite for beginning readers to develop their ability of phoneme segmentation which, in turn, was the prerequisite for learning to read (e.g., Elkonin, 1973; Liberman, Shankweiler, Fischer, & Carter, 1974; Wallach & Wallach, 1976).

Children's developmental process in acquiring concept of word also yields diagnostic values for teachers. Morris and Henderson (1981) considered children's performance on concept of word measures as valuable input for teachers to diagnose children's word knowledge and to accommodate formal reading instruction to each child's special needs in literacy development.

Finally, Hochberg (1970) argued that a lack of understanding of word boundaries in written English may cause reading difficulties during the early stages of learning to read. As stated, children's acquisition of concept of word lays a solid foundation for their development of other literacy abilities, such as conventional spelling and phoneme segmentation. Undoubtedly, children who have not acquired concept of word must be at a disadvantaged starting point in their literacy development. In order for young children to develop concept of word, they
must be aware of word units in spoken and written language before they are able to make a connection between a spoken word and a written word.

Word Units in Spoken and Written Language

Spoken Words as Units of Spoken Language

A wealth of research has indicated that most children's awareness of word units in a language has not been fully developed when they come to school. Children still need to be aware that spoken words are units of spoken language and written words are that of written language (Bowey, Tunmer, & Pratt, 1984).

Once children have learned to say a first word, they gradually develop the ability to construct a wide range of sentences using various known words. However, they are not aware that it is word units that make up all these sentences (Ehri, 1976). Downing (1969, 1979) conducted the first examinations of children's word awareness in spoken language. He asked 13 five-year-olds to say yes to a spoken word stimulus and no to a spoken nonword stimulus. The nonword stimuli included nonhuman sounds, and other linguistic units (phonemes, phrases, and sentences). Surprisingly, all 13 children failed to identify spoken words. Downing and Oliver (1974) conducted a similar study. They investigated older children's word awareness in spoken language. The children ranged in age from 6 to 8 years. As with Downing's findings,
Downing and Oliver discovered that even the oldest children could not distinguish phonemes and syllables from words.

However, some children, as observed from their language performance, may have word awareness in spoken language as early as 2- or 3-years-old (Karmiloff-Smith, 1986). These children's word awareness is limited to certain types of words (Ehri, 1976). They may know many content words with concrete meanings as they learn them in daily communication and use them frequently, too (e.g., table, shop, and apple). Children tend to ignore other words functioning in ways other than naming an object (e.g., a, the, and on). This observation is evident in a myriad of studies (e.g., Estrin & Chaney, 1988; Papandropoulou & Sinclair, 1974; Roberts, 1992; Templeton & Spivey, 1980; Templeton & Thomas, 1984).

Karpova's (1955) study examined Russian-speaking children's ability to segment speech sounds into words and to differentiate content words from function words. He concluded that children aged from 3 1/2 to 7 years old were usually unable to divide speech sounds into words. Most surprisingly, even if these children could segment speech sounds into words, they still had trouble telling content words from function words, especially prepositions and conjunctions.

Similarly, in the United States, Holden and MacGinitie (1972) asked kindergartners to divide long phrases and sentences into words by
laying down poker chips after they had heard a word spoken. In their study, young children had less difficulty recognizing content words than function words. Their findings were further supported by Papandropoulou and Sinclair's (1974) study. The children, aged 6-7, tended not to count grammatical function words, such as the, as, a, do, and are, in sentences as words. Additional research confirmed these findings (Ehri, 1975; Huttenlocker, 1964; McNinch, 1974).

Studies conducted in Russia and the United States concluded that children's ability to segment words in sentences and to differentiate function words from content words is a developmental process (e.g., Estrin & Chaney, 1988; Holden & MacGinitie, 1972; Karpova, 1955). Even though children may be skillful at using spoken language in their daily communications, their conscious knowledge/awareness of words is not fully developed at this point. This undeveloped awareness is shown in their limited word awareness in both spoken and written language. A great number of studies on word awareness in written language have shed light on our understanding of how children learn about written language.

Written Words as Units of Written Language

In order for children to master speech-to-print match, they must understand that written words are units of written language. Written words are also separated from each other by white spaces (Weintraub, 1971). Children's process of learning spacing boundaries as a unique
feature of recording speech sounds in written forms is difficult (Allan, 1982; Meltzer & Herse, 1969). Again, studies by researchers in various English-speaking countries have indicated children's difficulty of developing word awareness in written language.

In Edinburgh, Scotland, Reid (1966) interviewed 12 first graders about functional and featural concepts of written language. Functional concepts referred to the various communicative purposes of speaking, listening, reading, and writing. Featural concepts were corresponding representations between spoken language and written language. Reid was surprised to find that these children did not even know what a word was. In addition, they failed to differentiate numbers from words, and letters from words. Awareness of spaces as word boundaries was, of course, far beyond their ability.

Later, Downing (1969) replicated Reid's study in England. His conclusion was similar to Reid's in that even the most advanced children considered phrases and sentences as words. Additionally, in New Zealand, Clay's (1966) observations of 100 children during the first year of their schooling concluded that children, even until the age of six, were confused about words and letters.

The previous studies by researchers in Scotland, England, and New Zealand have influenced the development of research in written word boundaries in the United States. Meltzer and Herse (1969) carried out
the first examination of children's knowledge of written word boundaries.

Thirty-nine first-grade children, who had been in school for two and a half months, were asked to count each word in a sentence and circle it. Melter and Herse made the following observations about children's perceptions of written word boundaries: (a) letters were confused with words; (b) long words were often divided into more small words as they needed some spaces between them; and (c) tall letters were indicators of spaces between words. Melter and Herse (1969) indicated that these children had "almost complete ignorance after three months of school of graphic characteristics which define ... a letter or word" (p. 11). Melter and Herse's observations were further supported by Holden and MacGinitie (1972). They found that many children had difficulty understanding and identifying written word boundaries at the end of their kindergarten year. However, it was discovered that brief instruction did assist them in improving their knowledge of word boundaries.

A wealth of research on children's knowledge of word boundaries in written language in the United States and other English-speaking countries has reached an important conclusion. Before children enter school or even when they are at the end of the first school year, they still lack knowledge of written word boundaries. Their limited knowledge results in their inability to distinguish words from letters and to correctly
indicate spaces between words. This inability makes it extremely hard for children to match speech with print.

**Spoken and Written Language**

In addition to children's lack of word awareness in spoken and written language, the different characteristics of spoken and written language make it challenging for children to match spoken words with written words. Unlike written language, spoken language does not have distinctively separated linguistic units, such as sounds, letters, words, and sentences (Liberman, Cooper, Shankweiler, & Studdert-Kennedy, 1967), and spaces between words (Estrin & Chaney, 1988). It is understandable that one will have a difficult time dividing a stream of foreign speech sounds into words in a foreign language. To children who are still developing their language, a sentence seems to be “one continuous word” (Estrin & Chaney, 1988, p. 79). As Estrin and Chaney further illustrated, the written sentence, “Did you see that truck?” sounded to children as “Disjaseethatchruck” (p. 79). Definitely, if children cannot be conscious of distinctive features of word units in spoken and written language, how can they match spoken words with their written forms? The task of speech-to-print match is challenging.

Furthermore, children's language acquisition processes indicate that acquisition of concept of word is part of their language development. The process is developmental and arduous. Piaget (1955) stated that
children were aware of sentences earlier than words. Vygotsky (1962) expressed a similar view in that children learned to speak and to understand the meaning of spoken words in two different ways:

In mastering external speech, the child starts from one word, then connects two or three words; a little later, he advances from simple sentences to more complicated ones, and finally to coherent speech made up of series of such sentences; ... In regard to meaning, on the other hand, the first word of the child is a whole sentence. Semantically, the child starts from the whole, from a meaningful complex, and only later begins to master the separate semantic units, the meanings of words, and to divide his formerly undifferentiated thought into those units. The external and the semantic aspects of speech develop in opposite directions— one from the particular to the whole, from word to sentence, and the other from the whole to the particular, from sentence to word. (p. 126)

Clearly, Vygotsky implied that children's awareness of linguistic units, words, occurred much later in their development than the ability to talk. Word awareness, though, was the key to successful reading achievement.

Factors Related to Children's Acquisition of Concept of Word

It is evident that young children's understanding of word units in spoken and written language is crucial for their concept of word development. Researchers of emergent literacy have addressed the
process of children's acquisition of concept of word from different perspectives. Some argued that children's acquisition of concept of word paralleled their cognitive development (e.g., Ferreiro & Teberosky, 1982; Roberts, 1992; Templeton & Spivey, 1980). As children grew more mature, their word awareness would be fully developed. Some proposed that acquisition of concept of word resulted from children's extensive experience with print. Interaction with spoken language and print promoted children's language development and increased their conscious awareness of words (e.g., Clark, 1976; Teale & Sulzby, 1986). Still others believed that children developed their concept of word through receiving formal reading instruction in school (e.g., Snow, 1983). It is formal school instruction that assists children in bringing word awareness from the unconscious level to the conscious level.

**Cognitive Development and Concept of Word**

Researchers who believed in the significant role of cognitive development in children's literacy development stated that before children develop concept of word, they must have an understanding of what word is. Development of word awareness is congruent with children's cognitive development. Ferreiro & Teberosky (1982), from a Piagetian perspective, studied children's knowledge of written language. They suggested that children's linguistic awareness of written language symbols developed over time, as they grew older. This process was more or less similar to
that of oral language development. Children were frequently testing hypotheses about language functions in their early years. As time went on, children's hypotheses about language were more likely to be in agreement with linguistic conventions. Children's growth in linguistic awareness resulted from their cognitive maturity.

Sinclair-de Zwart (1973) further indicated that development of language and reading ability was associated with children's cognitive level. The close relationship between cognitive development and that of language and reading ability is evident in the role of decentering (Roberts, 1992). Mason (1980) described children's ability to decenter as a way "to separate the meaningful thought (a word or phrase) from its component part (letters, letter sounds, or words)" (p. 207). Acquiring concept of word is included in this process. Roberts (1992) supported Mason by stating that as children were growing older, their thinking process changed in quality. This changed quality of thinking fostered children's ability to decenter. To decenter enabled children to develop their awareness of distinctive linguistic units, phonemes, letters, and words.

In addition, some studies investigated the relationship between cognitive development and word awareness and included studies on both performance-based and reflective word knowledge (Roberts, 1992; Templeton & Thomas, 1984) as well as reflective word knowledge by itself (Templeton & Spivey, 1980). Templeton and Spivey (1980) studied the
correspondence between children's reflective knowledge of concept of word and their cognitive development. The children examined were at three different cognitive levels, as defined by Piaget (preoperational, transitional, and concrete operational). Those at a higher cognitive level showed more correct reflective knowledge about concept of word. Roberts (1992) and Watson (1984) made similar observations. In addition to confirming the close relationship between cognitive development and word awareness (performance-based and reflective knowledge), the above mentioned studies supported the significant role of children's experience with print in their acquisition of concept of word.

**Experience with Print and Concept of Word**

Some researchers have viewed children's acquisition of concept of word as a consequence of their extensive experience with print. Awareness of word in spoken and written language develops naturally in children as they use language in authentic situations at school and at home (Taylor, 1983; Teale & Sulzby, 1986). With interaction with print, children perpetually construct their schemata about a language. Their repeated unsuccessful communication with adults and other children forces them to reconstruct their linguistic schemata. The construction and reconstruction of the linguistic schemata to communicate is especially obvious in their early years (Ferreiro & Teberosky, 1982; Mason, 1980).
Language development. Before children reach school age, their early exposure to spoken language results in effective ways of communicating, a growing number of vocabulary words (Estrin & Chaney, 1988), and tacit awareness of linguistic units (Roberts, 1992). Children's awareness of spoken units is further fostered by their exposure to print and experience with print. Ehri (1976) indicated that when children play with spoken language in context they could learn that speech sounds could be divided into words, and that there were boundaries between words. Struggling with obtaining meanings from print, children developed their ability to understand print, speech sounds, and word meanings. Extensive experience with print would assist children to be conscious of word units in sentences. Supporting Ehri's view, Goodman, Goodman, and Flores (1979) and Smith (1976) stated that natural interaction with print enabled children to become aware of features of written language.

Valtin (1984) also found that young children could have various concepts of word that were broader than what teachers defined as, "scholastic" (p. 225). For example, a child, who has multiple concepts of word, may explain why table is a word by stating, "it is a piece of furniture, I can put my books on it, or I have meals at table." Under the influence of formal literacy instruction, his/her multiple concepts of word is restructured and limited to the conventional or scholastic explanation,
that is, a word is made up of letters and separated by spaces. Karmiloff-Smith (1986) provided further support by stating that children at age 3 or 4 could show some concept of word in their spoken performance.

Furthermore, children may have a better understanding of content words with concrete meanings as opposed to function words (e.g., Holden & MacGinitie, 1972; Karpova, 1955). Clearly, early experience with print contributes a great deal to children's language development and later conscious knowledge of a language.

**Home literate environment.** Since extensive exposure to and experience with print are crucial for children to develop concept of word, the environment in which children spend a great amount of time in their early years should be print-rich and literately supportive. Children's parents and other adults in their lives are key people who create and provide such an environment. Research has strongly supported significant roles of a literate environment and parents in children's literacy development, especially with print awareness (e.g., Goodman, 1986; Taylor, 1983).

From their studies of early readers, Clark (1976), Clay (1980), Durkin (1966), and Taylor (1983) highlighted the importance of a literate home environment in young children's development of print awareness. They discovered that the early readers' homes furnished them with various books and other print materials, which made it possible for them...
to interact with print. Being read to, reading, and writing gradually enhance the children's print awareness in informal settings and a literate environment.

Like the literate home environment, parents' interaction with their children is also vital in their literacy development (e.g., Snow, 1993). Wells (1985) suggested that the interaction between parents and children was the opportunity for parents to model functions and effective use of a language. Through parents' modeling, children began to understand that a language was meaningful and purposeful. Their awareness of the importance of language learning further motivated them to interact with parents, other children, and print. In addition to modeling during parent-child interaction, parents need to share experience and knowledge with children and engage children in discussions to promote children's language growth and emergent literacy. Children's spoken language starts to grow from one word, to two words, to phrases, to sentences, and to discourses (Ollila & Mayfield, 1992). Children's large vocabulary, as Larrick (1988) indicated, was a consequence of frequent parent-child interaction and experience and knowledge sharing. Learning to read and write in school would be much easier and more smooth for children with ample literacy experience than for those with limited literacy experience at home.
Formal Reading Instruction and Concept of Word

Although many studies have proven that children begin to develop their knowledge of word awareness through their interaction with spoken and written language (e.g., Ehri, 1976, 1979; Hiebert, 1978), some researchers emphasized the importance of formal reading instruction. Snow (1983) differentiated between language and literacy. She suggested that the former was acquired naturally while the latter must be achieved through formal schooling. The reason for this difference was due to literacy's higher requirement of metalinguistic awareness. Specifically, as Ferreiro and Teberosky (1982), Holden and MacGinitie (1972), and Taylor (1977) agreed, formal reading instruction in school enabled children to acquire the principle of matching spoken words with written words. Furthermore, Hall (1976) and Johnson, Moore, and Moore (1986) confirmed that formal reading instruction enhanced children's awareness of word boundaries.

However, some scholars have questioned the effect and role of formal reading instruction. According to Templeton and Spivey (1980), not all formal reading instruction would be beneficial to children. They cautioned that formal instruction of word knowledge should not begin unless children had extensive contact with written language. To instill abstract word knowledge into children could hardly help their development of word awareness. On the other hand, Roberts (1992) had a
different view about the role of formal reading instruction in children's acquisition of concept of word. As children were growing older, cognitive development became significantly more important for acquisition of concept of word although formal reading instruction was still crucial. With children's maturity, the close relationship between cognitive development and acquisition of concept of word became stronger while that of formal reading instruction and acquisition of concept of word waned.

**Second Language Acquisition**

Stephen Krashen (1981, 1995), an authority in the second language acquisition field, has proposed two hypotheses: (a) second language acquisition versus second language learning and (b) comprehensible input. He has argued that in the process of second language acquisition children develop their competency in a second language in informal settings, similar to the way in which children learn their native language. The learning process is subconscious. Additionally, he has suggested that second language learning is characterized as a formal and conscious process and serves as a monitor, allowing learners to check their language output against the grammatical rules of a language. Krashen (1991) outlined the relationship between the processes of acquisition and learning by stating that "acquisition is far more important. It is responsible for our fluency in a second language, our ability to use it
easily and comfortably. Conscious learning is not at all responsible for our fluency but has only one function: it can be used as an editor or monitor" (pp. 96-97).

Another important hypothesis in Krashen's second language acquisition theory is comprehensible input. Comprehensible input includes linguistic input that is easy for second language learners to understand due to the contexts in which it occurs, that is to say, the shared background knowledge between the listeners/speakers and readers/writers. Additionally, linguistic input at a level a little above the learners' present language ability is regarded as a stimulus to promote language growth.

It seems that Krashen values natural and unconscious learning and understandable linguistic input for second language learners' success. His hypotheses are consistent with the emergent literacy perspective that children learn the conventions of a language in meaningful contexts, and the learning process is developmental, moving from the implicit or unconscious level to the explicit and conscious level (e.g., Sulzby & Teale, 1991).

In addition to Krashen's hypotheses about second language acquisition, Cummins' (1979) theory of interdependence between one's first language and second language argued that literacy deals with unembedded and decontextualized aspects of language, and children's
developed first language literacy abilities can be transferred to second language literacy development. What can be transferred from a first language to English consists of learning behaviors, skills, strategies, and knowledge of universal linguistic features of phonology, syntax, and semantics (Odlin, 1989). In support of Cummins, Cummins and Swain (1986) claimed that children's first language competence, both written and spoken, is crucial for them to survive in the learning environment where English is a medium of instruction. Hudelson (1984) and Zutell and Allen (1988) observed that Hispanic children used their orthographic knowledge of Spanish to spell English words.

Nevertheless, Gass and Selinker (1983) challenged the assumption that native and non-native English speakers share a similar process of acquiring English literacy. They have admitted the positive and negative transfer between a first language and English while questioning the transfer between two languages with different phonological, syntactic, and semantic systems. Positive transfer enables second language learners to take advantage of the similarities of a first language and English in learning English (e.g., using Spanish orthographic knowledge to spell English words sharing similar Latin roots). Negative transfer indicates the influences inhibiting the learning of English. For example, an accent derived from a first language may transfer to English pronunciation, thus making English words sound strange (Odlin, 1989). Gass and Selinker
have proposed that there would be interference rather than positive transfer between a first language and English when the first language and English are so distinctively different.

**The case of Chinese.** In addition to being a logographic writing system and monosyllabic (Norman, 1988), Chinese also has a unique speech-to-print match. In Chinese, one syllable with the same tone can be represented with more than one character in writing. For example, the syllable *ma* can represent the characters of *mother*, *ant*, and *clean* (verb). As a result, the Chinese language does not possess a one-to-one speech-to-print match (Lee, Stigler, & Stevenson, 1986; Norman, 1988). Concept of word in Chinese conveys a different meaning from that in English, one sound matching multiple characters.

To address the uniqueness of speech-to-print match in Chinese, an alphabetic system using 26 Roman alphabet letters, Pinyin (or Hun Yu Pin Yin), was invented (Chen & Yuen, 1991). Pinyin has been used to assist young children in making connections between written characters and their pronunciations during their first two years of schooling. After that, only new characters may be accompanied with Pinyin.

However, Pinyin used in mainland China and Taiwan is different. The one used in mainland China has Roman alphabetic letters while the one used in Taiwan employs the Mandarin phonetic system, consisting of...
square shaped strokes. In Hong Kong, Pinyin is never used; however, children, more or less, have some exposure to English in and out of school.

As Rozin & Gleitman (1977) explained, the Chinese language uses concrete visual representations to stand for spoken words, and the visual representations of words are not as abstract as letters in English words. The English language poses a problem for learners due to its abstract representations of words and a limited number of visual symbols (i.e., letters) used to stand for different phonetic spellings.

Others have expressed an uncertainty about the influence of experience in learning Chinese on learning English, particularly when it comes to dealing with different ways of learning a language (e.g., Wong, 1988). In learning English, Chinese children may need to alter their learning strategies as learning Chinese requires more memorization while learning English entails more intelligent guessing and acceptance of irregularities due to the often inconsistent letter-sound correspondences. Furthermore, Hsia's (1992) study has suggested that it is invalid to have hypothesized that bilingual Chinese-speaking children would tend to segment sentences into syllables rather than words because their experience in learning Chinese (i.e., a monosyllabic and tonal language) could influence the segmentation task.

To summarize, the little research dealing with the influence of experience in learning Chinese on learning English has reached
inconclusive findings. It is still unknown whether native Chinese-speaking children can utilize their native linguistic knowledge to assist in learning English in the same way that native Spanish-speaking children do (e.g., Hudelson, 1984; Zutell & Allen, 1988). Less is even known about native Chinese-speaking children's efforts to develop their early English literacy. The following two studies by Hsia (1992) and Read, Zhang, Nie, and Ding (1986), though not dealing with beginning English learning in particular, may provide some insights into the understanding of the uniqueness of the Chinese language and Pinyin.

Relevant Studies

Hsia's Study on Word Units in Spoken Language

Research lacked specific investigations of non-native English-speaking children's performance on word awareness in spoken language until a study by Hsia (1992). Hsia conducted the first comparative examination of monolingual English-speaking children and bilingual Chinese-speaking children's ability to segment sentences into words in spoken language. In her two studies the children, aged 4 to 6, were required to carry out two tasks. The first one was to remove one penny from its row in a plate when they thought that they were saying a word while retelling a story. The second one was to segment sentences orally. Hsia found a high correlation between monolingual English-speaking and bilingual Chinese-speaking children in the task of segmenting syllables.
and words. These children's performance on segmentation of intraword boundaries might transfer to segmentation of interword boundaries. On the other hand, Hsia did not find a significant group effect to prove her hypothesis that Chinese-speaking children were more likely to segment sentences into syllables instead of words than monolingual English-speaking children did. Her hypothesis was based on a unique feature of the Chinese language, where each morpheme being monosyllabic.

Hsia's comparative study of children's awareness of word boundaries can be characterized as pioneering in nature. However, the study has some serious limitations. First, the focus of her study was limited to word units in spoken language; word units in written language were not studied. Second, the bilingual children in her study already had some literacy experience with English, both oral and written. Finally, the bilingual children in Hong Kong, whose English and Chinese learning experience is fairly different from that of other Chinese children from mainland China and Taiwan, only represented a rather small percentage of young Chinese children. Thus, the findings about Chinese children's understanding of word units cannot be generalized to other young Chinese children.

Read et al.'s Study on the Effect of Pinyin on Phonological Manipulation

Unique to young Chinese children learning English is that they may have prior experience with both the logographic writing system of
Chinese and that of the alphabetic writing system of English, that is, if
they have had exposure to Pinyin, an alphabetic system that assists
Chinese children in making connections between a sound (i.e., a syllable
in Chinese) and a character. An important study by Read, Zhang, Nie,
and Ding (1986) investigated the effect of prior experience with Pinyin on
phonological manipulation, which is crucial in early English literacy
development of Chinese-speaking children. Read et al. asked two groups
of literate Chinese adults to add or delete an initial consonant in a spoken
Chinese syllable. One group of Chinese learned Chinese through Pinyin.
The other group learned Chinese by memorization. The study concluded
that those with Pinyin background were able to perform the adding and
deleting tasks while those without Pinyin couldn't. Read et al. have
indicated that phonemic segmentation ability is the by-product of reading
experience; in this case, the Pinyin experience has an impact on
phonological manipulation. However, Read et al.'s study explored only
one aspect of reading an alphabetic language, phonological manipulation.
The question of the relationship between prior experience with Pinyin and
Chinese children's concept of word development in English remains
unanswered.

Conclusion

This review of literature on factors influencing native and non-
native English-speaking children's acquisition of concept of word in
English has revealed that: (a) current research has focused on the individual role of cognitive development, experience with print at home and at school, and formal reading instruction; (b) little research has been done to thoroughly explore the acquisition process of concept of word of non-native English speakers; and (c) only one study thus far has been conducted to investigate bilingual Chinese-speaking children's acquisition of word boundaries in spoken English. Therefore, further studies examining native Chinese-speaking children's acquisition of concept of word in English are necessary.

The purpose of this proposed study was to investigate the acquisition process of native Chinese-speaking children's concept of word in English (both performance-based and reflective word knowledge). The researcher was particularly interested in answering the following two questions:

1) What are the similarities and differences between native English- and Chinese-speaking children in developing performance-based and reflective word knowledge in English?

2) What are the significant factors that influence native Chinese-speaking children's successful acquisition of word knowledge in English?
References


Karpova, S. N. (1955). Osoznanie slovesnogo sostave rechi rebenkom doshkol'nogo vozrasta. [The preschooler's realization of the


Emerging literacy: Young children learn to read and write (pp. 135-146). Newark, DE: International Reading Association.


Appendix C Assessment Tasks
The Pointing Task

Directions: The participant will echo read, with the researcher, the first two lines of a familiar nursery rhyme in either Form A or B. When the participant can recite these two lines from memory, he/she will be told that he/she is going to see these two lines on a piece of paper. After observing the researcher modeling finger pointing at each word while reading, the participant will perform the same task while reading.

Form A: Sam, Sam the baker man
Washed his face in a frying pan.

Form B: Tom, Tom the piper's son
Stole a pig that weighed a ton.

Scoring 0 points for each incorrect pointing (e.g., pointing at individual letters while reading words)
1 point for each correct pointing (i.e., pointing at five individual words while reading the five words)

The Chinese in Pinyin and Character Task

Chinese in Pinyin

Directions: The participant will sound out the 10 Chinese words in Pinyin one by one. A flash card will be used to cover the other words before and after the word that the participant is sounding out so that he/she can concentrate on the shown word. The number in each parenthesis after the word indicates the number of phonemes.

ba (2), chuan (3), tai (2), qian (3), er (1), zhuang (3), liu (3), xing (2), feng (2), an (1).

Scoring

0 points for each unrecognized word
1 point for each recognized word
Chinese in Character

Directions: The participant will sound out the corresponding Chinese characters written on cards. Only the characters from the basic Chinese sight vocabulary required for the primary elementary graders are included.

八 装 千 风
台 流 耳 安
船 行

Scoring
0 points for each unrecognized character
1 point for each recognized character
Parent Interview

Date:

Name of the child: Gender:

Birthdate: Birthplace:

Years in the United States: Media of Communication:

1. How often is English used at home?
   seldom occasionally often

2. Has your child had experience with Pinyin? If yes, where has he/she got such experience? Please explain.
   yes no

3. Does your child know how to read Chinese? If yes, where has he/she learned to read Chinese? Please explain.
   yes no

4. Do you teach your child to read in Chinese? If yes, do you use Pinyin? Which kind?
   yes no

5. Do you send your child to a Chinese school? If yes, what do you know about instruction in that school?
   yes no

7. Do you finger point at each character when you read to your child in Chinese?

8. Do you read to your child in English? What kinds of books do you read to him/her? Please explain.

9. Do you finger point at each word when you read to your child in English?

10. Do you do a lot of reading and writing activities (either in English or in Chinese, or both) with your child? What are they?

11. How often do you do these activities with your child in a day?

12. Does your child read books by himself/herself? What kinds of books? Are they in Chinese and/or English?

13. Can your child figure out an unknown word by himself/herself? Please explain how?
14. Is your child able to recite the alphabet without mistakes?
seldom occasionally often

15. Is your child able to spell letters in printed words?
seldom occasionally often

16. Is your child able to make alphabet letters when drawing?
seldom occasionally often

17. Does your child have a favorite book? What is it?
yes no

18. How often does your child watch Sesame Street?
seldom occasionally often

Teacher Interview

Name: Date:

Grade Level:

1. How long has the child been in your classroom?

2. Have you observed any special needs that the child has? If yes, please explain.
   
   Yes No

3. What kinds of literacy activities do you usually do in your classroom?

4. Please describe the child's behaviors during the various literacy activities.

5. If the child does not participate in the various literacy activities, what might be the reasons?

6. What other children does the child usually work with during the various literacy activities?

7. Which activities do you use to help your students recognize words?
   
   (a) Dictated Stories/Language Experience Approach
   
   (b) Echo Reading
   
   (c) Choral Reading
   
   (d) Patterned Book Reading
   
   (f) Other Activities:
Do you finger point at each word while reading a text in the above mentioned activities?

8. What are the similarities and differences between the child and other children in participating in the above activities?
The Word Identification Task

Directions: The researcher will read out a word or a phrase from the following list of nine words and three phrases. The participant will respond to each aurally presented phrase or word by answering the question, "Is ___ a word?".

<table>
<thead>
<tr>
<th>Phrases</th>
<th>Nouns</th>
<th>Verbs</th>
<th>Functors</th>
</tr>
</thead>
<tbody>
<tr>
<td>from the house</td>
<td>table</td>
<td>give</td>
<td>the</td>
</tr>
<tr>
<td>up and down</td>
<td>night</td>
<td>put</td>
<td>and</td>
</tr>
<tr>
<td>hide and seek</td>
<td>children</td>
<td>took</td>
<td>with</td>
</tr>
</tbody>
</table>

Scoring: 0 points for an incorrect response (i.e., treating a word as a nonword, and vice versa)

1 point for a correct response

The Word Awareness Task

Directions: The researcher will ask the participant to justify each answer from the Word Identification Task. The participant will answer the question, "Why is/isn't _____ a word?".

Scoring

0 points for no response or "I don't know"

1 point for a response relating a word to an object/action (e.g., table is a word because it is a piece of furniture. Or put is a word because we put things away.)

2 points for a response indicating that a word is the same as saying something (e.g., the is a word because it says T.H.E.)

3 points for a response reflecting structure knowledge of the word in print and/or sound (e.g., and is a word because we use it a lot. Or the is a word because it is something you say.)

4 points for a response defining a word in a conventional way (e.g., table is a word because it's a name for the table. Or the is a word because you can find it in the dictionary.)
The Sentence Dictation Task

Directions: The researcher will read aloud a sentence in Form A or B and ask the participant to first say the sentence back and then write down the sentence. The researcher may repeat the sentence as many times as necessary.

Form A: The monkey ran up the tree.
Form B: The puppy went out the door.

Scoring 1 point for a space wider than the spaces between letters within a word (e.g., a space between ran and up.)

1 point deducted for a wider space between letters within a word (e.g., a space between a and n in ran) or for more than the total 5 spaces in the sentence

The Sentence Dictation Explanation Task

**Directions:** The participant will be asked to explain why some spaces are wider than necessary in the previously dictated sentence and/or why there are more spaces than the 5 necessary spaces.

**Scoring**
- 0 points for no response or "I don't know."
- 1 point for an explanation indicating an artifact of instruction, that is, the explanation commonly heard in classroom instruction (e.g., you are supposed to leave a finger space.)
- 2 points for a response indicating physical appearance of the text or for ease of reading, or auditory convenience (e.g., it looks right in this way.)
- 3 points for a response reflective of awareness of words as stable elements of language; spaces divide word units.

Appendix D  Consent Forms
DATE: January 18, 1996

TO: Hong Xu - ICS
M/S: 3005

FROM: Dr. Frederick W. Preston
Chairman, Social Behavioral Committee of the Institutional Review Board

RE: Status of Human Subject Protocol entitled: "Native Chinese-speaking Children's Acquisition of Performance-based and Reflective Word Knowledge in English"

OSP #311s1295-115

This memorandum is official notification that the protocol for the project referenced above has been approved by the Social Behavioral Committee of the Institutional Review Board. This approval is approved for a period of one year from the date of this notification, and work on the project may proceed. At the end of the year, you must notify this office if the project will be continued.

Should the use of human subjects described in this protocol continue beyond a year from the date of this notification, it will be necessary to request an extension.

If you have any questions or require any assistance, please give us a call.

cc: Dr. J. Readance (ICS-3005)
OSP File

Office of Sponsored Programs
4505 Maryland Parkway • Box 451037 • Las Vegas, Nevada 89154-1037
(702) 895-1357 • FAX (702) 895-4242

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February 29, 1996

Hong Xu
Department of Instructional and Curricular Studies
University of Nevada, Las Vegas
4505 Maryland Parkway
Box 453005
Las Vegas, Nevada 89154-3005

Dear Ms. Xu:

At its meeting on Thursday, February 22nd, 1996, the Committee to Review Cooperative Research Requests reviewed your proposal to study "Native Chinese-Speaking Children's Acquisition of Performance-Based and Reflective Word Knowledge in English." The committee is pleased to approve your request to conduct cooperative research with the Clark County School District, with the following provisos:

1) The corrections/changes indicated in the various consent forms you provided should be made. (See attachments.)

2) We should like to work with you to identify participating schools. We assume you are probably already aware of some schools that have native Chinese-speaking 5- or 6-year-old students. However, it would be essential that the principal and teachers of any such schools be willing to participate in the study.

Please call me (at 799-5403) at your earliest convenience, and we will set about the task of identifying potential participants (schools).

Thank you for inviting us to participate in your research.

Sincerely,

Judith S. Costa, Chairman
Committee to Review Cooperative Research Requests

Enclosures

cc: Don Anderson
    Tom Barberini
    LeRoy Hurd
    Dan Hussey
    Craig Kadlub
    Lauren Kohut-Rost
    Connie Kratky
    Charles Rasmussen
    J. Readance
    Carla Steinforth
Informed Consent Letter

Dear Principal:

I am a doctoral candidate in the Department of Instructional and Curricular Studies, College of Education, University of Nevada, Las Vegas. I am going to conduct a research study for my dissertation. The focus of the study will be native Chinese-speaking children's process of acquiring concept of word (matching a spoken word with a written word and talking about what a word is) in English. The purposes of the study are to: (a) describe native Chinese-speaking children's concept of word acquisition process, (b) compare this process with that of native English-speaking children, and (c) enrich our understanding of native Chinese-speaking children's beginning English literacy development.

I cordially invite your school to participate in my research. The expected length time of your school's involvement will be approximately 6 months. I will interview the teacher(s) at your school, whose student(s) will participate in my study, at the beginning and end of the study. These 2 interviews will be audiotaped. Additionally, the researcher will observe the classroom(s) with the participants of my study once every 2 weeks for at least one hour when language arts/reading is taught. There will be 10 classroom observations for the study. I will not interact with the student(s) in the classroom(s), including the one(s) participating in the study. Therefore, classroom instruction and students' learning will not be disturbed. I will take notes during my observations and have an informal talk with the teacher(s) before or after each observation. The informal talks will be also audiotaped.

The findings from the study will benefit the teacher(s) and student(s) in that the study can inform the teacher(s) of unique literacy needs of the native Chinese-speaking student(s). The identities of your school, teacher(s), and student(s) will be protected. If all the names need to be used in any research reports, they will be pseudonyms.

Your school's participation is strictly voluntary. You may withdraw from participation at any time during the study.

If you have any questions concerning the rights of research subjects, please feel free to contact the Office of Sponsored Programs, University of Nevada, Las Vegas at 895-1357. You may contact me at any time at 895-3095 or via e-mail at xu@nevada.edu. Thank you for your cooperation!

Sincerely,

Principal Signature _______________________

Hong (Shelley) Xu

Date _______________________

College of Education
4505 Maryland Parkway • Box 453001 • Las Vegas, Nevada 89154-3001
(702) 895-3374 • FAX (702) 895-4068

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Informed Consent Letter

Dear Teacher(s):

I am a doctoral candidate in the Department of Instructional and Curricular Studies, College of Education, University of Nevada, Las Vegas. I am going to conduct a research study for my dissertation. The focus of the study will be native Chinese-speaking children's process of acquiring concept of word (matching a spoken word with a written word and talking about what a word is) in English. The purposes of the study are to: (a) describe native Chinese-speaking children's concept of word acquisition process, (b) compare this process with that of native English-speaking children, and (c) enrich our understanding of native Chinese-speaking children's beginning English literacy development.

I cordially invite you to participate in my research. The expected length of your involvement will be approximately 6 months. I will interview you at the beginning and end of the study. These 2 interviews will be audiotaped. Additionally, your classroom will be observed once every 2 weeks for at least one hour when you are teaching language arts/reading. There will be 10 classroom observations for the study. I will not interact with your students, including the one(s) participating in the study. Therefore, your instruction and your students' learning will not be disturbed. I will take notes during my observations and have an informal talk with you before or after each observation. The informal talks will be also audiotaped.

The findings from the study will benefit you and your student in that the study can inform you of your student's unique literacy needs. The identities of you, your student, and your school will be protected. If all the names need to be used in any research reports, they will be pseudonyms.

Your participation is strictly voluntary. You may withdraw from participation at any time during the study.

If you have any questions concerning the rights of research subjects, please feel free to contact the Office of Sponsored Programs, University of Nevada, Las Vegas at 895-1357. You may contact me at any time at 895-3095 or via e-mail at xu@nevada.edu. Thank you for your cooperation!

Sincerely,

Teacher Signature ______________________

Hong (Shelley) Xu

Date ______________________
Dear Parent(s):

I am a doctoral candidate in the Department of Instructional and Curricular Studies, College of Education, University of Nevada, Las Vegas. I am going to conduct a research study for my dissertation. The focus of the study will be native Chinese-speaking children's process of acquiring concept of word (matching a spoken word with a written word and talking about what a word is) in English. The purposes of the study are to: (a) describe native Chinese-speaking children's concept of word acquisition process, (b) compare this process with that of native English-speaking children, and (c) enrich our understanding of native Chinese-speaking children's beginning English literacy development.

I cordially invite you and your child to participate in my research. The expected length of time of your and your child's involvement will be approximately 6 months. At the beginning and end of the study, your child will be tested in your home on his/her word recognition and knowledge about what a word is. The assessment sessions will be audiotaped. I will interview you at the beginning and end of the study to collect information on your child's home literacy environment. The interviews will be audiotaped. Once every 2 weeks, I will observe your child's classroom to collect data on the type of school literacy instruction in which your child is engaged. There will be 10 classroom observations for the study. I will not interact with your child at school. Therefore, your child's learning at school will not be disturbed.

The findings from the study will benefit you and your child in terms of how to provide a literacy rich home environment to cultivate your child's beginning English literacy development. The identities of you, your child, and your child's school will be protected. If names need to be used in any research reports, they will be pseudonyms.

Your and your child's participation is strictly voluntary. You and your child may withdraw from participation at any time during the study.

If you have any questions concerning the rights of research subjects, please feel free to contact the Office of Sponsored Programs, University of Nevada, Las Vegas, at 895-1357. You may contact me at any time at 895-3095 or via e-mail at xu@nevada.edu. Thank you for your cooperation!

Sincerely,

Hong (Shelley) Xu