Indeterminacy in first and second languages: Case studies of narrative development of Chinese children with and without language disorder

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Indeterminacy in First and Second Languages - Case studies of
narrative development of Chinese children with and without
language disorder.

by

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Abstract

Bilingual children with specific language impairment (SLI) from non English speaking background (NESB) present a major diagnostic problem to speech pathologist and educationist in an English speaking country. There has been no known study on the simultaneous narrative development involving bilingual Chinese children with and without SLI.

This longitudinal case study examined the relationship of Chinese (L1) and English (L2) in narrative development in a child with no language difficulty (Child LN) and a child (Child LI) diagnosed as having SLI. The hypothesis posed for this study was that Child LI has the same developmental profile for narrative skill in L1 and L2 as Child LN, but at a slower rate of progression and there was no within subject difference in the narrative development between L1 and L2.

The narrative characteristics of L1 and L2 of these two children were studied over a twelve months period between the age of six and half and seven and half years. A total of ten recordings of the children's retelling and generation of stories in both L1 and L2 were made, using various bilingual and textless children's books and pictures.

The narratives were analysed with regard to their form and content. The narrative form was measured by T-unit/utterance ratio, the cohesive score and the number of complete episodes. The narrative content was analysed according to the total number of story grammar components (measuring content amount), the types and frequency of grammar components, and the developmental staging (measuring narrative maturity).

For each child, the narrative characteristics of L1 and L2, with regard to the indices studied, were closely linked. Both children showed a similar developmental pattern in their narrative production, and parallel progression with age in the narrative production of coherence score, total grammar components, and number of complete episodes. However, Child LI generally performed at the lower level than Child LN in both his Chinese and English languages for T-unit/utterance ratio, developmental staging, coherence, and number of complete episodes. The study also confirmed the past findings of the important influence of age, topic and communicative context on the production of narratives of young children. Whilst Child LN was developing culture related narrative characteristic in the way of using different constituents for his grammar components, Child LI was yet to do so.

The frequent sequence of "initial event", "attempt" and "consequence" was found in Child LN's Chinese narratives, indicating the "cause-effect" discourse pattern of Chinese culture. This was in contrast to his English narratives where "setting" was found to be more frequent than "consequence". No difference in the frequency of common grammar components between L1 and L2 of Child LI's narratives was found. They were "attempt", "initiating event" and "internal response". The preponderance of "internal response" in Child LI's narrative was in contrast to past studies on children with SLI.

The outcome of this study indicates that the indices used in this study may be culturally relevant for analysing the narrative structure of bilingual Chinese children. The results indicated that simultaneous analysis of L1 and L2 narratives of these children may help to differentiate SLI from ESL (English as second

language). In this respect, gaining access into L1 data through linguistically competent transcriber may be crucial to accurately identify narrative difficulties of children from non English background.

This study, although descriptive in nature with only a single representative case, raised a number of questions that need to be addressed in future research. They will be discussed in the thesis. Further research to see if the same characteristics could be isolated among most bilingual Chinese children is necessary for cross-cultural study of children with SLI.

Declaration

I certify that this thesis does not, to the best of my knowledge and belief:

(i) incorporate without acknowledgement any material previously submitted

for a degree or diploma in any institution of higher education;

(ii) contain any material previously published or written by another person.

16th February 2000

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Chapter I

INTRODUCTION

Research in the development of narratives in child language has occurred mainly as monolingual cross sectional studies of the dominant language with speakers from different cultural backgrounds (Crais & Chapman 1987; Crais & Lorch 1994; Liles 1985a, 1985b, 1987; Hickmann, Hendriks, Roland & Liang 1996; Merritt D & Liles B Z 1987, 1989; Paul & Smith 1993) . The assumption underlying most of these studies is that norms of native speakers (NS) are an adequate target for non native speakers (NNS), (Kasper and Schmidt, 1996). Furthermore, these studies focus only on the formal aspect of narratives (Dasinger and Toupin 1994; Erbaugh 1986; McCabe and Peterson 1985; Peterson 1993; Peterson and Dodsworth 1991; Peterson and McCabe 1987; Purcell and Liles 1992; Wigglesworth 1990; Yuan 1997). This formal aspect at the sentential level was also the main goal of some longitudinal studies of simultaneous language acquisition of bilingual children and the majority of them involving the authors' children (Hoffman, 1991; Dopke, 1998). There have been only a few studies on linguistic characteristics in the narratives of Chinese children learning a second language (e.g., Lee 1992; Hickmann et al 1996; Hickmann & Hendriks, 1999), and none on Chinese children with language disorders.

Simultaneous and longitudinal investigations of the characteristics of narratives in first language (L1) and second language (L2) of a child with English as a second language (ESL) are rare. Rarer still are studies of ESL children with language impairment. In this study, the development of narrative in such children was followed, both in their first and second languages.

A narrative is an account of happenings that emanate from a wide range of human experience, and is presented in a recognisable but unspecified conventional form in all languages. The use of narrative serves an important function in a child's life and demands a degree of cognitive and linguistic ability for its construction. Children with specific language impairment often demonstrate an apparent inadequate narrative inability due to poor decontextualisation (Liles, 1993). Decontextualisation is considered a cognitive requisite for the development of narrative competence. Thus, narrative tasks seem to be a particularly sensitive instrument for tapping higher level language skills. As the demands for the production of narrative resemble the decontextualized language demands of the classroom and its written material, narratives may serve as an important index for future linguistic and academic success (Paul & Smith, 1993). Stories are easily elicited from older pre-school children and can be analysed on a variety of levels. As such, narrative assessment would seem to be an important instrument to consider when evaluating risk for language and learning disorders in older pre-schoolers (Paul and Smith, 1993).

The influx of immigrants from South East Asia and elsewhere, and the adoption of multicultural policy in Australia in recent years, has meant that the number of children with language disorders from non-English speaking families identified in child care centres and pre-schools has increased. Consequently, there has been greater demand for speech therapy. The very limited resources for therapy services and the virtual lack of knowledge regarding the narrative ability of NESB children in general, and Asian children in particular, regardless of whether or not they have language disorders, have made it difficult to ascertain

whether intervention may play a role in helping these children. It is also unclear whether speech therapy at late pre-school and early school age is effective in reducing future academic difficulty. It is hoped that this study will be the beginning of more research on the narrative skills of language impaired NESB children.

There is a clear need for research into languages other than English to gain some insight into the acquisition characteristics of these languages. This is particularly relevant in view of the fact that the data that currently exists for non-English languages tend to be biased as English is usually used as a baseline measure. Children who migrated with their family to an English speaking country at a young age will present with disparate abilities in the two languages when they enrol in primary school. Little is known about the effects of gradually learning a second language during these early years of schooling (Diaz, 1985). The within-bilingual sample design could be an important means for demonstrating a positive relationship between the degree of bilingualism and cognitive ability. However, this area is beyond the scope of this present study in view of the small sample size. In children, story tellings are important means for learning a language and are easily accessible for studying language development. Furthermore, difference in the developmental trend may be demonstrated between the two languages.

Therefore the purpose of this study is to examine the development of narrative in English and Chinese in two Chinese children, one with and one without language delay in their first language (L1- Chinese). The narrative characteristics of both Chinese and English languages were studied

simultaneously. The children's narratives were recorded and their speech analysed in order to answer the following question.

Is there any difference in narrative development between Chinese and English in:

(i)   a bilingual child without specific language impairment;

(ii)   a bilingual child with specific language impairment ?

The children were considered bilingual because they had developed a degree of competency in the use of Chinese (l1) and English (l2) at home and in school respectively (Saunders 1988; Hoffman 1991). The bilingual child with language delay demonstrated a similar degree of delay in both L1 and L2 languages.

Chapter 2

REVIEW OF LITERATURE

2.1 General Literature

In recent years, linguists have turned their focus towards narrative as it is a rich source of information about a child's linguistic and pragmatic knowledge. Increasingly, narrative studies have focused on language impaired children (e.g. Johnston, 1982; Merritt & Liles, 1987; Klecan-Aker & Kelty, 1990; Paul & Smith, 1993; Liles, 1993; Hewitt & Duchan, 1995; Johnson, 1995; Gutierrez-Clellen, Peña and Quinn, 1995; Peterson, 1989 & 1990; Peterson & McCabe, 1991.). At the same time, however, it is unclear what questions about language disorder the study of narratives may answer, and what special methodological constraints must be addressed when studying language impaired populations (Liles, 1993). It is even less clear in respect of cross-cultural studies due to the limited number of studies that have been undertaken.

Narratives are an organiser of human experience (Silliman & Diehl, 1995). They consist of a form with a unique sequence of events, which include the content of a message, and a speaker's intent for reporting (Bruner, 1990; Liles, 1993). They may also include such things as a personal recount in which the speaker attempts at telling and retelling his/her life experience, either real or imagined. Therefore the narrator needs to use appropriate linguistic choices to express what he/she can comprehend of "world" events. Narratives also have a basic function of establishing communication with others within the same cultural context. Within an English speaking culture narration also reflects the speaker's mental ability to interpret the emotion and intention of characters, thus

creating the interpersonal involvement between narrator and audience which constitutes a good storytelling (Feldman, Bruner, Renderer, & Spitzer 1990; Tannen, 1989). However, the purpose of storytelling and what constitutes a good narration may vary among different cultures. In order to achieve the culturally appropriate goal of a "good" narrative, the narrator needs to appreciate that others can hold different beliefs, and he/she also needs to select culturally appropriate pragmatic rules.

The interweaving of culture, cognition, language and meta-cognition provides the basis for studying narratives from two perspectives : firstly the "landscape of action or knowledge " and secondly the "landscape of consciousness" (Silliman & Diehl, 1995, p. vi). These approaches are reflected in narrative literature where there are three approaches to the study of narratives : (a) social and psychological function, (b) cognitive operations that direct the use of narrative content, and (c) the structural features of the narrative content.

2.1.1 Social functional approach

This approach regards the narrative as a speech act in which the speaker has to integrate a variety of themes, interweaving content with socially appropriate arguments for plans and outcome, mould the content coherently for communicative purpose, and monitor all of these to produce the desired effect on the listener (Searle, 1969; Bates & MacWhinney, 1979; Karmiloff-Smith, 1979; Preece, 1987; Bruner, 1990; Halliday, 1994.). How this goal is achieved can be studied by analysing the narrative structure at three levels :

(a) narrative level - a referential description of the event,

(b) meta-narrative - consisting of the narrator's explicit references to the story structure, and

(c) para-narrative - consisting of the narrator's own experiences to establish relationship with the speaker (McNeill, 1992).

Narrating is structured on multiple levels by shifting and integrating these three fundamental levels through time, space and perspectives between the narrator and the story told, revealing the "communicative dynamism" in the narration (McNeill, 1992). Obviously, the relative importance and the relevance of these structural levels are also culturally specific.

At the narrative level, at least in Western culture, the referential aspect is shown by a well-ordered series of clauses structured around an initial orientation, a complication and a resolution (Labov and Waletzky, 1967). The listener understands that the order in which the sentences on this level appear is itself part of the story (McNeill, 1992). Therefore the referential function of narrative is to inform the listener - what, whom, when and where. It is complemented at the meta-narrative level by the evaluative function of comments integrated within the form of the referential function (Labov & Waletzky, 1967; McNeill, 1992; Sulliman & Deihl, 1995.). However, the meta-narrative clauses are not structured around the order of events in the story. At the para-narrative level, the narrator steps out of the role of a narrator by making personal comments unrelated to the events in the story, such as " um have you seen any of the uh Bugs Bunny cartoons?" (McNeill, 1992, p186). The emphasis is on the relationship between the narrator and the listener. Thus, the social functional approach to the study of narratives can be represented as follows :

Bruner.   Form-----------Content----------- Message

Labov, Waletzky.   Referential--------Evaluative

McNeill   Narrative---------meta narrative-------para-narrative

2.1.2 Cognitive operational approach

This approach describes how the narrative content is organised. The emphasis of this approach is on how the structural, linguistic, and psychological components are logically related (Kemper, 1984; Westby, 1984; Liles, 1993; Wimmer, 1980). The elements and the extent of narrative organisation of normal children appears to exhibit a continuum of complexity of development (Liles, 1993). Applebee's (1978) application of cognitive development to narrative structure in young children occupies one end of the hypothesised continuum. It looks at how the statements are logically related to integrate the sequence of events with the theme of the story.

The other end of the continuum is occupied by the complex interaction of strategies between the global narrative organisation of world knowledge and the local aspects of cohesive ties, as hypothesised by Kintsch and vanDijk (1978; vanDijk & Kintsch 1983), and the proposition theory of other investigators (e.g., Black and Bern, 1981; Kemper, 1988; Trabasso, Secco & Van Den Broek, 1984). In between these two extremes is the proposal for cognitive schemata expressed in narration (Mandler & Johnson, 1977; Propp, 1958; Rumelhart, 1975; Thorndyke, 1977; Stein & Glenn, 1982). These investigators regard the presence of schema orientation in children's narrative as an indication of general cognitive development.

According to the cognitive operational approach, the content of narrative is organised by a schema within which a number of episodes are coherently related. Schemata are sets of hierarchically related story grammar components (episodes), which may include setting, initiating, internal responses, consequences, and reactions (Liles, 1993). Episode consists of a goal, attempt at goal's attainment and consequence or resolution of the attempt. It has a theme. The theme, or the meaning conveyed through the characters and the content of the narrative, needs to be organised in culturally specific, socially appropriate and in a logical structure by the appropriate use of coherent language in order for the narrator to communicate successfully with the audience. The narrator also needs to frequently check to see that the communicative purpose is achieved. This requires the ability to recognise genre and culturally specific rules.

Thus the cognitive operational approach used in studying children's narratives may be represented as a developmental continuum from left to right in the following diagram:

Related organisation statement	Episode	Schemata	Global/local proposition
Applebee('78)	van Dijk('81)	Mandler & Johnson('77)	van Dijk&Kintsch ('83)
Kemper('84) Kemper('88)	Stein&Glenn('79)	Propp('58)	Black&Bern('81);
Westby('84)		Rumelhart('77)	Trabasso et al('84)

However, there is no study in the literature on how applicable these narrative organisations are to the Chinese language, especially as it relates to young bilingual children with language impairment.

2.1.3. Structural Approach

The main emphasis of this approach is the structural organisation of the narrative (e.g. Applebee, 1978; Bruner, 1990; Labov & Waletzky, 1967; Stein & Glenn, 1979.) The contextual influence on narrative production and the use of various structural devices to create a culturally coherent text are not addressed. Halliday & Hasan (1989) define a text at two levels. One is at the genre specific global level and the other at the local level of textual coherence. Narrative is a specific genre that follows a set of structural rules to form textual coherence. The unified whole of a narrative text is indicated by the presence of the explicitly marked cohesive ties such as "and", "but", "so" and "then". For children, the T-unit, defined as "one main clause, plus any subordinate clause or non-clausal structure that is attached to or embedded within it" (Budd, 1988, p172), has also been used to measure the syntactic development of narratives (Budd, 1988; Paul & Smith, 1993). For the purposes of cross-cultural comparison the structural aspects of narrative have also been investigated by examining the use of past tense in narrative of speakers of NESB, the marking of new information in relation to verbal position and topic, language complexity in terms of noun and verb phrases, and the use of connectors and indefinite determiners in narrative structure (Saunders, 1988; Ellis, 1987; Hickmann & Hendrik, 1991; Hickmann et.al., 1996; Paradis & Genesee, 1996; Winsler et. al., 1999). The problem in many of these studies, however, is that the comparisons were often made between bilingual and monolingual children, and therefore it is not possible to identify the effect that is attributed to cross-cultural differences.

2.2 Children's Narrative Development and Language Disorder

Research indicates that difficulty with narrative among children with specific language impairment (SLI) is a strong predictive indicator of future academic difficulty (Bishop & Edmundson, 1987; Feagans & Applebaum, 1986; Paul & Smith, 1993). At the same time, there is also a known association between pre-school language disorders and academic failure (Catts & Kamhi, 1986). Recent studies have likewise shown a correlation between poor narrative skill and academic underachievement of adolescents (Hayes, Norris & Flaitz, 1998; Ward-Lonergan, Liles & Anderson, 1999; Johnson C., Beitchman, Young & et. al., 1999). However, little is known about the prevalence of SLI among children during the pre-school or early school years and the clinical identification of these children remains low among kindergarteners (Tomblin, Records, Buckwalter, Zhang, Smith & O'Brien, 1997). This is due, at least in part, to the uncertainty about the diagnosis of SLI (Conti-Ramsden, 1999). The main reason for this uncertainty is because of the lack of a widely acceptable standard for subject identification (Plante, 1998). One may regard a Performance IQ / Verbal IQ (PIQ/VIQ) discrepancy of greater than 20 points as indicative of SLI, or alternatively language development lagging behind the chronological age may be considered as SLI. Based on these criteria, the rate of SLI quoted in the literature varies from 2.5% to 12.6% (Tomblin et al, 1997). The study by Tomblin et al. of 7218 pre-schoolers from English speaking background showed the prevalence rate fell within the above estimate for SLI (7.4%), and they also found that SLI was more prevalent among girls than boys (8% vs. 6% respectively) than has previously been reported. However, despite the important role that language plays in any educational system,

the prevalence of SLI in non- English speaking communities is not known.

Although there have been very few studies about the narrative ability of children with SLI (Lies, 1993), it is known that they have difficulty in producing grammatical sentences. Furthermore, children with expressive language delay and normal language development show a significant difference in their information scores, MLUs per T-unit (MLU=mean length of utterance), percentage of complete cohesive ties and production of different word roots (Paul and Smith, 1993). Children with SLI also have a limited ability to produce lengthy and complex sentences, although they can use and comprehend words in citation formats. The deficit manifests itself at the toddler level as a delay in the ability to formulate sounds (Paul and Jennings, 1992) and words (Paul and Smith, 1993). Later, when basic production skills for phonological and lexical units have slowly been acquired, the problem affects the formulation of sentences and extended discourse. Thus, the deficit in lexical diversity that appears in a story retelling task is not because of a lack of knowledge about the names of things but, rather, reflects a limited ability to formulate language. Some SLI children also have trouble encoding, organising and linking propositions and in retrieving precise and diverse words from their lexicon. These difficulties in formulation, organisation, and retrieval are precisely the characteristics that are often identified in the learning-disabled child of school age (Johnson & Myklebust 1967; Roth and Spekman 1986; Wig and Semel 1980).

The global organisation of story content can be studied by analysing the use of episodes (Karmiloff-Smith, 1980, 1984; Bamberg1987), and the evaluative comments within the episode. Previous studies have shown that by about five

years of age, children are able to utilise cohesive strategies to produce an episodic structure in their narrative which can involve more than one character (Bennet-Kastor, 1983; Karmiloff-Smith, 1980; Bamberg, 1987; Orsolini, 1990; Pellegine, Galda & Rubin , 1984; Ripich & Grifith, 1988; Bamberg, 1987). They are also able to locate the evaluative comments within the text. Often children with SLI are able to produce successive statements but fail to integrate the multiple components of a narration. In another words, they are not able to join the episodes together into a cohesive whole (Liles, 1987, 1993). This is particularly true when the narrative involves many characters. There is a characteristic paucity of connector use in their narratives. Connectors (conjunctions or joining words) are words that function to join or connect word/ideas together. The use of connectors is a necessary cohesive devise for a good narratives across many languages (Berman & Slobin, 1994, p39-84). They are vital to language development as they allow a child to expand upon his or her speech, and to provide more information either by adding on ideas, providing a cause, or exception. Children progressively acquire and use more connectors with increasing age (Hudson & Shapiro, 1991; Hickmann & Hendriks 1999).

The development of connectors follows an age related pattern. Native English speaking children with normally developing language generally start to use early connectors, namely "and" at around 2:6 to 3:0 years old. By 3:6 years, they should be using a variety of connectors including "then, when, because, so, what, if, but, that" (Romaine, 1985; Hudson & Shapiro, 1991; Berman & Slobin, 1994, p593-641). However, children with language difficulties are often significantly delayed with their use of connectors. These children frequently only use "and" and "then"

during the pre- and early school years (Liles, 1993; Johnson, 1999).

There are also more communication breakdowns in the narratives of children with SLI (MacLachlan & Chapman, 1988). Children with language impairment are less able to decontextualise events and rearrange them according to higher order structural relationships (Bamberg & Damrad-Frye, 1991). Decontextualisation is considered to be a cognitive requisite for the development of narrative competence and poor decontextualisation is used as an explanation for some children's apparent inadequate narrative ability in Western culture (Liles, 1993). In contrast, for other cultures such as the Aboriginal, the narrative is more contextualised, governed by the concrete, visual and spatial ways of thinking (McGregor, 1987). Thus, they may not have the same schema in their story-tellings.

2.3 Language skill in bilingual children

2.3.1 Children's cognitive development and bilingualism

The subject of childhood bilingualism has been the focus of a number of narrative studies. The results, however, have been inconsistent, and even contradictory (Schinke-Llano , 1989). This is largely due to the fact that what constitute a "good storytelling" varies a great deal between diverse cultures and little is known about the characteristics of children's narrative in other languages.

The effect of bilingualism on the intellectual development of young children has interested many investigators. The general opinion from these studies is that bilingualism does not retard intellectual development and in fact bilingual children score higher in numerical aptitude, verbal flexibility, perceptual flexibility, general reasoning and meta-linguistic awareness (Anisfield, 1964; Haugen, 1969;

Balkan, 1970; Cummins, 1978; Diaz 1985; Winsler, Diaz, Espinosa & Rodriguez, 1999; Bialystok, 1999). Cognitively, bilingual children are able to encode causal relations, use causal codes that are encased within semantic intention in their message and maintain continuous conversation (Lee, 1992). They are also aware of the structural differences between the two languages. It has been suggested that the competition between these two structural cues facilitates language acquisition in general (Dopke, 1998). More recently, it has been found that bilingualism increases executive function of the brain in young children (Bialystok, 1999).

With regard to the effect of bilingualism on the development of cognitive ability in young children, Diaz (1985) proposed a new threshold hypothesis indicating that the degree of bilingualism will predict significant positive cognitive development before a certain level of language proficiency has been achieved (Diaz, 1985). In other words, in the initial stage of second language learning prior to this unspecified threshold level, bilingualism fosters the development of cognitive abilities. This is in contrast to Cummin's Threshold Hypothesis which stated that

" those aspect of bilingualism which might accelerate cognitive growth

seem unlikely to come into effect until the child has attained certain

minimum threshold level of competence in his second language"

(Cummins, 1976, p23)

In one of the studies on bilingualism and narrative development, Saunders (1982) in his very detailed recordings of narrative and discourse of his two bilingual children (aged three and half years and five and half years) over a two year period confirmed the multitude of advantages for young bilingual children. These include :

1. greater awareness of arbitrariness of language (Ianco-Worrall, 1972;

   Cummins, 1976; Feldman & Shen, 1971);

2. earlier separation of meaning from sound (Ben-Zeev, 1972);

3. greater adeptness at evaluating non-empirical contradictory statements

   (Cummins, 1978)

4. greater adeptness at divergent thinking

5. greater adeptness at creative thinking (Carringer, 1974)

6. greater social sensitivity (Genessee, Tucker & Lambert, 1975)

7. greater facility at concept formation (Peal & Lambert, 1962; Liedtke &

   Nelson, 1968).

2.3.2 Narrative skill and pragmatic development

From early childhood the acquisition of narrative skill constitutes an important

factor in the development of pragmatic ability. As pragmatic knowledge is highly

sensitive to social and cultural features of context, a second language environment

may provide learners with the diverse and frequent input they need for such

development (Kasper & Schmidt, 1996). Kasper and Schmidt believe that pragmatic

knowledge is teachable and that pragmatic knowledge can be facilitated through

consciousness raising activities and communicative practice in classrooms. Thus

activities involving narrative production in classroom and at home are important for

bilingual children with and without language impairment. This view is also shared by

Lee in her longitudinal study of narrative development of twelve bilingual pre-

schoolers from age four through to age six in Singapore (Lee, 1992). It was found

that word knowledge and language fluency differ widely among these bilingual

children. Based on these differences, children can be broadly divided into five

groups:-

1. good at second language (L2 ,English) and poor at first language (L1),

2. good at both languages (Chinese and English),

3. poor at first language (L1, Chinese) and no L2(English),

4. poor at L1(Chinese) and beginning to acquire L2(English),

5. good at L1(Chinese), and poor at L2(English).

It appears that those children who are good at either one or both languages are those who received the most parental support in providing the appropriate linguistic input, and their narration reflects their rich life experience (McCabe & Peterson, 1991; Lee, 1992).

2.3.3 Narrative development in bilingual children

The question of whether second language learning in young children interferes with their first language is another area of interest to researchers. An interdependency principle between L1 and L2 academic skills was proposed by Cummins (1984):

> *To the extent that instruction in Lx is effective in promoting proficiency in Lx, transfer of this proficiency to Ly will occur provided there is adequate exposure to Ly (either in school or environment) and adequate motivation to learn Ly.* (Cummins, 1984, p 141)

According to this principle, both L1 and L2 are manifestations of a common underlying language proficiency which is essential for academic development as one measure of cognitive ability. This principle is supported by numerous studies on pre-schoolers cited by Cummins (1984) which indicated the transfer of academic skills across languages in bilingual education. This academic skill is generally known as the cognitive academic linguistic proficiency (CALP). In order to encourage

language output in pre-schoolers, it has been suggested that it is important to continue using the dominant language at home because of the inter-relationship between L1 and L2 (Lee, 1992).

Studies on the simultaneous acquisition of two languages before three years of age have shown a similar level of competence attained and a similar learning strategies used in acquiring these languages (McLauglin, 1978; Hoffman 1991). In the sequential acquisition of L2 after three years of age, the influence of L1 on L2 is not great either (McLaughlin, 1978; Winsler, Diaz, Espinosa & Rodriguez, 1999). Paradis and Genesee (1996) also found that bilingual children show no evidence of transfer, acceleration, or delay in acquisition of L2 and they supported the hypothesis that grammars are acquired autonomously. They concluded that the acquisition of second language by these children follows the same pattern as monolinguals. Dopke (1998) in the longitudinal study of her bilingual child found that the different structural cues of the two languages provide an important force in the bilingual acquisition.

Bilingual Chinese children appear to go through similar stages in their narrative development in both Chinese and English languages (Lee, 1992). By four years of age, the narration of such children moves from subject to subject (i.e. a tendency for one idea to trigger off another) with little adult-like story grammar. They rely on the semantic relations of narrative to communicate with the listener. By five years of age, their language becomes more formal, and there is a better control of grammar. 'Subjectivity' begins to emerge. At six years, although egocentric in nature, the narration shows greater similarity to the adult form of grammar, reflecting the effect of teaching from parents and pre-school teachers. The use of imitation, such as the use of formulaic expressions, becomes evident, and

comprehension and production shows further development. By this stage, the development of the narrative in bilingual children begin to reflect the social and contextual nature of language acquisition.

2.4 Chinese language and narrative

2.4.1 Characteristics of Chinese Language

A unique characteristic of Chinese as a literary medium is its consistency in form, style and content for more than three thousand years (Chan, 1959). The content of the Confucian classics is intelligible and can be read aloud according to the modern dialectal pronunciation by the lettered Chinese. In contrast to other languages in the world, there is a peculiar relationship between written and spoken Chinese. The written form of Chinese has as many standard pronunciations as there are Chinese dialects (Chan, 1959). It has a unifying effect upon the culture of the people who speak mutually unintelligible dialects (Li & Thompson, 1979). There are five major groups of Chinese dialects - Mandarin, Wu, Min, Yue and Hakka. The Min group is best known to some as Hokkien, and Yue as Cantonese. (Hokkien and Cantonese are the dialects relevant in this study.) Although all these dialects differ in pronunciation, and in the choice of the most common words, they do share a number of phonological and syntactic characteristics that show that they are derived from the same ancestral origin (Li & Thompson, 1979; Chan, 1959).

The basic word forming elements of Chinese are consonants, vowels, and tones. In general, these dialects are characterised by their preservation or deletion of the final consonants -m, -p, -t, -k of ancient Chinese, retaining or unvoicing of the ancient voiced initials and by the number of tones preserved from the ancient Chinese (Chan, 1959). (Hokkien) and (Cantonese) have retained the ancient finals,

unvoiced the ancient voiced initials. (Cantonese) has seven to ten tones and (Hokkien) has six to seven tones. Tonal variation is the most noticeable difference among the Chinese dialects. Chinese is an isolating language that lacks grammatical inflection in all dialects. These dialects by and large share a similar set of grammatical rules that is different from the grammar of English with respect to the manifestation of plurality, agreement, grammatical function, etc. Specifically, they all have classifier, linear word order to signify definiteness/indefiniteness, A-not-A question form. Chinese is a topic orientated language where null subject and null object are allowed (Yuan, 1997). Likewise, a topic NP can be deleted if it is identified with a topic in a preceding sentence. A recent study in various modern Chinese dialects has found that there are no clear semantic boundaries among the Chinese aspectual categories (Sun, 1998). Another common characteristic among the Chinese dialects is that the word order in a clause structure is flexible and is determined by the extent to which the sentence element contributes to the development of the communication. In other words, it is governed by pragmatic factors (Hickmann & Liang, 1990; Chen, 1995).

2.4.2 Chinese grammar and iconicity in narratives

The prime function of Chinese narrative is for the transmission of actual or hypothetical fact, in contrast to the storytelling function found in western languages (Plaks, 1977). The narrative art is demonstrated by the teller's willingness to move in and out of the narrative stances as the demands of the specific context dictate, and his ability to direct the listener's attention from the linearity of chronological episodes (Plaks, 1977). The traditional moral value of the society is woven through these narrative facts. The narrator creates in the text as many episodes as he

perceives necessary and each episode is divided into sections according to the narrator's subjective impression as to the beginnings and ends. Among the episodes, there are shifts in time, place and key characters, similar to that of the Athabaskan and Gooniyandi (an Australian Aboriginal language) narrative style (Silliman, Diehl, Aurilio, Wilkinson, & Hammargren, 1995; McGregor, 1987). Accordingly, this narrative style is known as spatial-causal narrative structure, in contrast to the temporal- causal style of the Western European narrative. This type of spatial-causal narrative structure allows (within certain constraints) the narrator to select, combine and recombine story chunks to produce a coherent story (Silliman, et al, 1995). When applied to the Chinese narrative, the constraint would be the principal philosophy of "changeable existence" of all natural phenomenon - the *yin* and *yang*, and moral judgement of human existence within the social context (Plaks, 1977).

The contemporary Chinese story unit consists of a four part structure, namely beginning, development, climax and conclusion, which has its origin from the historical expository written structure (Kirkpatrick, 1997). The beginning provides an implicit discussion on the scope and the object of the narration. The opening statement in a written narrative is listener orientated, informing the listener about the ensuing structure of the narrative, rather than about the content (Kirkpatrick, 1993). This is followed by a tortuous approach to the subject through the subsequent development, together with the inter-current climactic episodes before the summation of the main point that was implicitly stated at the beginning (Kirkpatrick, 1997; Plaks, 1977). The Chinese narratives tend to reach a climax or logical end before the conclusion of the text. Presence of complementary bipolarity of events is common and is in keeping with the fundamental philosophy of changing

states of existence. The thematic character is composed of composite figures. Each character type is represented by their action in society to demonstrate the various aspect of universal moral value. Thus, evaluative and judgmental comments dominate among these episodic texts. The episodes interweave in a recursive manner. There is no fixed point for breaking the story line as it is broken as the narrator sees fit in the context, (Plaks, 1977). Therefore, in contrast to the typical spatial-causal narrative in the Athabaskan and Gooniyandi cultures (Silliman et al, 1995; McGregor, 1987), the Chinese narrative structure is modelled on the emphasis on spatial patterns alongside the overall temporal rhythm of the four parts structure.

There are five types of explicit formal cohesive ties (temporal, additive, adversative, causative and exemplificative) in Chinese narrative structure that divide the sequence of clauses into thematic units (Bai, 1997). Text cohesion can be achieved through the use of parallelism, rhythm, lexical cohesion, substitution, ellipsis and contrastive statement (Bai, 1997). In Chinese written and discourse texts, there are numerous paired connectors, such as "because-therefore". The main component comes first in the sentential sequence. The sequence of "because - therefore" is commonly used to mark discourse and to introduce and control a series of view points in a discourse text (Kirkpatrick, 1991; Kirkpatrick, 1993). As well as for stylistic purpose, these connectors are used to provide a rhetorical effect of unifying the text into a coherent unit of what is known as "*qianhou huying (front-back echo)* " (Kirkpatrick, 1993, p430). However, the pragmatic discourse of Chinese language is also based on the "principle of temporal sequence" (Kirkpatrick 1996, p105), which is also known as iconicity in Chinese grammar (Tai, 1993). According to this principle, the temporal order of the state of events represented in the conceptual world determines the word order in the Chinese language. Therefore

in comparison to English, Chinese is a more paratactic language (Halliday, 1994, p218).

2.5 Eliciting narrative data

Children's narrative can be elicited and studied in a number of ways. Story generation and retell are generally the most common methods used for eliciting narratives. Although there are specific differences between generation and retell in eliciting narratives, the distinction may not be the critical feature (Baggett,1979; Merritt & Liles, 1989).

Story generation is considered to be more "difficult" than retelling (Merritt & Liles 1987, 1989; Ripich & Griffith 1988), but more representative of spontaneous communication reflecting the pragmatic characteristics of the narrative (Liles 1993, p877). It has greater structural and content variation Its pragmatic function is more culturally specific. Therefore it is harder to organise. Methods for story generation have included a single picture (Pellegrini, Galda & Rubin, 1984; Ripich & Griffith 1988); stem completion (Merritt & Liles 1987, 1989); a made up story about a specific event or object (Orsolini 1990; Roth & Spekman, 1986); a story about anything familiar (Bennett-Kastor 1986); and reports on personal experience (Labov 1972). At the same time, the extent of contextual support offered to the speaker needs to be controlled as it can either positively or negatively influence the outcome of the speaker's narrative production (too much or too little over the narrative).

Story retell can be spontaneous (relating to familiar fairy tales or folklore) or a directed task involving the use of prior movie viewing (Liles 1985a, Purcell & Liles, 1992); picture accompaniment (Ripich & Griffith, 1988); a review of wordless picture books (Bamberg, 1987; Hemphill, Pizardi & Tager-Flusberg, 1991);

televised, or verbal only presentations by the investigator (Merritt & Liles, 1987 and 1989; Feagans & Short 1989; Orsolini, 1990) and audio cassette presentation (Crais & Chapman, 1987).

Finally, repeated data collection over an extended period of time is essential in the language assessment of bilingual children (James 1995). In the initial stage of language learning, the L2 characteristics may be indistinguishable from those of SLI. Studies have also shown that a considerable length of time is necessary for a language learner to achieve the competence of a native speaker (James 1995; Bialystok 1997). Analysis of a series of data over time may counter the initial diagnosis of SLI.

2.6 Methodological issues

One area of difficulty for researchers has been the study of narrative development in bilingual children. This is because the structure of a narrative is affected by cultural diversity and hence there is a lack of a universal norm for assessing bilingual children. Despite the rich diversity in story telling across cultures, and the distinctive narrative traits of minority and non European cultures, seldom is this reflected in our current narrative assessment tools (Johnson, 1995). Current tools available measure :

(1)maturation in narrative content (Johnson, 1982; Crais & Chapman, 1987);

(2)structural growth (Applebee, 1978),

(3)increased components of story grammar (Mandler & Johnson 1977; Stein & Glenn, 1979; Westby, 1984; Kemper, 1984; Labov, 1972; Nelson, 1993);

(4)length (Applebee, 1978; Dickinson et al 1993; Kemper, 1984;

(5)evaluative expression, (Bamberg & Shaver, 1991; Kemper, 1984; Stein & Glenn 1977;

(6)knowledge of genre specific narration (Nelson, 1993; Dickinson, Wolf & Stotsky, 1993;

(7) Story chaining of narrative (Schober-Peterson & Johnson, 1993).

These are criterion referenced assessments which may be suitable to account for change or variability in narrative development over time in bilingual children. The L2 language features of children from NESB often are similar to children with SLI (James, 1995). Therefore extra information obtained from a case study and the repeated assessments may help to differentiate diagnosis of SLI from ESL (James, 1995).

The narrative form, (measured in this study by means of T-units/utterance ratio, coherence score and number of complete episodes), represents the ability of the children to assemble the essential elements into a coherent story with respect to the length that is relevant to the story content. Past studies on the narrative ability of young children used complete episodes and successful complex grammatical sentences for analysing the narrative form (Klecan-Aker & Swank, 1987; Merritt & Liles, 1989; Hadley, 1998; Hayes, et al., 1998). They are regarded as an important index of children's ability "to co-ordinate multiple ideas into a unit" without shifting topics (Hayes, et al., 1998, p166). The inclusion of "successful complex grammatical sentences" has its obvious limitation in the simultaneous study of narratives in L1 and L2 of bilingual Chinese children. What is regarded as successful complex grammatical sentence in one language might not apply to other language. Therefore, the use of T-unit/utterance ratio, cohesive score and number of complete episodes in this study for the comparative study of narratives in bilingual children would seem to be more appropriate. Other studies also show that the narratives of children with SLI

are shorter in terms of number of T-units, fewer episodes, more incomplete episodes, less internal state, plans, fewer story grammar categories, and more ungrammatical sentences " (Johnston, 1982; Klecan-Aker & Kelty, 1990; Liles, 1993; Paul & Smith, 1993; McFadden & Gillam, 1996; Hayes et al., 1998). The problem with studying these variables individually or jointly in cross sectional studies is that they provide few clues as to how these narrative skills evolve in relation to each other.

Chapter 3

PARTICIPANTS

3.1 Selection Criteria

The participants were selected to be as similar as possible, apart from the

language impairment of Child LI. The selection criteria included:

(1) normal IQ,

(2) same age,

(3) male,

(4) from monolingual Chinese speaking family,

(5) mother engaged in full time house duties,

(6) both parents literate in Chinese written language,

(7) parents from similar socio-economic background.

For Child LI, the diagnosis of specific language impairment (SLI) was made

on the basis of the clinical assessment of a speech pathologist (see Appendix D),

psychometric assessment using Weschler Pre-Primary School Intelligence

(WPPSI), and a linguistic measure using Peabody Picture Vocabulary (PPVT)

test (Klecan & Kelly, 1990; Conti-Ramsden et al., 1997).

3.2 Description of participants

The children are both male subjects. At the commencement of the study,

they were both aged six years and five months. Child LN and Child LI are of

average IQ as defined by WPPSI . The main difference between the two children

is that Child LI has severe language impairment. This was determined by the

discrepancy of more than 20 points (i.e. more than two standard deviations from

the mean) between his verbal and non-verbal IQ on the WPPSI scale, and on the lower performance expected for his chronological age on PPVT testing (Johnson et al. 1999). The WPPSI was conducted by a native English speaking registered psychologist with the help of accredited interpreter. The PPVT testing on Child LI also showed that his vocabulary was at least three years below his chronological age in both languages

Both children are Chinese, from non English speaking home background. At the time of the study, the children used their native dialects as the sole means of communication at home. Hokkien is used in Child LN's home and Cantonese in Child LI's home. These are the major dialects of the Fujian and Guangdong provinces of China where the parents of the respective children had originated.

At the commencement of the study, the linguistic environment of both children at home was more akin to that of foreign language acquisition than of second language acquisition (Ellis, 1985, pp.127-163). During the period of the study, the children could only communicate in English to each other as they were not mutually intelligible in their different dialects. The investigator on the other hand has competency in both dialects.

Both their mothers were engaged in full time home duties and both sets of parents were literate in written Chinese language. Their parents were migrants from semi rural areas of mainland China and appeared to be from reasonably similar socio-economic backgrounds. The predominant means of exposure to English for both children came from television and school.

3.2.1 Child LN

Child LN is the eldest boy in his family and he has a brother six years younger. Child LN and his parents had migrated from Southern China to Perth one year prior to the commencement of the study, when he was five and a half years old. He was enrolled in English as Second Language (ESL) school for his pre-primary and grade one classes; and subsequently into main stream class for grade two (aged seven years).

His mother was a primary school teacher in China. Although Mandarin was the official language in the school in which she taught, in practice the native language was the medium of teaching. His father was a draftsman in China although he now works as an unskilled labourer in a shipyard in Perth.

The Linguistic environment of Child LN

Apart from school and television, there seems to be limited exposure to English in Child LN's home. Hokkien is spoken at home and used when his parents read Chinese story books to him. His paternal aunt and her family live within the same suburb and there is a strong social link between them. They have little social contact with English speakers in their daily encounters other than through school. Television viewing is a routine pass time and it is monitored by his parents. Educational video and audio Chinese tapes with a story content and dialogue are frequently viewed by Child LN in his home.

During the second half of the study, the amount of English in Child LN's home increased dramatically. Exposure to as much English as possible was encouraged and in fact, was regarded as a necessity by his parents. The TV was on whenever

there was a children's programme on the screen. Child LN's father took a year off work to enrol in an English course for migrants. Both child LN's parents were keen to learn English through the children's television programmes and through story reading, when the exercise became a "collaborative effort between the child and his parents" (McCabe & Peterson, 1991, p220). A similar process also occurred when they read Chinese story books to him. English story books were brought home from school and in addition English story books and English children's video tapes were also bought for the child. This change in his English environment is reflected in the dramatic increase in his vocabulary scores on PPVT (see Table 4) as occurred during the course of this study.

Child LN was enthusiastic about participating in this research project. He took it as a challenge for demonstrating his language skill. Consequently, he paid particular attention to the detail of story told for "retell". For story "generation", he would spend time scrutinising the material presented. His anxiety arose from his eagerness to perform well.

3.2.2 Child LI

Child LI was born in Perth. His parents had migrated to Perth from Southern China (via Hong Kong) eight years previously. He has two sisters, one three years older and on three years younger. His father works as a chef at a local Chinese restaurant, and he has always been very involved with the children's activities. His father's English is very limited, whilst mother's understanding of English is only slightly better. His older sister is the only one

who can speak English well. Cantonese is the only language spoken at home, and stories are read to Child LI at home in this language. His aunt and her family live in the same suburb and there are strong family ties and joint family activities.

Child LI has a very severe language disorder. Whilst he has a normal full scale IQ (see Table 5), with a high average performance IQ (PIQ), he has a low verbal IQ (VIQ being 40 points difference from his PIQ). His language impairment was also apparent because of the discrepancy between his chronological age and the age levels he attained in both his Chinese and English languages shown on the PPVT, (Dunn & Dunn, 1981; Tomblin et al., 1997; Plante, 1998) (see Table 4 and Graph below).

Table 1. PPVT's profile of subjects.

	Child LN			Child LI	
CA	6:5 yrs	7 yrs	7:6yrs	6:5 yrs	7 yrs
7:6yrs					
AE1	5:4	5:9	7:0	3:5	4:9
6:3					
(Chinese)					
AE2					
(English)	4:2	5:6	6:6	2:5	3:5
4:2					

Note: CA=Chronological age; AE1=Age equivalent in Chinese on PPVT; AE2= Age equivalent in English on PPVT; LI=Language impairment; LN=Language normal; PPVT = Peabody Picture Vocabulary Test.

Figure 1. Graph of the scores on Peabody Picture Vocabulary Test

Vocabulary Score
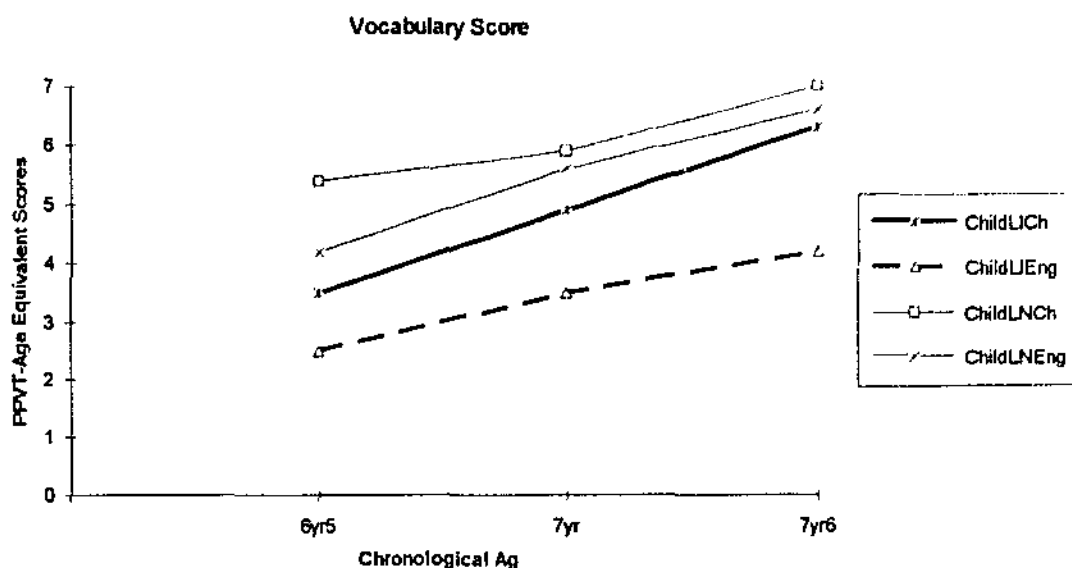
Child LI also has a history of language delay in his native language, which was noted when he was three years old. A WPPSI was done at four years of age, and again just after his entry into first year at school when he was six years of age. The results of this test are presented in Table 5 below.

Table 2. IQ Results - WPPSI.

	Child LI		Child LN
	CA4:7	CA6:2	CA 6:5
PIQ	11í	95	130
VIQ	62	58	103
FIQ	83	74	117

Note: LI=Language impairment; LN=Language normal; PIQ=Performance IQ; VIQ=Verbal IQ; FIQ=Full scale IQ; WPPSSI=Weschler Pre-Primary School Intelligence Test.

He had been receiving speech therapy since his enrolment at the local pre-primary school when he was aged four and half years. Attempts at applying for Language Development Centre (LDC) enrolment for pre-primary and grade one failed on the grounds of his being from a family of non English speaking background (NESB). This was despite the fact that he had severe semantic and pragmatic language impairment as demonstrated in his speech assessments (see speech pathologist's report Appendix D). Because of his difficulty in learning in the main stream school, he was enrolled in an ESL school in grade one. He was eventually accepted for enrolment at an LDC in grade two at aged seven, half way through this study. At the beginning of this study, he had already been involved in individual speech therapy (three months) and then group therapy during the middle phase of the data collection.

The linguistic environment of Child LI

As with Child LN, there is also little social contact with the local English speaking background community members, other than through the occasional formal contacts at the children's school. The children in the family attend a Cantonese speaking Chinese school on Sunday mornings. Unlike Child LN, TV viewing is not a routine pass time of the children and parents in Child LI's family, and when children's programmes are watched, they are not jointly viewed or discussed with the parents. As Child LI is free to choose his own video films or games in Chinese, he mostly watches Chinese Kung Fu action films.

Child LI is slightly more competent in L1 than L2 as shown in the PPVT (see Table 1 and Figure 1). Perhaps for this reason, it is easier for his elder sister to communicate with him in L1. At the same time, his younger sister is just beginning to acquire English in her pre-primary school, and therefore L1 is the language mostly used amongst the siblings.

Both parents of Child LI are not particularly articulate in L1 and they speak the vernacular form of Cantonese. They do not appear to have a keen interest in learning English themselves. Their television viewing is limited to video screening of Cantonese movies and Cantonese children's action films. However, most other times TV is not turned on in the home.

Child LI has very little communicative need for English at home. There is no consistent story time with the parents. He either isolates himself in silent reading, or taking instruction from his elder sister in how to play board games. Story reading is a chore for Child LI and often is stressful because there is a conflict between the child and the parents. The conflict arises from the child's insistence on reading the story set by the teacher and the parental interest in improving the child's L1 story telling ability and knowledge. As a result, Child LI's exposure to English language is less than that of Child LN, even though he was born in Australia and Child LN was not.

Child LI is very aware of his language difficulty and became very anxious when the data was collected in the presence of his sibling. Child LI adopted avoidance tactics to hide his language difficulty. He would often say "I don't know", "It's too hard" or simply skip through the parts of the

story. However, when the Child LN and Child LI were together, it seems

that the presence of Child LN was seen as a challenge by Child LI and he

seemed to make an extra effort.

3.2.3 Parental attitudes

The parents of Child LN recognise the social, as well as the economic value,

of English in their adopted country. The mother is an ex primary school teacher in her

home country and it may be for this reason that she sees the importance of the role of

parental involvement in the language development of her children. As such, there is

constant verbal exchange between her and her two children.

In contrast, Child LI's parents regard the remediation of their child's language

difficulty as a task for the professionals (such as the teachers and the speech

pathologists) and do not regard parental involvement as essential. However, they do

recognise the important role that learning English as a second language has for their

children in achieving academic success. These attitude were consistent with the

findings from past studies among South East Asian parents (Bebout & Arthur, 1992;

Cheng, 1989).

Both families strongly identified themselves as members of Chinese speaking

community, and are making positive effort in maintaining L1. Child LN and Child

LI, at the same time, are immersed in the L2 school environment.

Chapter 4

METHOD

4.1 Design

This was a longitudinal case study of the narrative development of two

bilingual children, one with normal language development (Child LN) and one

with language impairment (Child LI). The study was conducted over twelve

months period. Comparisons were made between L1 and L2 for each child and

between the two children with regards to those variables indicative of narrative

development, namely T-units/utterance, grammar components, number of

complete episodes, coherence score, and developmental staging of their stories.

The children were recorded retelling a story and generating a story using

various bilingual and textless children's books and pictures. A total of ten recordings

were made. The first and the last recordings were formal narrative assessment using

the Bus Story (Renfrew, 1969) and Peabody Picture Vocabulary Test (PPVT, Dunn

& Dunn, 1981) The children were to tell the same story in both languages. There

was a short interval between each version to avoid attempts at direct translation.

The PPVT was used to measure the children's vocabulary development. It

was also used to compare the receptive vocabulary of the two children. It served

as a baseline indication of the child's language ability (Johnson, et al., 1999;

Bialystok, 1999) and similarly it was used for comparison purposes between pre-

and post-study phases. Forms L of the PPVT was used for testing the children's

English language and Form M for Chinese. Items within Form M were

translated into Chinese by the researcher with an attempt at preserving the increasing degree of difficulty in the Chinese version. Wherever there was lexical transparency or greater frequency in the Chinese translation, a less common or more opaque word was chosen after discussion with children's mother.* The words were read out by the mother to the respective child to ensure that it was in an accent familiar to the child so that it can be understood the first time it was spoken.

To ensure a good match of the intellectual levels between the two children, they underwent Weschler Pre-Primary School Intelligence (WPPSI). The WPPSI test on each child was conducted on separate occasions through a professional interpreter.

4.2 Setting and materials

The children's narratives were recorded either at the child's home or at the researcher's home. When it was the former, the child's mother was the listener for the child to tell the story to in his native language, and the researcher the listener for the English version of the story. When it was the latter, then each child served as the English listener and the researcher the respective native language listener.

A Sony Cassette Recorder TCM-459V was used for the recording. The recorder is small and could be held hanging over the researcher's wrist if required. The participants sat on the lounge room floor where the recorder was placed. It appeared that the children were not recorder shy and were keen to listen to their own story when it was played back at the end of the session.

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*This was based on a similar methodology used by Saunders (1982, p160).

The sequence of the English/ Chinese and retell/generation alternated between each session in order to avoid the procedure from becoming too routinised. A variety of culturally appropriate books and pictures were used to elicit the narratives (see Appendix A). These books and picture were selected from popular Chinese stories with a moral issue in their original text, bilingual animated stories, textless books and pictures that the children could related to in their daily life. The books had to be fairly short and age appropriate in order not to be too demanding for either the child with normal language ability or the child with specific language impairment. When a monolingual Chinese text was used for a story "retell", the text was translated into English and told by the researcher to the children. At the beginning of each meeting, a warm up session of about 15 minutes was provided for the child to be familiarised with the pictures and books.

The materials used in this study were presented to the children during the ten recording session in the following order (Table 3):

Table 3: Study materials and schedules.

Session	Child's age	Story Retell	Story Generation
1	6yr 5mth	Bus Story	
2	6yr 6mth	Goldilocks	"Red Ridinghood/The Demon City"
3	6yr 8mth	"Little lamb & a big rock."	Pictures about "A bird, cat and a dog"
4	6yr 9mth	"Three little rabbits & the gray wolf"	"A little red flower"
5	6yr 10mth	Peter and the cat.	Shopping
6	7yr	"Mountain goats crossing bridge"	Frog, where are you?

7	7yr 2mth	"Frog has a bear father".	Pictures about "A horse jumping over fence"
8	7yr 3mth	Wolf is coming!	Pictures about "a messy boy eating rice."
9	7yr 4mth	Farmer Duck	A boy, a dog, a frog and a friend.
10	7yr 6mth	The Bus Story	

4.3   Procedure

The investigation was conducted in three phases: (I) initial assessments (session 1), (II) narrative samplings by "retell" and "generation" (sessions 2 to 9), (III) post investigation assessment (session 10). Recording of the children's story samples was made at approximately six weekly intervals. A different story was used for the "retell" and for the "generation". Each child was asked to retell and generate a story first in one language and then repeat the same retell and generation sequence in the other language. This is to avoid the child attempting to translate what he had just said in one language directly into his other language. The sessions generally followed a similar format, although some variation occurred. The procedure for each session is outlined below:

Phase I : Initial Assessment

Session 1

To establish a baseline assessment of the children's narrative, the children retold the "Bus story" (Renfrew, 1969) and completed PPVT and WPPSI tests.

Phase II : Narrative Samplings (Sessions 2 - 9)

Session 2

This session involved a story generation. Four picture prompts of similar episodic value were used to assist the children. They were arranged in a way that was deemed by the investigator to be a traditional Chinese tale. The story was vaguely familiar to each child, told during their earlier childhood. Each child was given the choice of one of the two tales. Child LN told the story about "Red Riding Hood" (see Appendix A) in Hokkien and Child LI on "The Demon City" (see Appendix A) in Cantonese. The children were given the choice for using these resources to generate a story.

The traditional tale "Goldilocks and the three bears" was used for retelling the story. The text was translated into standard Chinese language and first read by their respective mothers.

Session 3

This session was conducted at the children's own home. A story was elicited from each child using a series of pictures about "A bird, a cat and a dog", (Hickmann & Liang, 1990, p 1178). For the retell a scripted Chinese children picture book about "A lamb and a big rock" was used (Huang, 1993, p 57-64). The written text was concealed from the children . The text was translated into English by the investigator.

Session 4

Both children were interviewed at the researcher's home for this session. A textless book "A little red flower" (Huang, 1993, p.115-120) was used for the

story generation. The story was told to the investigator first in their respective dialect and then to each other in English. The story of "The three little rabbits and the gray wolf" (Jiang, 1996) was used for the retell. Firstly it was read in the native dialect and then in English to each child before the data collection.

Session 5

This session was conducted in the child's own home. For the story generation a text-less book "Shopping" (Shakespeare Publication) was used and "Peter and the cat" (Allen, 1993) for the retelling.

Session 6

This session was conducted in Child LN's home in the presence of both children and mother of Child LN. For the generation, the textless book "Frog - where are you" (Mercer, 1980) was used and for retell "Mountain goats crossing bridge" (see Appendix A). This is a traditional Chinese story for children and has been included in many Chinese reading texts.

Session 7

This session was conducted in the children's own home. Five pictures depicting a horse jumping a fence was used (Hickmann & Liang, 1990, p1178) for the story generation. A moralistic story titled "Froggie has a bear father" (see Appendix A) was used for the "retell".

Session 8

In this session, pictures depicting a red rooster picking grains of spilt rice from a boy who had an untidy eating habit (Huang, 1996, p279-288) were used for the children to generate a story. For the story retell, a bilingual story book

"Wolf Is Coming!" (Yong & Ma, 1996) was used. This session was conducted in the researcher's home.

Session 9

This session was conducted at the child's own home. The textless book "Frog-where are you?" (Mercer, 1982) was used for the story generation and "Farmer Duck" (Waddell & Oxenbury, 1993), a bilingual children's story book, was used for the "retell". The written text in the latter was concealed so as not to influence the children.

Phase II : Post-investigation Assessment

Session 10

This final session was conducted at the child's own home. Renfrew's "The bus story" was used for story retell and a PPVT was completed with each child. The same language sequence was used as in session 1 in the retelling of "The bus story".

4.4 Transcription and coding

The English tapes were transcribed using standard English orthography. The Chinese phonetic system Han Yu Pin Ying (Xinhua Zidian, 1988) was used for transcribing the Cantonese and Hokkien dialects* from the children's first language stories. To ascertain their accuracy, the Chinese transcripts were checked by each mother after they had listened to the tapes. Next the Chinese scripts were translated into English for analysis. The word order of the original narrative was kept if it did not interfere with meaning of the translation. The investigator's prompts were also transcribed. Once the transcriptions were

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*Cantonese and Hokkien are two main Southern dialects of China.

completed, the data were coded according to the prescribed guidelines (see Appendix B). As the investigator is competent in the linguistic structure of both languages (the two Chinese dialects and English), the use of an interpreter was unnecessary and therefore hopefully interpreter bias was avoided.

4.5 Analysis

The quality of the of the narratives, both their form and content, were measured at a "textual" (Halliday, 1994) level. The measurements employed were based on those used in previous studies and thus are those aspects found to be the most salient features in the quality of children's narrative (Klecan-Aker & Swank, 1987; McFadden & Gillam 1996). The indices for measuring the narrative form are T-unit*/utterance** ratio, cohesive score, number of complete episodes***. These indices were used for comparing the narratives of the children's first (L1) and second (L2)languages. The T-unit/utterance ratio measured the amount of relevant information in relation to total utterances produced by each child in the story telling. It served as a qualitative index of narrative ability in this study. Each cohesive component (listener's orientation, adverbial, vocabulary, connectors, and referencing) was rated one to three according the degree of completeness (see Table 4). The full score for a cohesive narrative is 15 and the cohesive score for

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*A T-unit is defined as "a single, independent clause and any subordinate clauses that are grammatically attached to it" (Hayes et al, 1998, p163), and A clause is, as described by Berman & Slobin, (1994) any unit that contains a unified predicate ←— which ←— expresses a single situation (activity, event or state) with finite, non-finite verbs or predicate adjectives.

**An utterance is defined as "a stretch of speech preceded and followed by silence of speaker" (Crystal, 1991, p. 367).

***A complete episode should contain at least three story grammar categories of initiating event and/or internal response, attempt and direct consequence).

each child was the ratio of the actual rating to the full score.

To measure the narrative content, a count was undertaken of the number of

story grammar components (Glenn, 1978; Klecan-Aker & Swank, 1987). These

grammar components consisted of setting, initiating event, internal response,

attempt, consequence, reaction and ending as described by Glenn (1978). However

they were adapted for this study according to the guidelines as outlined in

Appendix B. The same category and criteria for these grammar components, as

described by Hayes, Norris & Flaitz (1998) (see Table 5) was also adopted in this

study for coding the data. The examples listed in this table come from the present

study with the exception of one quoted from Hayes et al.(1998).

Table 4: Criteria for Cohesive Score. (Adapted from SAOLA*)

Listener orientation :
0   Fails to provide orientation at commencement of story or between episode.
1   Some initial orientation is given, but it is not reintroduced or re-established
2   Character and place orientation are provided but story lacks time orientation; or character and time, but no place.
3   Character, time and place orientation are provided and maintained throughout the story

Adverbial
0   Little or no evidence of adverbial
1   Occasional use of adverbial of place, or time, or manner
2   Occasional use of more than one type of adverbial, (of time, or place, or manner)
3   Evidence of use of adverbial of place, time and manner

Vocabulary
0   Non-specific or inappropriate vocabulary used; mostly labelling and over use of deixis
1   More specific vocabulary used. However still concrete, familiar and lacks variety
2   Developing description and elaboration within the story. Some use of adjectives, adverbial, expanded noun phrases etc.
3   Use of more formal literate vocabulary evident, e.g. mental verbs, modals. A wider use and range of descriptive vocabulary throughout re-tell.

Connectors
0   Lacks intersentential links and connector use; re-tell consists mainly of simple sentences or phrases. Active sentences (little passive), repetition of exact lexical items or identical grammatical structure.

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*SAOLA= School age oral language assessment (Allen, Leitao & Donovan, 1993).

1 Mostly temporal connection, e.g *and, and then,*

2 Causal connectivity evident, e.g. *but, because -therefore*

3 Greater variety of connectors used and more literate types, e.g *until, suddenly, firstly, therefore*

Referencing

0 Does not use referencing or fails to indicate referent clearly resulting in confusion re-tell

1 Cohesive skills developing - referencing attempted nut use not consistent and often inappropriate

2 Cohesive ties generally exist between successive utterances, anaphoric referencing used more consistently and referent usually identified

3 Cohesive skill are used consistently and correctly

Sum of all above ratings is 15..

Cohesive Score = sum of actual score for the above rating divided by 15.

Table 5. Story grammar categories and criteria.
   (Based and adapted from Hayes et al. 1998, p.163)

Category	Criteria	Example and sources (see Appendix E)
Setting	Establishes important context, including introduction of characters, location, time and habitual state or usual events.	(a.) [A boy very naughty. One day, the boy... his dad want to go shopping, therefore they then get changed.] 9/1/1999,(3), 1 &2 Child LN (b). [Once upon a time, there were a child and a dog...That dog and child were looking at the frog. Frog was in the jar. 28/2/99,(2),(b), 1,2 & 3 Child LN
Initiating Event	Situation of event that causes the main character(s) to engage in goal-directed behaviour.	[One night, dog and child were asleep, that frog stole away] 28/2/1999,(2),(b),4, Child LN
Internal response		
State	Internal motivations, feelings, and cognition of major character(s) that	[And he said "Be quiet! May be the frog is there.]

		lead to goal-directed behaviour.	28/2/1999,(2),(b),38, Child LN
Plan	Steps that the major character(s) plan to take to attain that goal.	[That frog wanted to go outside.] 28/2/1999,(2),(c),3, Child LI
Attempt/ complicating event	Steps the major character(s) actually takes to attain goal; or any concurrent that is related to the attempt	[He is sleeping, the frog is go away] 28/2/1999,(2),(a),5, Child LI
Consequence/ closing event	Attainment or non-attainment of the goal; or an event that mark / leads to the concluding remark or action	[And then dog was shaking the tree, the bee hive then fell down] 28/2/1999,(2),(b),19, Child LN
Reaction/ Resolution	Major character(s)' reaction to the attainment/non-attainment of the goal; also, resolution any actions or behaviours that result from direct consequence.	[And the dog fell down. And the jar broke. And the little boy was crossed and the dog licked the little boy.] 28/2/1999,(2),(d),7,8,9, Child LN
Ending	A statement that signals the end of the story by summarising the story, offering a moral or, as is the case in folk-tales, providing an explanation for some natural phenomenon.	(a). "There he sits today for every one to see, waiting for his master to return." (Hayes et al., 1998, p169) (b). ....you don't climb up you use to call the adult. That's dangerous. 9/1/99,(2), 27 & 28, Child LN

In addition to the story grammar components, the developmental level of the narratives was also used as a measure of overall quality of the narrative content (Liles 1993; Applebee, 1978) of Child LN and Child LI. According to Applebee (1978), the organization of children's narrative in English develops in a sequential

pattern and is age related (Klecan-Aker & Swank 1987; McCabe & Peterson,

1991, p217). These developmental stages are: (0) heaps, (1) pre-

narrative sequence, (2) primitive narrative, (3) unfocussed chains, (4)focused

chain, (5) true narratives (Klecan-Aker & Swank, 1987; Klecan-Aker & Kelty,

1990). The staging level and definition are listed in Appendix B. Other researchers

have classified these further according to the qualitative developmental stages -

levels 1 to 3 (McFadden & Gillam, 1996) and information packaging of temporal,

causal and constituent elements (Berman & Slobin, 1994), (see Appendix B).

4.6   Reliability

The investigator reviewed 20% randomly selected segments of the

transcripts three months after data collection to determine the intra-rater

reliability. These same segments were also reviewed by a speech pathologist to

assess the inter-rater reliability of the analysis. The reliability was tested by

dividing the number of agreements between the raters by the sum total of number

of agreements and disagreements between scorers, times 100 as the percentage of

reliability (Klecan & Kelty , 1990, p.211) as follows :

$$\frac{\text{No. of agreements}}{\text{No. of agreements} + \text{No. of disagreements}} \quad \text{x}100$$

Since the T-units and utterances were used to analyse grammar components

of the story, the text coherence, and the developmental level, reliability was

calculated for each of these three latter elements. The results of these reliability

tests are presented in Tables 6 and 7.

Table 6 Percentage Agreement for Intra-rater Reliability

Sample Developmental staging	Story Grammar	Text Coherence	
Child LI Retell	91	80	100
Child LI Generation	88	100	100
Child LN Retell	93	100	100
Child LN Generation	88	100	100
Mean	90	95	100

Table 7: Percentage Agreement for Inter-Rater Reliability.

Sample Developmental staging	Story Grammar	Text Coherence	
Child LI Retell	83	100	100
Child LI Generation	89	100	100
Child LN Retell	93	80	100
Child LN Generation	94	100	100
Mean	89.8	95	100

4.7 Ethics

Parents gave informed consent for their child and themselves to participate in the study.

Chapter 5

RESULTS

This study examined the relationship of Chinese (L1) and English (L2) in narrative development in a child with no language difficulty and a child diagnosed as having specific language impairment (SLI). The narratives were analysed with regard to their form and content. The narrative form was measured by T-unit/utterance ratio, the cohesive score and the number of complete episodes. The narrative content was analysed according to the total number of story grammar components (as an indication of amount of content), the types and frequency of grammar components, and the developmental staging (as an indication of the level of narrative maturity).

The results are presented in two sections. The first section concerns the narrative form. The results relating to the content of the narrative are given in the second section.

5.1 Narrative Form

Three aspects of narrative form were investigated and the results of these are presented below. They include T-units/utterance ratio, textual coherence and number of complete episodes.

a. T-units/utterance ratio (Figures 2 & 3)

Child LN

Child LN produced similar story length in both the English and Chinese narratives for "retell" and "generation. In the "retell" (see Figures 2), there was a consistent overlap of L1 and L2 over time. In his story generation (Figure 3)

there were two sessions (sessions 6 & 7, around his seventh birthday) when he

produced a lengthier story in English than Chinese. In general though, there was a

close link between his English and Chinese narratives for "generation". However,

the trend was for lengthier narratives over time in the "retell" component than in

the "generation" of narratives.

Child LI

The development of Child LI's story length in L1 and L2 were similar for

both story retell-and generation. However, Child LI retold and generated shorter

stories in both languages than did Child LN. This can be seen in the discrepancy

of the T-unit/utterance ratio between the corresponding languages (see Figures 2

& 3). Furthermore, the gap between Child LN and Child LI was greater in

"retell" than in "generation" in both languages. During the initial phase of data

collection , his T-unit/utterance score in L2 "retell" was either the same (session

1) or was much higher than that of Child LN's L1 and L2. His "retell" score in

L1 was consistently lower than Child LN's L1 and L2 during this initial phase

(Figure 2). Child LI showed similar progress to that of Child LN over time in his

L1.

Like Child LN, there were occasions when Child LI performed exceptionally

well in generating an English story in comparison to his performance in Chinese.

This was the case in Session 5 and Session 6, when the textless books

"Shopping" and "Frog, where are you?" were used. Unlike Child LN, Child LI

performed equally well in both languages in the story generation in the last data

collection (Session 9) (see Figure 3).

Figure 2: T-units/utterance Ratio

T/ unit/ Utterance Ratio-Retell
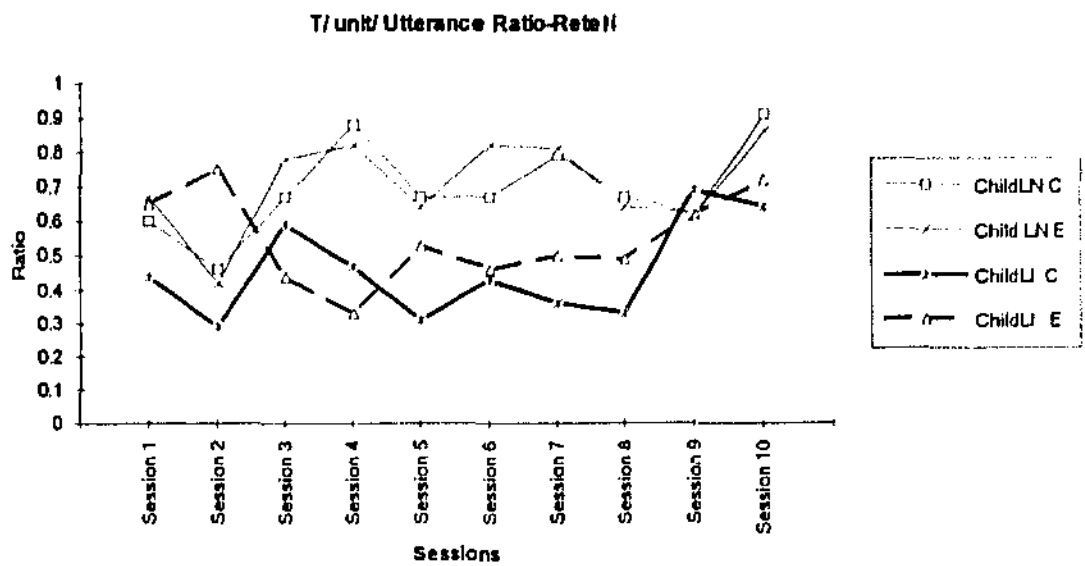
Figure 3: T-unit/utterance Ratio

T-units/ Utterance Ratio-Generation
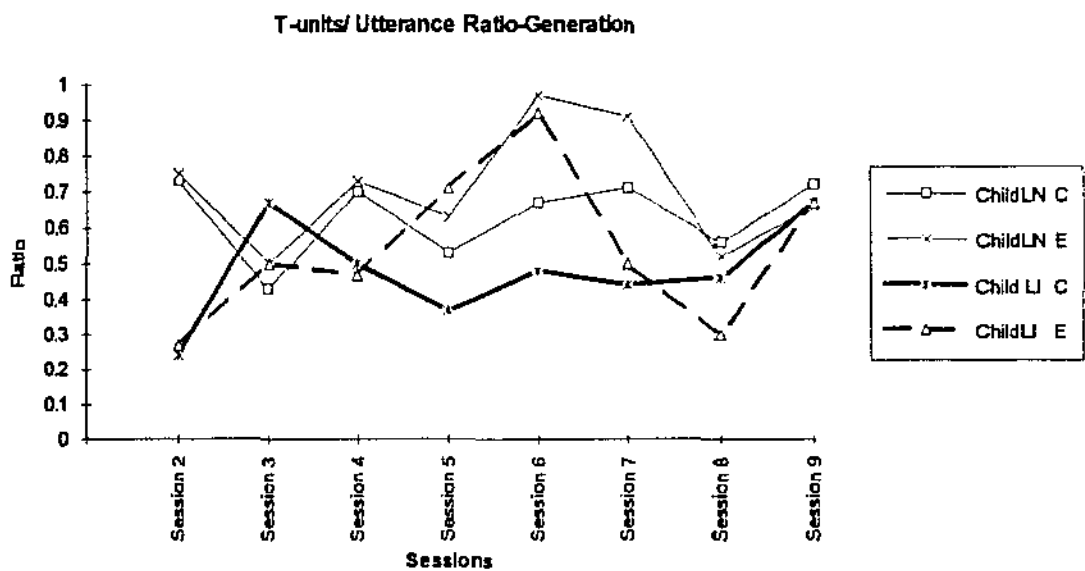
b. Textual coherence (Figures 4 & 5; Appendix C)

Child LN

Very little difference was found between Child LN's L1 and L2 narratives

with regard to his development of cohesive ties for "retell" and for "generation".

The only exception was in Session 3 ("A little red flower") when a much lower

coherence score was found in the generation of his L2 story (see Figure 5). Overall, his coherence score increased steadily with age, to a greater extent and more noticeably for the retell than for the generation (as represented by the steeper gradient in Figures 4 & 5).

In both languages, "listener orientation", and "referencing" were consistently used as cohesive ties by Child LN for both "retell" and "generation" narratives, although the range of his "vocabulary" and "connectors" were still rather limited in both languages (see Appendix C). The results in the table of Appendix C also show no difference between his Chinese and English in the rating of his "adverbial" use for "retell" and for "generation".

<u>Child LI</u>

In a similar manner, Child LI's cohesive development showed no apparent difference between his L1 and L2. As compared with Child LN, he was performing at a distinctively lower level in both languages. Furthermore, his total coherence score fluctuated widely between sessions, more so in his L2 than his L1. This was true in both the story retell and the story generation. Despite these fluctuations in different sessions for both languages in both types of narratives, like Child LN, there was also an increasing trend of coherence development over time. This was particularly so in the "retell" rather than in the "generation" of narratives. In addition, there was a more consistent performance, with less fluctuation, between the two languages for "retell" than for "generation" after session 6 (age seven years).

All Child LI's retold and generated stories in both languages were characterised by a marked lack of "connectors" (Appendix C). He was slightly better at providing "referencing" in an English retell than in Chinese, but no such

difference was evident in the story generation. There was also a paucity of

vocabulary in both languages. When a comparison was made with Child LN, there

was less use of "listener orientation" and "referencing" which was noticeably

lacking in most sessions.

Figure 4: Coherence Score - Retell

Coherence Score-Retell
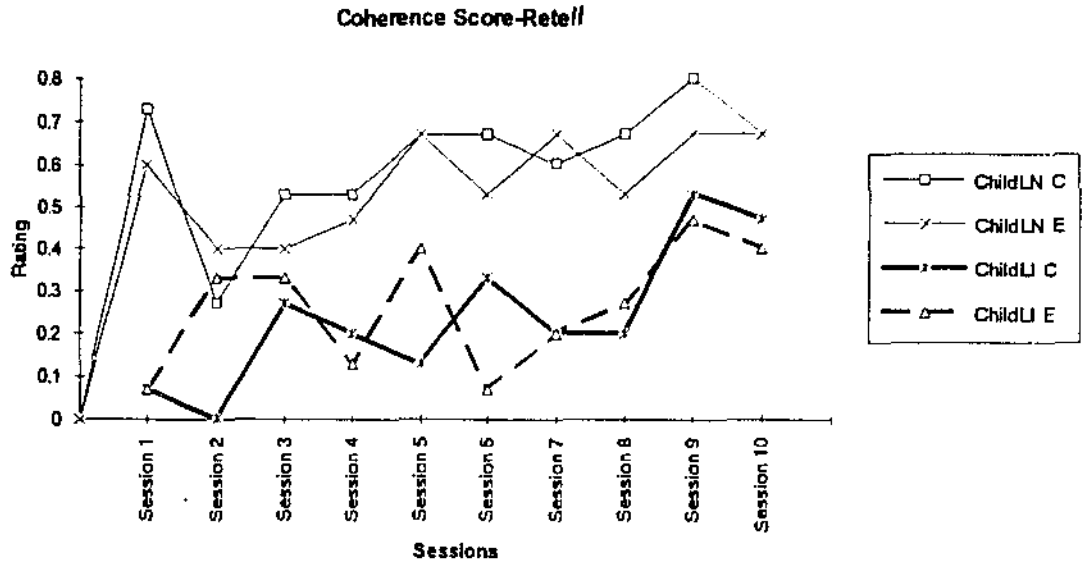
Figure 5: Coherence Score - Generation

Coherence Score-Generation
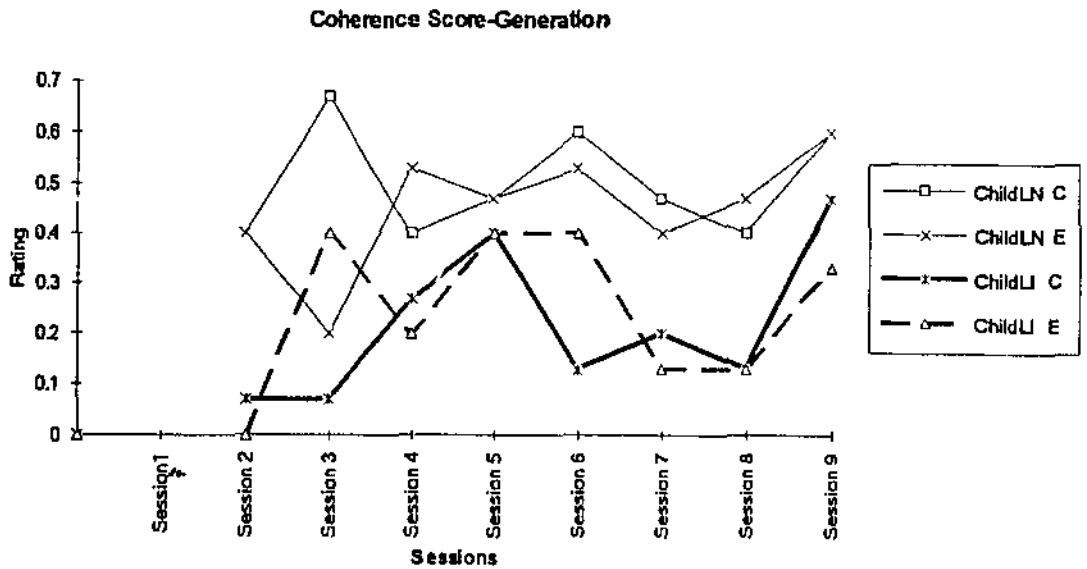
c. Number of complete episodes (Figures 6 & 7)

Child LN

The number of episodes produced by Child LN ranged between one to six. With regard to the story retell, during the first half of the study Child LN produced more episodes in L1 than L2. However, after age seven (Session 7), there was little difference between L1 and L2. While no apparent change with time was evident in his L1 "retell", there was a progressive upward trend in his L2 over the latter half of the study.

In the story generation, no difference between L1 and L2 narratives was found (Figure 7) until age seven, when a steady increase in the number of complete episodes became evident. However, there was one exceptional peak in Session 6 when he produced a large number of complete episodes in both his languages. In this session, the book "Frog, where are you?" was used, and it may be that something about the nature of this text produced the aberration in the results. .

Child LI

For Child LI, there was no difference in the production of number of complete episodes between L1 and L2. In contrast to Child LN, Child LI produced very few complete episode in his two languages for both retell and generation (generally between 0 to 2 episodes). However, the developmental profiles in the "retell" and "generation" between the two children were very much alike apart from that one occasion in session 6 of "generation" as described above. Whilst in session 6 Child LN was able to produce many complete episodes to correspond with the lengthy story of "Frog, where are you?", Child LI was unable to do so.

As with Child LN, after age 7:2 years (after session 7), there were signs of

increasing story length in terms of the number of complete episodes produced by

Child LI for both languages in both the retold and generated stories. However,

the effect of time was more clearly demonstrated in the "retell" of Child LI than

it was in Child LN.

Figure 6: Complete Episodes - Retell

Complete Episodes-Retell
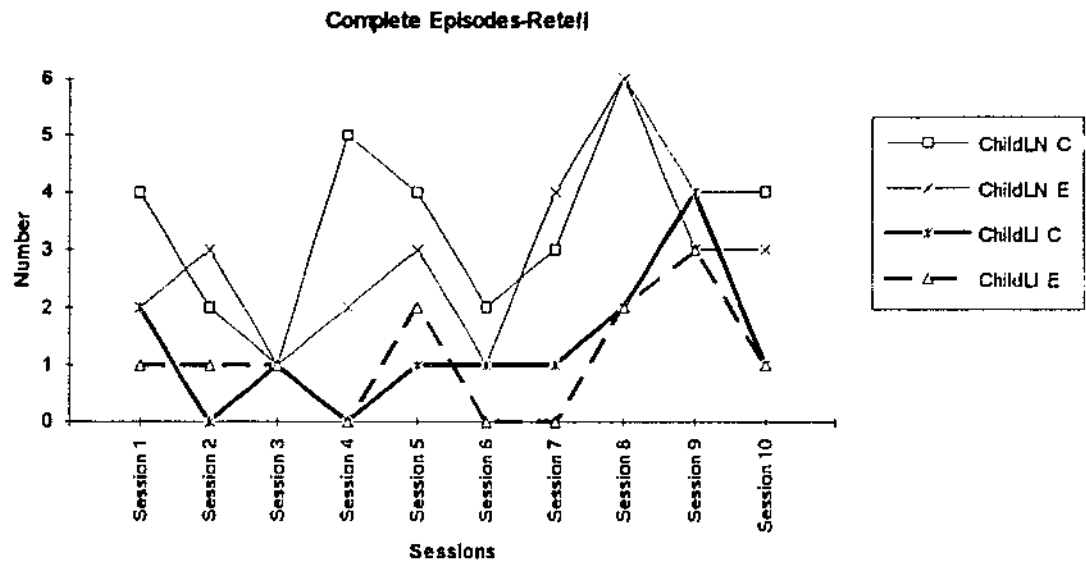
Figure 7: Complete Episodes - Generation

Complete Episodes-Generation
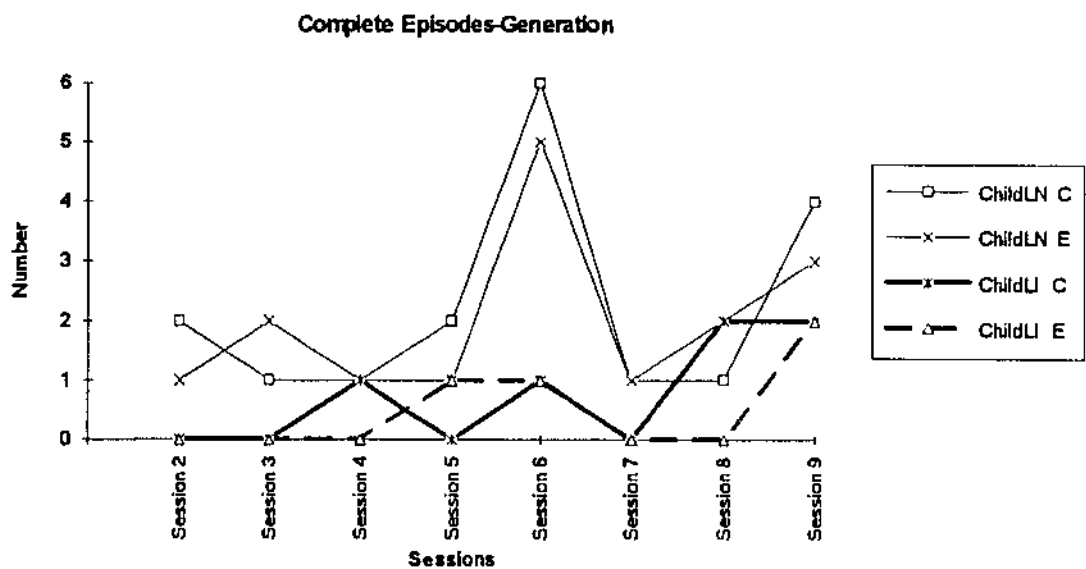
5.2 Narrative Content

In the area of narrative content, the results are presented according to story grammar components, and the developmental level of the two children.

a. Story grammar components.(Figures 8 & 9)

Child LN

Child LN's production of total story grammar components in English closely followed that of his Chinese narrative for both retell and generation (Figure 8 & 9). As with other aspects of his development, there was an upward trend in the number of components with his increasing age, especially after he turned seven years old (although this was more apparent in generation than retell). This is the opposite to the results of the categories in narrative form found above, where the increasing trend over time was more apparent in "retell" than "generation".

The difference between Child LN's two languages was in the frequency of the different grammar components in his L1 and L2 narratives, although generally there was remarkable consistency in the order of components used. In his Chinese retold and generated narratives, "attempt", "initiating event" and "consequence" were the three most frequent grammar components (see Table 8). In his English retold narratives, "attempt, "initiating event" and "internal response" were the three most frequent grammar components but "initiating event" "attempt" and "setting" were the three more frequent components in his generated narratives. However, in his L2 narratives, there was also a greater level of "settings" than "consequence" as compared with his L1 version for both retelling and generation. For both L1 and L2, "internal response" generally occurred more frequently in the "retell" than "generation". Therefore, the genre rather than language used seemed to determine the frequent occurrence of "internal response".

Table 8 : Order of frequency of grammar components

	Child LN		Child LI	
Narrative	Chinese	English	Chinese	English
Retell	A	A	IR	IE
	IE	IE	IE	IR
	C	IR	A	A
	IR	S	C	S
	S	C	S	C
	R	R	R	R
	E	E	E	E
Generation	A	IE	IR	IE
	IE	A	IE	IR
	C	S	A	A
	S	C	S	S
	IR	IR	C	C
	R	R	R	R
	E	E	E	E

A=Attempt. C=Consequence. E=Ending. IE=Initiating Event.
IR=Internal Response. R=Reaction/Resolution.S=Setting.

Child LI

For Child LI, there was also a striking similarity between the total number of story grammar components in "retell" and "generation" for his two languages (see Figures 8 & 9). Interestingly, his profile over time was similar to that of Child LN and in the main he produced as many total grammar components in his narratives in both languages as did Child LN. However, in Session 7 ("Froggie has a bear father"), Session 8 ("Wolf is coming") and Session 10 ("The bus story"), Child LN started to produce a greater number of grammar components than did Child LI in retelling stories; and in the generated story in the last session ("A boy, a dog and friend") a similar case was also true.

The frequency of the story grammar components for both languages in the "retell" and " generation" of Child LI were largely the same (Table 10). For Child LI "initiating event", "internal response" and "attempt" were the three most common

grammar components in his L1 and L2 retold and generated stories. The main difference between the performance of Child LN and Child LI was in the production of the different grammar components and the order of frequency of these different components. Unlike Child LN, "internal response" featured prominently in Child LI's narratives. However, whilst "internal response" was more frequent than "initiating event" in his retold and generated L1 stories the reverse was the case in his L2 retold and generated stories. In other words, the occurrence of this component was affected by the difference in the languages used and not by the difference in narrative genre of retelling or generation. This was not the case for Child LN where the use of "internal response" differed between "retell" and "generation" and not between his two languages.

Figure 8: Total Grammar Components - Retell

Coherence Score-Retell
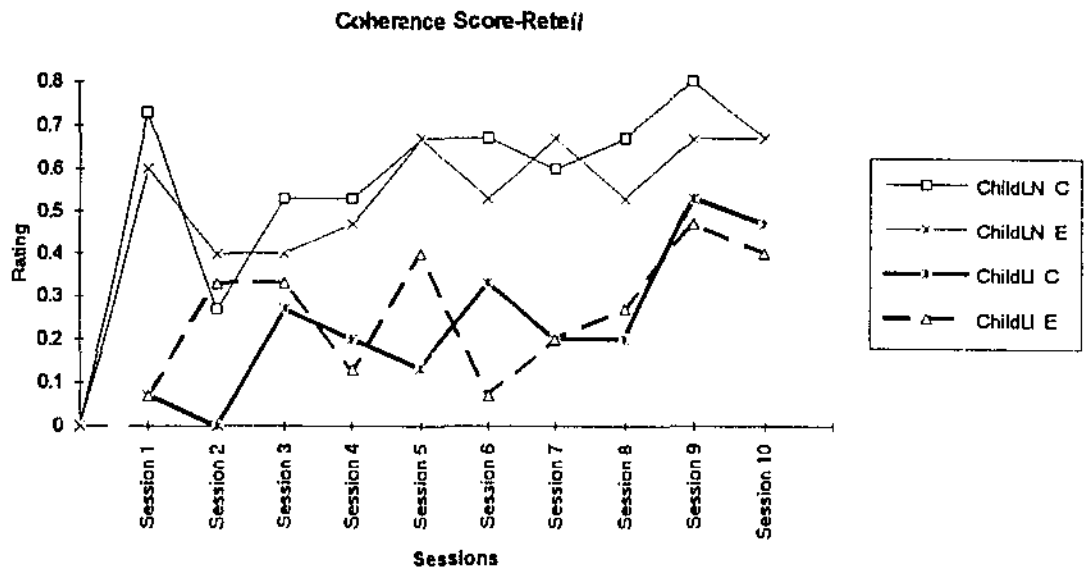
Figure 9: Total Grammar Components - Generation

Total Grammar Components-Generation
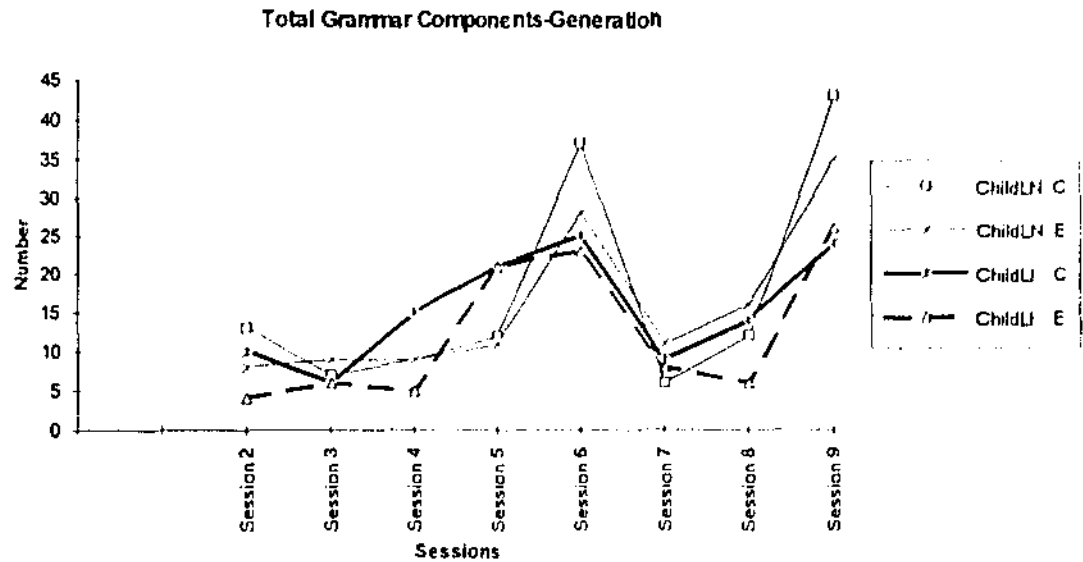
b. Developmental staging (Figures 10 & 11)

Child LN

In the initial phase of data collection (sessions 1 to 3 in Figure 10), Child LN's

L2 narrative skills for "retell" was much lower than that of his L1. This corresponded

to the early period of his L2 learning. Subsequent to this period, he was able to

consistently retell stories towards the higher stage (Stage 4) of narrative development,

matching that of his L1. This resulted in an apparent change between phase I and

phase III in L2 but not L1 (as shown in the graph in Figure 10).

Child LN's generated narratives were not as uniform as in his "retell". There

was considerable fluctuation between sessions in both his L1 and L2 narratives. The

effect of the earlier developmental lag in L2 was also evident in his generated

narratives (sessions 2 & 3) where there was a substantial gap between L1 and L2.

After that, both his L1 and L2 followed the same developmental pattern. However,

his generated Chinese story was generally at a higher level than his generated

English stories and the degree of fluctuation was less between sessions (see Figure 10). With a few exceptional peaks, the developmental stage in "generation" was generally below stage 3, as compared with stage 4 in the "retell". As in the "retell", a marked difference between phase I and phase III was also shown in Child LN's L2, but not his L1.

Child LI

Child LI's performance in both languages was consistently poor - at Stage 0 to 2 in his "retell" narratives (Figure 10). At the earlier phase in the data collection (Sessions 1 to 3), Child LI performed better in L2 than L1 although there was parallel progression over time in both his languages. Except for minor fluctuations this developmental trend continued to progress over time in his L1 "retell". However this was not found with his L2 "retell" (except in the last two sessions), and furthermore, there was a greater inconsistency in his performance of his L2 "retell", although in the last two sessions Child LI performed equally well in L1 and L2.

In both his L1 and L2 generated narratives, exceptionally good performances were occasionally found (Figure 11). Such was the case in Session 4 (A little red flower) when Child LI scored a Stage 4 in L1 "generation". Similarly in Session 3 (pictures about "A bird, cat and a dog") and in Session 5 ("Shopping") in his L2 "generation", exceptional scores of Stage 3 were attained. Unlike his "retell", generally there was no change over time and no difference between L1 and L2 in the developmental stage he obtained for "generation". The degree of fluctuation was also greater and less predictable in Child LI's "generation" than in his "retell"

In the earlier phase (session 1 to 3), both the retold and generated L2

narratives of Child LN were at a similar stage to that of Child LI (both of which

were substantially at a lower stage of development than LI of Child LN).

Comparing the performance between the two children, Child LI was at a much

earlier stage of development than Child LN in the L1 "retell" (Figure 10). However,

the difference was less marked in the "generation" narratives (Figure 11), although

the gap was also clearly shown. Once he overcame his L2 developmental lag, Child

LN's performance was shown to be much higher than Child LI in both L1 and L2.

In other words, Child LN was at a more advanced stage of narrative development

than Child LI in both L1 and L2 and the difference was more marked in the "retell"

than "generation".

Figure 10: Developmental Staging - Retell

Developmental Staging-Retell
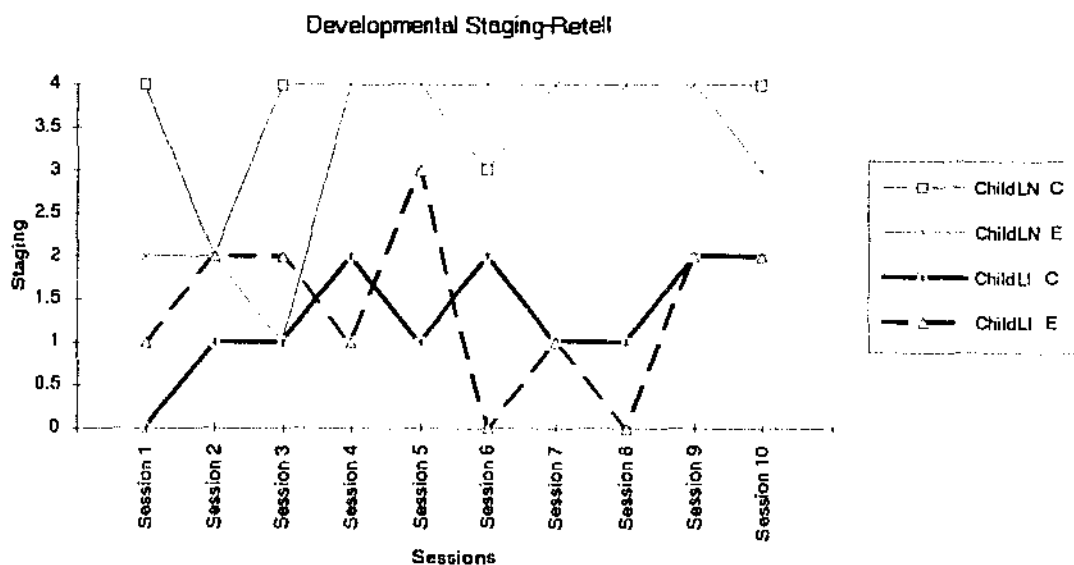
Figure 11: Developmental Staging - Generation

Developmental Staging-Generation
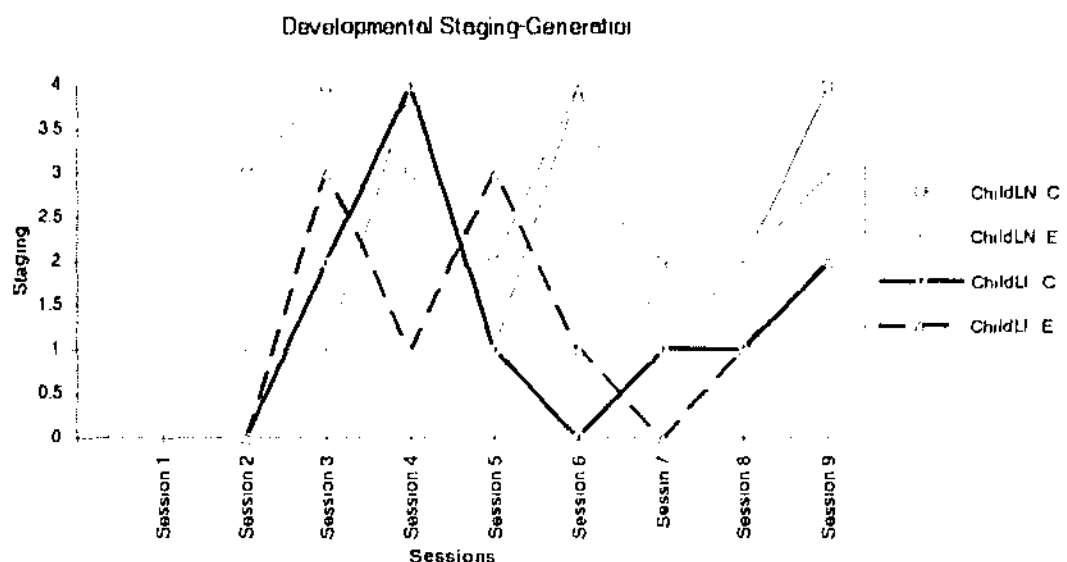
Table 9 : Summary of results.

Dependent Variables	Findings

T-unit/utterance	**-Retell :**
	No difference between languages for each Child LN and LI.
	    Shorter story length from Child LI than Child LN.
	- Generation :
	Tendency for Child LN to generate longer Chinese story than
	    Child LI. Similar trend for English, though no definite
	    conclusion due to exceptional sessions.

Textual coherence	**- Retell:**
	No difference between languages for each Child LN and Child
	LI. Greater gradient in the development of coherence skill in
	Child LN than Child LI as well as higher level of performance.
	Difference in the use of cohesive ties between Child LN and Child
	LI with LO and R featured prominently in Child LN's and marked
	    lack of connectors in Child LI's.
	Both children showed progression with age.
	-Generation:
	No language difference. Child LN at higher level than Child LI,
	    although the gradient not as great as in retell.
	Use of cohesive ties same as in retell.

Episodes	**- Retell :** No difference between languages for each Child LN and Child LI. Fewer number of episodes from Child LI than Child LN. After age 7, increment with age. **- Generation:** Same as above.

Dependent Variables	Findings
Narrative grammar (a) total components	- Retell No difference between languages for each Child LN and Child LI, and between Child LN and LI. After age seven, more grammar components in Child LN than Child LI. Gradual progression with age in both Child LN and Child LI - Generation : No difference between languages for each Child LN and Child LI, and between Child LN and Child LI. Slower progression with age than for "retell"
(b) components	- Child LN : Difference between L1 & L2 - Child LI : No difference between L1 & L2. - Retell : IE, IR and A were the frequent components in Child LI's L1 & L2 narratives. C was not common in both his Chinese and English. In Child LN's Chinese, A, IE, and C were frequent, but A, IE, and IR were more frequently present in his English story. However, S was also more frequent in English. than Chinese. -Generation : For Child LI, there was no difference between the languages for IE, IR and A being the most frequent components. C, R and E were the least frequent components. For Child LN, IE, A and C were frequent components in Chinese story (same sequence) as in "retell" and IE, A and S were more frequent in English.
(d) Developmental Staging	- Retell: No difference between languages for each Child LN and Child LI, except a latent period required for Child LN's English to catch up. Child LN functioned at a higher level than Child LI. Little evidence of progression noted for both Child LN and Child LI. - Generation: Child LN's performed better in Chinese than English, especially early phase. No difference between languages for Child LI. Emergence of progression with increasing age at age 7:3 for both children in both languages and difference between Child LN & Child LI evident after age 7.

Chapter 6

DISCUSSION

The results of this study were based on the narratives recorded from two children (Child LN and Child LI) over a twelve months period. T-unit/utterance ratio, coherence score, number of complete episodes, story grammar components and Applebee's (1978) developmental staging were used to code the transcripts. The purpose was to explore the developmental characteristics of two bilingual Chinese children (one with and one without SLI) in both Chinese and English. The results are discussed with regard to (1) bilingual narrative pattern of development, (2) ESL and SLI characteristics in relation to Child LN and Child LI, (3) the relationship between L1 and L2 and (4) difference in genre.

6.1 Bilingual narrative pattern of development

In terms of the overall organisation of the narrative, the results indicated that both children were performing consistently at their own developmental level during this short period of study. For Child LN (and to a lesser extent Child LI), there was little change in the narrative quality of L1 and L2 between ages six and half to seven and a half. This is consistent with past studies on young monolingual English speaking children that found considerable stability in their language performance over time (Hickmann 1996; Johnson et.al.1999; Conti-Ramsden & Botting 1999). Although less stability was found in story "generation", the fluctuation within a range of "developmental staging" between sessions showed a similar stability. The staircase like profile of the

"developmental staging" (Figures 10 & 11) reflects the non-linear process of language acquisition. The fact that there was continuing acquisition of narrative form (as shown in the results) in the face of relatively stable developmental staging, would suggest that these bilingual children still have a long way to go in the final phase of their narrative development. This is a similar conclusion reached in a previous study of the narrative structure by young Japanese children as compared with their adult counterparts (Minami, 1996).

The less mature narrative development (Figures 10 & 11) was reflected particularly in Child LN's generated stories by the lower "staging" level and greater fluctuation between various sessions. The presence of fluctuation in "generation" is probably related to his still limited vocabulary and to the small number of connectors used (see Appendix C, Table a). Past studies have found that the use of connectors is a necessary cohesive device for a good narrative across many languages (Berman & Slobin 1994, p39-84).

Based on the categories used, a similar profile of narrative development was found in these two children. The characteristic difference between these two children was the slower rate of development of the narrative features under investigation in Child LI's narratives as compared with Child LN. In other words, generally Child LI's performance in both L1 and L2 followed very similar trend to that of Child LN, but at a much lower level. The discrepancy in the level of performance between the two children was particularly apparent after age seven. At this time Child LN was notably ahead of his peer in his generated narratives in both L1 and L2. The parallel but lower level of acquisition profile of

Child LI than Child LN may be an indication that Child LI's problem relates to language delay rather than to ESL.

For each child, there was also a considerable consistency between their L1 and L2 as shown by the similar narrative profile in all the categories investigated. This consistency between the two languages is a recognised phenomenon among young bilingual children (without SLI) acquiring a second language (Winsler et.al., 1999). However, what is surprising in this study is the similar profile for these two children. It appears that the narrative development of Child LI was at an earlier stage than Child LN. Unfortunately as there are no other known studies of this type, it is unclear whether this is a common profile for the narrative characteristics of bilingual children with and without SLI. Therefore no conclusive theory can be formulated from this exploratory study. Nevertheless, the results may suggest that Child LI's difficulty was one of maturation delay in language development rather than "impairment" (Tomblin, et al., 1997; Plante, 1998). If this is the case, theoretically then, a child with SLI may eventually achieve similar level of narrative competence to a child without SLI when sufficient time is given for learning. In other words, if the maturational delay of language development were found to be the basis of SLI in future larger scale case studies, it may perhaps serve to further support the 'generalised slowing hypothesis' suggested by Windsor & Huang (1999). On the other hand, it is equally feasible that this type of language difficulty might represent the performance at the lower end of the normal scale of language abilities as proposed by Leonard (1998, quoted in Johnson et.al., 1999, p756). However, as a single case study, generalisation about the narrative development for both the

L1 and L2 of bilingual children, including those with SLI, cannot be made. Obviously a lot more research needs to be done in future studies to establish the validity of these two claims.

The ability to tell stories involves the development of "narrativization" (Hudson & Shapiro, 1991, pp. 97- 98). Hudson & Shapiro differentiate between "narrating" and "narrativization". The development of the latter is the "development of a plot or story about what happened, through the use of formal structural elements" (p97). In other words, a narrative follows a general schema that is specific to the cultural tradition of story telling. The incidental events and any evaluative comments are woven into a coherent whole with the overall structure to form a story. This is in contrast to the "narrating" which is simply reporting, without a specific structure. Based on these definitions, the differential narrative development of Child LN and Child LI can be illustrated from this study. In order to attain the narrativizational skill, the children need to at least acquire competency in the use of formal structural elements. It was found that both children in this study were fairly limited in the range of vocabulary and connector use between the age of six and a half and seven and a half, although Child LN was better than Child LI (Appendix C). Associated with the lower connector use, the scores for other formal indices (T-units/utterance ration, use of cohesive ties and number of episodes) were generally much lower in Child LI's narratives than in Child LN. Whilst both the children are acquiring the narrative form during the study (Figures 2, 4, and 6), the skill of "narrativization" is yet to emerge in Child LI (Figures 5 & 11). This was reflected in lower level

of Child LI's coherent score and developmental staging in both his story "generation" and "retell" than that of Child LN.

Whilst some past studies have shown the progression of developmental staging with increasing age in children's narratives (Applebee, 1978; Westby, 1984; Klecan & Swank 1991), there was no sign of such progression in Child LN and Child LI between the age of six and a half and seven and a half years of age (Figures 10 & 11). A plausible reason for these different findings is the difference in the methodology - cross-sectional versus longitudinal studies. Furthermore, this study only covers a short period of one year. It would have been very difficult to detect any minor changes in the narrative development. The narrative profiles in the "retell" and "generation" of both Child LN and Child LI indicate the progressive acquisition of narrative form without an obvious concurrent change in the developmental staging. The only exception was the initial rapid progression of L2 performance in Child LN as a result of the intensive English language input following his enrolment in an ESL school. This stability of narrative performance in these two young children is consistent with findings of Johnson et al (1999). It is also consistent with the findings in a recent longitudinal study on a large cohort of seven year old children with SLI over a one year period (Conti-Ramsden & Botting, 1999). These researchers found that the profiles of their difficulty in language impairment are stable over time This includes a group of children who have similar difficulties to those of Child LI.

The results support the view that repeated data collection is essential in the language assessment of children from NESBs (James, 1995) because otherwise the diagnosis of SLI may be erroneously made. For example, Child LN learned his L2 after his L1 was well established at the age of five . There was a

developmental lag of his L2 in the first stage of investigations. This was demonstrated by the presence of a greater number of complete episodes (Figure 6 & 7), number of total grammar components (Figures 8 & 9) and generally higher level of narrative performance (Figures 10 & 11) in his L1 than in his L2 in the initial stage of the data collections. When more data across various contexts were collected over time, there was no difference between the two languages. Without the concurrent L1 data for comparison, the lower scores of L2 variables would have been regarded as an indication of SLI since the features found in young children at their early stage of ESL are also found in the narratives of children with SLI (James, 1995).

Despite the presence of ESL, Child LN was able to produce longer stories as his "coherence" ability increased with age in both languages. This was shown in the close association between L1 and L2 in both the form and content of his narratives. This would suggest that the indices used in this study may be valid for investigating the language skills of a bilingual Chinese child. In contrast Child LI's performance lacks the stability found in Child LN, although like Child LN, the fluctuation of his performance was greater in "generation" than "retell". After age seven years, there was more consistency between his L1 and L2 performance. In comparison to Child LN, most of the exceptional peaks in Child LI's performance in the "retell" and "generation" were in L2 rather than L1 narratives. This would suggest the relevance of genre for these children's narrative development. This will be discussed in section 6.4.

6.2 ESL/SLI proficiency (Child LN and Child LI comparison)

6.2.1 Role of connectors

The characteristic difference in the use of cohesive ties between Child LN and Child LI suggests that "listener orientation" and "referencing" are important elements in the acquisition of narrative coherence for both L1 and L2 in these bilingual children. Child LN's strength in the "coherence" skill was the consistent use of "listener orientation" and "referencing" despite the fairly limited use of connectors (Appendix C, Table a). Child LI's "retell" and "generation" narratives were shorter than Child LN's and his coherence scores were comparatively much lower. The poor "coherence score" was associated with the marked lack of "listener orientation", "referencing" and poor use of "connectors". Interestingly, he seems to provide more "referencing " in his L2 (English) than his L1. It is possible that the English language teaching in school and the training from speech therapy might be partly responsible for this. "Consequence" was also relatively infrequent in all Child LI's narratives due to the markedly poor use of connectors (McCabe & Peterson, 1985; Peterson, 1989).

There are several possible explanations for the paucity of connector use in young children with SLI (see Appendix C, Table b). Firstly it may be explained by the possible interference or influence of L1 structure on L2. Compared with English language, Chinese has less connecting words at the sentential level because of the paratactic (Halliday, 1994) and iconic (Tai, 1993) nature of its grammar system. Although for a child without SLI , like Child LN, the differentiation between these two language structures might have been realised earlier, it would probably be easier for Child LI (with SLI) to use the more

familiar language system of L1 in his L2 narratives. Hence there was greater L1 influence in Child L1's narrative in L2.

Secondly the lack of connectors may relate to the distinctive narrative features of young children with SLI. Whilst Child LN progressed from mostly using temporal to causal connectors, Child LI progressed from the initial lack of connector to the acquisition of temporal connectors. This is consistent with the findings of past studies that children with language difficulties frequently are significantly delayed with their use of connectors. Children with SLI often still only use "and" and "then" (Liles, 1987 & 1993). Based on this developmental trend, the extent of Child LI's use of connectors seems to support other evidence that Child LI has language delay rather than a language disorder or impairment. This study also found that there is an age related progression of connector use in both these bilingual Chinese children (with and without SLI). This is congruent with the findings of past researchers from their studies on young children (Romaine, 1985; Hudson & Shapiro, 1991; Berman & Slobin, 1994, p593-641).

The inability for decontextualisation in children with SLI (Liles, 1993) may be a third reason for the poor use of connectors by Child LI. Whilst Child LN mostly included "consequence" in his narratives, Child LI had difficulty incorporating this grammar component in his narrative because it requires the ability to use more advanced "connectors". This is similar to findings among the subjects in a study by Klecan-Aker & Swank (1987) where they found that in order to use more connectors without a direct contextual prompt, the child needed to be able to conceptualise consequence in relation to event. Therefore it

is not surprising that Child LI had difficulty in doing so, resulting in the poor coherent scores in all his narratives.

6.2.2   Decontextualisation

It appears that decontextualising ability may be an additional explanation for the different results found in the narratives of the two children in some sessions. For instance, Child LN was better at generating a story in L1 than L2 in session 3 on "A bird, a cat and a dog"(Figure 5). He was able to use the conceptual cue for "cause-effect" relationships as they occur in Chinese narratives (Kirkpatrick, 1993). Thus it appears that this decontextualising ability comes about because of the structure of Chinese narratives.

It is interesting that Child LI, in contrast, was able to generate a more coherent narrative in his L2 than in his L1 on Session 3. As reported by other researchers in their studies on the narratives of young children, Child LI's narrative was also limited to the contextual aspect of the story (Romaine 1985; Hudson & Shapiro 1991; Berman & Slobin 1994, p.57-84). It is possible that the sequential series of actions of the protagonists in the pictures lends itself to coherence when narrating in the "linear" English language (Romaine, 1985; Cheng, 1996). It might not be so easy for Child LI to produce a coherent narrative in Chinese which has a "relative emphasis on spatial patterns alongside of temporal rhythms as models of narrative shape" (Plaks, 1977, p333). At the same time, the short linear sequence of events helps Child LI with SLI to focus on the observable characteristics of what he could see in the picture of the story. In other words, Child LI demonstrated similar narrative characteristics to pre-

schoolers, (James, 1995). The greater narrative proficiency in his English could also be related to "some unmeasured but relevant" (Winsler, 1999. p356) variables such as the emphasis on sequential story generation dictated by the sequential picture prompt as used in his speech therapy sessions and as used in his Australian school.

6.2.3 Effect of age

Past researches had found that young children increasingly acquire different aspects of narrative form (story length, sentence complexity, complete episodes and total story grammar components) with time (Klecan-Aker & Swank, 1987; Lee 1992; Liles, 1993). The results of this study support these findings. For example as Child LN gets older, there is an increase in the T-unit/utterance ratio, coherence score, number of complete episodes and total grammar components between Phase I and Phase III of his "retell" narrative in both languages. Although this increase was only apparent in the "generation" narratives after he turned seven years of age.

Whilst Child LN made consistent progress throughout the study, for Child LI a noticeable improvement in the narrative forms and content was only noted after age seven years for both "retell" and "generation" narratives. Similarly, a close association between L1 and L2 only started to emerge after age seven years (Figures 10 & 11). Interestingly this coincided with his enrolment of LDC at the age of seven. This seems to demonstrate the efficiency of such centres for helping children like Child LI (Kohnert , Bates & Hernandez, 1999).

Despite the apparent concurrent development of L1 and L2 with increasing age and the help of language training, Child LI's improvement is not at all consistent. One of the main reason might be the variability of reinforcement in his linguistic environment. The fluctuation in his performance was generally more marked in his English narratives. It is likely that the peak and the trough seen in the results coincided with the time of speech therapy sessions and school holidays. Another reason could be related to how difficult it is for a child with SLI to use cohesive ties in his generated narratives - the genre that involves decontextualisation. This was also shown in the lower coherent score he obtained than Child LN and the lesser use of cohesive ties in Child LI's narratives. Although Child LN's generated narrative demonstrated a similar fluctuating profile, it was to a lesser extent than that of Child LI. The inconsistency in the progress between sessions in generated narrative of both Child LN and Child LI suggest that they are yet to fully develop the skill of using cohesive devices by themselves and Child LI is further from achieving it than is Child LN.

6.2.4 Narrative characteristics of SLI

Many narrative characteristics found in Child LI in this study are consistent with those found in pre-school children and in children with SLI (Slobin et.al., 1994; James, 1995). Child LI frequently took on the first person in his narratives. He also adopted a more "egocentric" style which has been identified as a narrative characteristic of children under eight years of age (Romaine, 1985, p91). The following excerpt from the "retell" of "Peter and the cat" from session 5 illustrates this.

Excerpt* 1: - Child LI

Once upon a time there was a boy, his name is Peter. Peter has four

animals. One day, Peter see a cat. He (*meaning "it"*) said "meow". Help,

Peter. She (*meaning "He"*) walking home to mum's house. What is here?

I can see a cat from tree to tree. Sitting up the tree. Who help with us, the

cat. He climb up the tree.

The above examples demonstrates that contextual description of

events was more salient for Child LI. This is a common characteristic of

younger children's narratives. It is well known that young children assume that

the listener shares his/her knowledge and thus they tend to focus on describing

the observable characteristics of what they can see in the picture of the story

(McCabe & Peterson, 1991; Liles. 1993; Berman & Slobin, 1994, pp. 39-85). It

may also be that the use of picture prompts from the text-less book encourages

this assumption of shared common knowledge for Child LI. Even so this would

appear to indicate a developmental effect as it was not found in Child LN's

performance (see Excerpt 2 below). It has also been shown that younger

children regard narratives as means of communication with the hearer (Berman

& Slobin 1994). As a consequence of this, younger children tend to resort to a

dialogue style in their story telling.

Excerpt 2: - Child LN

Once there were Peter. Peter loves lots of animal. One day Peter went

home from school, Peter hear the cat meow. Peter don't know where is the

---

* The grammatical errors within this excerpt were not typing errors. The italic comments were the researcher's own

cat. And then Peter looked back. Peter didn't saw him. And the cat meow louder. And then Peter saw the cat up in the tree. Peter is a kind boy. He started to climb up the tree.

Characteristically, Child LI was able to perform perceptual tasks that did not require abstract thinking. When an abstract conceptual framework was required, he started to omit the essential details resulting in a 'leap-frogging narrative". That is the story "jumps from one event to another, leaving out major events that must be inferred by the listener" (Romaine, 1985, p96). The 'chronological pattern' (simple description of events in succession) and the 'leap-frog' tendency are said to be age related, with it occurring more often in younger children's narratives. This phenomenon may also account for the large fluctuation in most of Child LI's generated narratives.

In contrast, Child LN demonstrated a greater maturity in his narratives. He was able to describe the more abstract aspects within the stories. For example he described how Peter heard the cat but did not know where it was, even though the cat was shown perching on the tree in the picture. Child LN did not assume he shared knowledge with his listener and he provided foreground information before describing Peter's action. Furthermore, Child LN was able to cluster more than one notion around a single verb by using an appropriate English conjunctive, such as "He started to climb up the tree." In contrast Child LI tended to use a verb in an utterance to indicate the direction of a single action, such as "He climb up the tree". It would seem that these more complex grammatical components are yet to develop in Child LI.

Child LI was equally capable of producing as great a total number of story grammar components as Child LN (Figure 8 & 9), although there were distinctive differences in the frequency of these. For example, "internal response" featured more prominently in all Child LI's narratives regardless of the genre. This is contrary to the findings of the narrative study among monolingual children with SLI conducted by Hayes et.al. (1998). According to these researchers, internal states (i.e. "internal response" of this study), reaction, and endings represent the most abstract levels of story knowledge. They found these features were deficient in the narratives of the underachieving pubertal children with SLI. The difference in age between the participants of this study and theirs may have accounted for this inconsistency, however Klecan-Aker & Swank (1987) also found that "internal response" was the most rare component in the narratives of grade 1 and grade 3 primary school children in their cross sectional study.

In turn this raises the question of whether the frequent "internal response" category is a phenomenon related to the specific narrative characteristics of Chinese, which has in turn influenced its presence in Child LI's narratives in English. The slight preponderance of "internal response" in his L1 than in his L2 in both "retell" and "generation" (Table 8) could be a reflection of his greater competence in Chinese as well as an indication of a more communicative function characteristically found in Chinese narrative style (Plaks 1977). However if this is so, it is peculiar to Child LI as it did not also occur in Child LN's narratives. In Child LN's, it was the genre rather than language he used

that determined the occurrence of "internal response". The rarer occurrence of "internal response" in Child LN's generated story is congruent with the theory that story "generation" represents the more abstract aspect of the cognitive ability of young children and hence is more difficult for young children (Liles, 1987 & 1989; Ripich & Griffith 1988). Once again it could be that the more egocentric and less mature narrative style of Child LI lends itself to the more frequent use of "internal response". This type of response may have been easier to produce when he adopted a first person stance in his narratives.

Other characteristics found in the narratives of younger children include the relative absence of "reaction" and "ending" (Hayes, et al., 1998). This was certainly the case for the two young subjects of this study (Table 8). Hence it would seem that the absence of these two categories in the story grammar is not indicative of SLI, but rather is a factor of age.

6.2.5 ESL and Cultural effects

It is often difficult to separate the problem of SLI from ESL in children from a NESB. This is because they share similar language characteristics (James 1995). A simultaneous study of L1 and L2 in bilingual children such as this one may be valuable for differentiating a primary language difficulty from an ESL problem. For example, Child LI's performance in English was similar to Child LN in the beginning of the data collection despite his longer exposure to English language. Yet, his performance in Chinese was clearly below that of Child LN from this early stage of data collection. Another example of the Child LI's language impediment was his much lower T-unit/utterance ratio in his narratives

when compared to Child LN's narratives. It is plausible that because Child LI was very aware of his language difficulty he produced many irrelevant utterances in his narratives as an avoidance or divergent strategy to mask his language difficulty. This then resulted in the lower ratio. This study also indicated that Child LI has language disability not only in the second language, but also in his first language. This result is consistent with the past studies of Spanish and English bilingual children with SLI, (Langdon 1983). The less mature form of narrative profile in Child LI than Child LN can also be demonstrated through the simultaneous L1 and L2 data collection over time.

This study has found that one of the main features that could distinguish SLI from ESL may be the ability to use culturally appropriate language structures in the corresponding narratives. The preponderance of "consequence" in the Chinese and "setting" in the English narratives of Child LN illustrate this point. Whereas "consequence" was a consistent feature in Child LN's "retell" and "generation" in Chinese, "setting" featured more prominently before "consequence" in his English narrative for both retell and generation. This is consistent with the narrative style of Chinese language where the phenomenon of "cause-effect" is a common discourse pattern (Kirkpatrick 1993). The latter is likely to be a learnt skill from the narrative convention of English and perhaps as the result of his schooling. In contrast, Child LI showed no culturally distinctive difference between his L1 and L2 narratives.

It is plausible that Child LN's competence in language had enabled him to perceive and apply the culturally appropriate narrative styles to L1 and L2. It also indicates that Child LN was at a more advanced stage of cohesive

development. In fact his profile was similar to that found among older children (Klecan-Kelty, 1990; Berman & Slobin, 1994, p57-84). On the other hand, genre rather than language seems to determine the presence of "internal response" in Child LN's narratives. It was more frequent in his "retell" in both L1 and L2 and not in the "generation". This finding is not surprising since "internal response" relates to the pragmatic aspect of the narrative (Liles 1993). The result is consistent with the view of past researchers who considered story generation to be a more difficult task than retelling for young children (Merritt & Liles 1987, 1989; Ripich & Griffith 1988). The effect of genre is discussed in greater detail in section 6.4.

6.3 Relationship between L1 and L2

The simultaneous data collection of L1 and L2 using the same resource material enables one to reveal the relative dominance of the languages used by a bilingual child such as Child LN. Khonert et. al. (1999) also addressed this issue. They found that there was a shift in relative language dominance from L1 and L2 over time. This study also found a similar change in profile between L1 and L2 in Child LN's narrative development and to a lesser extent in Child LI. It is particularly noticeable in the initial stage of the study when the children's L2 was at the earlier stage of development than was their L1.

This further supports past researchers' view that bilingualism is a dynamic system where there is a continuing interplay between the two languages (Schinke-Llano, 1989; Bialystok, 1997, Kohnert et.al., 1999). There are a

number of reasons for supporting this view that bilingualism is a volatile state during its development.

Firstly, age (in terms of cognitive development and period of language learning) is an important factor for this shifting dominance between the two languages. This was evident in the developmental staging of the children's "retell" where a period of time was necessary for their L2 to reach the competency level of their L1. Even in "generation" where there was fluctuation of performance between the two languages, this shifting profile between L1 and L2 of both children still existed. Bialystok (1997) suggested that this is a common phenomenon during the early acquisition of bilingualism and not an indication of abnormal language development. The poorer performance in the non-dominant language is said to be due to the inadequacy of lexical items in the non-dominant language (Schinke-Llano, 1989). This may be the reason for the fewer complete episodes in the "retell", and the much lower coherence score in the "generation" of Child LN in the early phase of this study. Bialystok (1997) also found a positive correlation between the length of L2 contact/use and competence. It was advocated that for migrant children the designation of dominant or weaker language in place of first or second language is more indicative of the functional roles that these languages play in the child's development (Bialystok 1999; Kohnert et.al., 1999). The influence of the socio-linguistic environment is evident from the results of this study. Coinciding with the enrolment in the special schools, both children demonstrated increasing dominance of English.

Apart from the effect of age in relation to the stage of language learning, other factors also contribute to the few exceptional occasions when the children's performance was much better in one language than the other in their bilingual development. These factors are cultural context and characteristics of the resource material used to elicit narratives, structures of the languages used, motivation of the child, and language teaching/therapy. The first two factors will be discussed in the remainder of this section.

In this early stage of both of the children's language learning, it seems that the cultural context of the story and their cultural narrative style may have a lot of influence on their performance. In Child LN's case, when the narrative context was culturally appropriate, he used the appropriate specific narrative style. As such he performed exceptionally well in one language over the other. For instance, in the "retell" story of the "Three little rabbits & the gray wolf" (session 4) - a very old traditional Chinese story commonly used in Chinese primary school, he performed exceptionally well in Chinese far better than in English. It may be the case that for Child LN the features of   ry (familiar to him from the Chinese stories read to him by his parents and the parental attitudes) are salient and hence he is able to remember more of this rather involved story and thus produces a far greater number of complete episodes in his L1 than L2 (Figure 6). Therefore it would seem that cultural relevance of narrative content might be an important aspect for his far better performance for this story in his Chinese over English.

Likewise his performance was much more coherent in his generated L1 narrative than L2 in session 3 (Figure 5). The pictures used in this session 3 (A bird, a cat and a dog) depict a series of related sequence of events not dissimilar

to the "cause-effect" (Kirkpatrick, 1993) relationship depicted in traditional Chinese narratives. In addition there is no unique character identified as the main protagonist in this story. This is consistent with the traditional Chinese narrative style as described by Plaks (1977). Thus his greater competency in his L1 at this relatively early phase of study may be due to his familiarity with this culturally specific narrative style.

At the same time, it would seem that the relationship between language structures in L1 and L2 is a relevant factor in bilingual development. For example in session 6 and session 7 (Figure 3) Child LN generated distinctively longer stories in terms of higher T-unit/utterance ratio in L2 than L1. Compared to Chinese, English is a structurally more "wordy" language, where ellipses are not commonly seen. This results in longer narratives. In contrast, meanings communicated through contextual inferences and formal ellipses are common in Chinese narratives (Plaks 1977, Wang 1992, Yuan 1997, Kirkpatrick 1997). It is possible that for a child like LN without SLI, the ability to differentiate these linguistic styles emerges with increasing age. The longer story he tells in his L2 than his L1 is therefore likely to be influenced by the English narrative style learnt from his schooling in Australia. However, there is a close link between his L1 and L2 in terms of episodic production (Figures 6 & 7). This may be because episodes are important elements in both Chinese and English narrative cultures (Plaks, 1977; Kirkpatrick, 1997).

There also seems to be an interplay of influences between the contextual and structural factors of the two languages. Further, it would seem that the cultural context influences the performance in the narrative development of young

bilingual children even in the presence of SLI. In the case of Child LI, for example, he was much more coherent (Figure 4) in his retold story of Goldilocks (session 2) in his L2 (English). This may be because it is a very well known English story, and is familiar to most Australian school children, including in this case a bilingual Chinese child. Furthermore, the story depicts recurrent actions of the little girl (a single protagonist) within a few limited settings. Consequently, the description of similar actions were repeated within a uniform and familiar English structure for the "retell". There is no equivalent recursive structure in Chinese within this context. It is therefore not surprising that Child LI, despite his language difficulty at the beginning of the study, was better at retelling this story in his L2 than in his L1.

The relationship between L1 and L2 in the narrative development of bilingual children is an interesting aspect in this study. Firstly, there was a corresponding change in the rate of L2 acquisition in the presence of concurrent L1 acquisition. However, initially Child LN's L2 narrative was at the much lower level than his L1 in sessions 1 to 3 for both "retell" and "generation". Given his limited exposure to English at this point, it is not surprising that his performance was lower. Subsequently, there was a rapid development to equal that of his L1. This suggests that a child without language difficulty does progress at a faster rate when acquiring a second language (Winsler 1999).

The second point relates to the dependent variables in this simultaneous study of L1 and L2. The main cross-linguistic differences in the narrative content between Child LN and Child LI, and between L1 and L2 of the children's

narratives were in the difference in the type and their frequency of the story grammar components. Yet there was no difference between these factors in the total grammar components. This suggests that the type of story grammar components are more indicative of the narrative styles that are specific to the language culture of these bilingual children. It also suggests that it may be inappropriate to merely investigate the total number of story grammar components in a study of bilingual children. However, at this point this is speculative. These relationships between L1 and L2 in terms of grammar component types has not been previously studied, and much further research is needed to substantiate this view.

Finally, the other variables, namely T-unit/utterance ratio, number of complete episodes, and total coherence score (as defined in this study), seem to be more sensitive in their ability to differentiate the narrative skill of "normal" and language "impaired" bilingual Chinese children. This is somewhat contrary to the findings of Klecan-Aker & Swank (1987). Among the monolingual children, they found that "grade" (in terms of age), "the number of episodes" and "the total number of story components" (not type of grammar components) were better predictors of developmental level.

6.4 Difference in genre

After the initial developmental lag at the beginning of the study, there was considerable stability in Child LN's performance in the "retell" for both his L1 and L2 (Figures 10 & 11). There are several reasons that may account for this finding.

First of all, the individual's ability to remember the story detail from the preceding narration must play an important role in retelling. Naturally by paying more attention to the story detail (see chapter 3), Child LN was able to retell a greater number of components. Secondly, his "unimpaired" language competence may have attributed to greater comprehension of the narrative content which in turn may help him to remember more story components for retelling. Thirdly, in terms of "retell" there is also less reliance on abstract thinking on the part of the child (Liles 1993).

The generation of narratives demands a higher level of language skill which involves the ability to narrate in the decontextualised environment. In turn decontextualisation is considered a cognitive requisite for the development of narrative competence (Liles, 1993). Young children are less capable of expressing abstract thinking in their narratives. As a result, these children performed poorly and less consistently in "generation" than "retell", this is especially true for those with SLI.

A similar effect of genre on narrative production of Child LI was also noted in his Chinese (L1) language. However it was not the case for his L2 (English). Furthermore there was considerable fluctuation between the sessions regardless of genre. The fluctuation in his performance was due to the presence of a number of much improved cohesive scores. This in turn seems to correlate with the intermittent speech therapy sessions that Child LI was receiving. The trough period also coincided with the long break from school during the term holidays. Thus language contact and use in his social life do seem to have some influence over Child LI's narrative performance (Bialystok, 1997).

6.5 Cultural perspective and parental attitude towards speech disorder

From this study, it would seem that parental attitude plays a vital role in children's language acquisition both for children with and without SLI. In children with SLI, speech therapy and special language teaching (e.g. LDC) in conjunction with parental involvement aim at helping the child to attain their linguistic potential. During the course of this study, the parental attitude and approach towards learning languages (L2 in particular) between Child LN and Child LI were found to be very different. This could be a major contributing factor for the accelerated acquisition of Child LN's L1 and L2 in comparison with Child LI.

A positive relationship between parental styles in eliciting narratives and developmental narrative skill in young children has been found by McCabe & Peterson (1991). They found that a collaborative parental style of narrative elicitation results in a longer story from pre-schoolers; e.g. asking many leading questions, posing information-rich clarification questions, directing and information giving, and providing summaries and evaluation (McCabe & Peterson, 1991, pp.217-250). In this study, the parent-child interaction and the parental attitude towards language learning between the two children differs considerably. The collaborative style of Child LN's parents corresponded with his better narrative performance, whilst the more "pedagogical" style of Child LI's parents with the poorer performance. What remains unanswered is whether this difference in parental style plays a role in the language delay of Child LI, and if it does, to what extent. Nevertheless, it would appear that parental role in children's development of narrative may go beyond the pre-school age suggested

by McCabe & Peterson. It would be interesting to find out if changing parental attitude towards greater and more appropriate involvement towards the language acquisition of their children would result in faster narrative development of children with language difficulty.

6.6 Educational implications for NESB children with SLI

The similar profile of narrative categories observed over time between the two participants seems to indicate that children with SLI may need more time to develop language skill even when appropriate help is given. The appropriate school placement of the children at around age seven years appear to coincide with the accelerated improvement in their narrative skill. These results are congruent with the views of past researchers regarding the value of special language teaching environments (Cummins, 1984; Kasper & Schmidt, 1996; Lee, 1992). Furthermore, the similar L1 and L2 narrative development in the simultaneous L1 and L2 learning (even in Child LI) is consistent with the findings of past studies on the facilitative effect of L2 on L1 (Dopke 1998; Bialystok, 1999; Winsler et al, 1999). In fact it has been suggested that a second language environment may provide learners with the diverse and frequent input they need for the development of narrative skill (Kasper & Schmidt 1996). This may be another factor influencing the narrative development of these two children.

With respect to SLI, past studies have shown that early language difficulty can lead to subsequent academic difficulty (Catts & Kamhi, 1986; Hayes et al., 1998; Fazio, 1999; Johnson et al., 1999). Child with SLI from NESB has a double barrel problem - dilution of linguistic opportunity (Saunders 1982) and

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With respect to SLI, past studies have shown that early language difficulty can lead to subsequent academic difficulty (Catts & Kamhi, 1986; Hayes et al., 1998; Fazio, 1999; Johnson et al., 1999). Child with SLI from NESB has a double barrel problem - dilution of linguistic opportunity (Saunders 1982) and organisational problem secondary to SLI (Johnson & Myklebust, 1967; Wiig & Semel, 1980; Roth & Spekman, 1986). Therefore, early diagnosis and subsequent intervention of children with SLI, especially those from NESB, is necessary.

In order to implement remedial measures, it is important to identify the true nature of the problem. Whilst at present there is no known standardised tools to assess children from NESB (Liles, 1993; Gutierrez-Cellen & Quinn, 1993; James, 1995), the approach of narrative assessment employed in this study may be used at least as a screening test to identify SLI problem among children from NESB. If it is primarily a SLI problem, then one would expect a large discrepancy in narrative development between L1 and L2. When SLI and ESL coexist (such is the case in Child LI), by examining the composite variables along with assessing the neuropsychological aspect of the individual, the underlying SLI may be identified. However, it is obviously impractical at this point in time to advocate this method as a routine narrative assessment because of the bilingual requirement for the assessor, which is a difficult pre-requisite to fulfil.

6.7 Limitations of the study

It was difficult to assess the first language development of the two children because of the lack of developmental norms for children from NESB (James, 1995, p79-80), and in this case in Chinese. This draws into question the appropriateness of the test administrated (Hoffman, 1991; James, 1995). It was also difficult in the case of Child LI because of the influence of delayed language development. As a means of partly overcoming this, the socio-linguistic environments of the children, particularly within the family, were examined. This included the degree of L1 use by the family members and the parental attitude and style of language use. The obvious difference in the linguistic environment between Child LN and Child LI therefore rather limits the extent one can differentiate between SLI and ESL.

The tests items used (PPVT, WPPSI, T-units, Applebees' developmental scores, etc.) were standardised for Western children of normal language development, but adapted for this study in an unconventional way for qualitative purposes. Thus they are non standardised. However, the phenomena of overlap, stability and convergence between the subjects and between the languages of each child can still be demonstrated in this alternative treatment design (Barlow & Nelson, 1984, p217-335). Cultural bias and interpreter's bias for testing the IQ of children from non English speaking background using WPPSI and PPVT may have occurred (Langdon, 1983; Diaz, 1985; Winsler et. al., 1999). This problem was partly overcome in this study by by-passing the use of a "linguistically untrained" interpreter. The IQ testing did serve a useful purpose for excluding the possibility that Child LI had an intellectual disability.

The main focus of this study was to measure the relative language

proficiency of the two children rather than the absolute measure of the

children's language ability. Therefore, the English and Chinese (translated by

the researcher) versions of PPVT seemed to have achieved this aim.

Furthermore the diagnosis of SLI in Child LJ was based on the combination of

test-based data (WPPSI, PPVT) and the clinical judgement (see Appendix D). It

is an example of a "multidimensional research method" advocated by Schinke-

Llano (1989, p236). This may be an acceptable assessment process that is

sufficiently specific for the diagnosis of SLI, although controversy over the

validity of this process for defining SLI remains (Langdon, 1983; Diaz, 1985;

James, 1995; Conti-Ramsden et.al., 1997; Plante, 1998; Fazio, 1999; Johnson C,

et.al. 1999; Windsor & Huang, 1999; Conti-Ramsden & Botting, 1999;

Bialystok, 1999). However such tests seem to provide a valuable qualitative

information for managing children with SLI.

Making generalisation based on these findings is limited by the fact that

only two narrative genres were used - retell and generation. Other genre such as

personal recount, and free conversation were not included. Using the fixed

narrative structure of resource materials for retell and generation may have set

an artificial and restricted environment within which the children were allowed

to operate. It has been shown that the effect of narrative topic and genre are

important factors in the development of narrative skill (Hudson & Shapiro,

1991). Topics affect both the coherence of the story schema and formal

cohesion. Whereas "retell" involves the ability to remember and interpret what

is told and the cognitive ability to relate form and function, story "generation" is

more related to the child's perspective and his or her narrative intent. As discussed in the previous sections, the structural characteristics found in this study are also affected by the story content, the children's familiarity with the story, the variability of the context in which the data were collected and the inherent linguistic characteristics of the language used (Liles 1993; Hudson & Shapiro 1990). These are other variables that further limit generalisation of the findings from this exploratory study.

The control of variables is important in the study of discourse development in children (Hickmann & Hendriks, 1999). Hoffman (1991, p49) further pointed out that:

> "one must not lose sight of the (perhaps severe) limitations on validity imposed by the facts that a large number of uncontrollable variables are involved in individual longitudinal case studies and that many of these variables (e.g. those related to language input) have not been acknowledged or considered."

In this study, one such variable is the different contexts in which the data were collected, e.g. at the child's own home or at the investigator's home. Consequently, the performance of the subjects might be affected. The children may not have wanted to talk or at other time talked a lot. This may explain the fluctuating results obtained on some occasions in this study. Context and topics have to be inducive for the children to narrate a story (Hudson & Shapiro, 1991), but sometimes it is very difficult to control these variables when studying young children. In this study, even though there is a considerable range of different Chinese and English resources, it was exceedingly difficult to ensure a suitable text for the individual child. The great fluctuation (exceptional peaks)

that were seen, particularly from Child LI, might have been resulted from this factor.

Another obvious variable relates to how the data was elicited. Each child was collaborating with the listener in the story telling game by using picture books. Thus, mutual knowledge between the narrator and listener is present. The presence of shared knowledge might arbitrarily restrict the number of structural elements employed by the child in the narratives. This is particularly true when contextual cues were given by virtue of the textless books and pictures. As a result, the findings in this study may not entirely reflect the true timing of acquisition of their various narrative skills. However, the use of picture prompts was necessary in view of the young age of these children who may not have been capable of producing narrative without context.

The third variable that may limit the validity of this longitudinal study is the difference of participants' characteristics. Although all care was taken to ensure that the selection criteria for a good match were met, during the course of the study substantial differences in the linguistic environment and parental characteristics were uncovered. This is an example of the "uncontrollable variables" referred to by Hoffman (1991). Despite these limitations, this study does provide some insight into the nature of narrative development of bilingual Chinese and English children with and without primary language difficulty.

6.8 Future Research

Future research is required to establish the robustness of the assessment tools employed in this study and whether they are useful for Chinese and other

languages. Applebee's staging, (the development of which is based on Western narrative structure) was used in this study although there might be a question about the appropriateness of doing so. Overall the indications from this study suggest that it may be useful for observing changes over time in the narrative of bilingual Chinese children. Similarly, the functional grammar components of Merritt and Liles (1987) has served a useful purpose of demonstrating the differential characteristics of narratives between the two languages and between the two children. Analysis of the use of connectors in children's narratives also may be an important tool for assessing children's language, particularly for bilingual children with and without language difficulties. This is because of the apparent similarity in the age related progression of acquisition of connectors use between the L1 and L2 as found in this study. Nevertheless future studies on culturally appropriate method and measures in the investigation of bilingual children need further development (Winsler et.al., 1999).

For cross linguistic studies of children's narrative development, it is also necessary to define what constitutes narrative length and what indices should be used for determining it. Unfortunately, little is known about the specific narrative structures at the sentence and content levels in Chinese children. Even less is known about the narrative structure of Chinese children with SLI. These are the areas that need to be addressed. The paucity of knowledge on these areas echo Schinke-Llano's call for more research on languages other than English (in this case Chinese) in order to establish monolingual acquisition norms for the purpose of comparison (Schinke-Llano, 1989).

Another area that needs to be further researched is whether the skill of telling a coherent story can be taught to children with SLI. Coherence is an important characteristic for both Chinese and English narratives (Hudson & Shapiro, 1991; Kirkpatrick, 1993; Bai, 1997). In this study, the accelerated development after age seven years in Child LJ's case coincided with the enrolment in LDC school. It is unclear if this accelerated development came about because of the special language teaching or whether it was the result of natural progression with increasing age.

This study raises more questions than answers regarding language difficulty in bilingual children. What is a culturally appropriate story for eliciting narratives from bilingual children to differentiate between ESL from SLI? What is the relative role of "retell" and "generation" in the assessment of children's L1 and L2? What is the most suitable genre for eliciting narratives from bilingual children with SLI? What is the definition of ESL in the context of SLI in bilingual children? What is a functional definition of SLI? What indices could be used to identify SLI?

It is possible that "retell" is better at eliciting narrative from young children than "generation" because it also tests the child's memory, his ability to focus on the salient characteristics of the story, ability to learn through modelling and provides a standardised structure for comparing with other children (Conti-Ramsden et. al., 1997). Clearly, the role of retell in the acquisition of narrative skill in young children warrants further investigation. As Klecan-Aker & Swank (1987,) state :

"Now that some factors have been isolated that appear to predict developmental level, future research should include the development of new ways of analysing stories that might tap language use beyond the level

of the true narrative and the use of story components as previously
defined."   p260

Although the method of simultaneous L1 and L2 analysis used in this study is a

novice one, the textual categories used for analysing the data have been

included in some previous studies (e.g. Klecan-Aker & Kelty, 1990; Bamberg &

Damrad-Frye, 1991; Paul & Smith, 1993; Gutierrez-Cellen, 1993; McFadden &

Gillam, 1996; Hayes, et al. 1998; Ward-Lonergan et al., 1999). The results of

this study have shown that the use of all these categories in the simultaneous

analysis of L1 and L2 of Child LN and Child LI appears to be equally

applicable. Obviously this method of studying the bilingual Chinese children's

narrative style needs further research to see if the same characteristics can be

isolated amongst a larger bilingual Chinese population.

Chapter 7

CONCLUSION

The simultaneous L1 and L2 narrative developments of two Chinese children with (Child LI) and without SLI (Child LN) were studied over twelve months between the age of six half and seven half years of age. The narrative form and content were analysed using T-unit/utterance ratio, coherence score and the number of complete episodes. The narrative content was indicated by the total number and types of story grammar components, and by developmental staging. Comparisons were made between the two languages of each child and between the two children.

It was found that narrative development in both languages in these bilingual children was closely linked. The gradients of the narrative development of these languages in terms of the parameters studied were very similar. It was also found that generally Child LI performed at a lower level than Child LN in coherent development, although their narrative development followed a similar pattern. Although the L2 narratives of Child LI showed many characteristics of those of younger children (pre-schoolers) without language difficulty, these features were also demonstrated in his L1 narrative, indicating the underlying SLI. Because of his SLI, he was generally unable to use culturally specific narrative style in his L1 and L2 narratives.

The narrative development of these participants was reflected differently in the spoken genre. For both children, the slope of narrative development (in terms of T-units/utterance, coherence score, number of complete episodes and total number of grammar components) is steeper in story retell than in the generation. This difference in the effects of genre on narrative development was

more clearly demonstrated in the narratives of Child LN than in Child LI. It may be that young children are better at producing a coherent story by "modelling" the narrative structure of the story they are retelling. When there was no preceding story to model, such as in the story "generation", these young children were not as capable of producing a coherent story on their own. This was reflected in the greater and more unpredictable fluctuation in their performance between various sessions in story "generation".

The effects of age, topic and communicative context were also important considerations in the study of narrative development of young children. Both children demonstrated the emergence of accelerated narrative skill after age seven, particularly their ability to be coherent. This was especially true for Child LI. Each child performed exceptionally well on occasions when the topic was either familiar to him or was perceived as being culturally relevant. Furthermore, the collaborative linguistic environment that Child LN was exposed to at home may have contributed in part to his far better narrative performance than Child LI.

Both children were equally capable of retell and generate narratives with similar total number of story grammar components. However, there was some sign of a culturally specific style in Child LN's narratives, shown by the difference on the sequencing of the grammar components between Chinese and English. No such culturally specific difference was found in the L1 and L2 narrative of Child LI. Obviously more longitudinal and cross sectional studies required in the future to validate these characteristics of Chinese and English

are required in the future to validate these characteristics of Chinese and English narratives of bilingual children with and without SLI.

"The critical step in management of children with language difficulties is that of data gathering" (James, 1995, p79). The greatest problem in gathering data from bilingual children, especially from a child with language difficulty, is to determine the relevance of the L1 or L2 data. In this respect, gaining access to L1 data through linguistically competent translator is crucial to accurate identification of these children's difficulties. If this is not done, over or under diagnosis of SLI may occur. Analysis of narrative structure by culturally more neutral indices may be one way to solve the dilemma as to whether there is a problem for a potential bilingual child is of SLI or ESL. It would appear that the indices used in this study may be culturally relevant for such an analysis and as such represent an initial step in their development.

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Appendix A

List of resources and description of the stories and pictures used to elicit narratives.

Session 1

(a) Retell: The Bus Story - Renfrew (1969).

(1) Once upon a time there was a very naughty bus. While his driver was trying to mend him, he decided to run away.

(2) He ran along the road beside a train. They made funny faces at each other and raced each other.

But the bus had to go on alone because the train went into a tunnel. He hurried into the city, where he met a policeman who blew his whistle and shouted, "Stop Bus"

(3) But he paid no attention and ran on into the country. He said, " I'm tired of going on the road". So he jumped over a fence. He met a cow who said, "Moo, I can't believe my eyes"

(4) The bus raced down the hill. As soon as he saw there was water at the bottom, he tried to stop. But he didn't know how to put on his brakes. So he fell in the pond with a splash and stuck in the mud. When his driver found where he was, he telephone for a crane to pull him out and put him back on the road again.

Session 2

(a) Retell: "Goldilocks and the three bears" - Bittinger J (ed.) Addison-Wesley Publishing Company.

Once upon a time, there were three bears, a father bear, a mother bear, and a baby bear. One day the three bears sat down to the breakfast.
"This is too hot", said the father bear. "This is too hot", said the mother bear. "This is too hot", said the baby bear. "Let's go for a walk," said the mother bear. "When we come back, our porridge will be just right."

Along came Goldilocks. She walked into the house. She saw three bowls of porridge. "This porridge is too hot," said Goldilocks. "This porridge is too cold," said Goldilocks.
"This porridge is just right," said Goldilocks. And she ate it all up.
Then Goldilocks went into the living room. She saw three chairs. "This chair is too hard," said Goldilocks. "This chair is too soft," said Goldilocks. "This chair is just right," said Goldilocks. Then Crash, the chair broke.

Goldilocks felt tire. She went into the bedroom. She saw three beds. "This chair is too hard," said Goldilocks. "This bed is too soft," said Goldilocks. "This bed is just right," said Goldilocks. And she fell fast asleep.

The three bears came home. They went into the kitchen. "Someone's been eating my porridge," said father bear.
"Someone's been eating my porridge," said mother bear. "Someone's been eating my porridge," said baby bear. "And they ate it all up."

The three bears went into the living room. "Someone's bee sitting in my chair," said father bear.

"Someone's been sitting in my chair," said mother bear. "Someone's been sitting in my chair," said baby bear. "And now it's broken."

The three bears went into the bedroom. "Someone's been sleeping in my bed," said father bear.

"Someone's been sleeping in my bed," said mother bear. "Someone's been sleeping in my bed," said baby bear. "And here she is".

Goldilocks woke up. She saw three angry bears looking at her. Goldilocks jumped out of bed. She ran out of the house. And she never came back again.

(b) Generation:

Source:- Hu Guo Hua, Lin Li Yi & Chen Jian Yun, (1996). Ting ge jiang gu she - Xiao Hong Mao, Mo Gui Ceng. Musical Stories For Children. part 5. General Language Record Co., Hong Kong.

i:-"Red Ridinghood"- Four pictures depicting:

1. A girl wearing a hooded hat was seen walking on a country road with a basket hanging over one arm. She was accompanied by two animated birds flying above her head. The girl was looking happy.
2. A wolf dressed in granny's outfit in bed is looking very pleased, showing its large teeth. The girl stands beside the bed and appears surprised.
3. The girl and the wolf are walking along the country road. The wolf is shadowing the girl, revealing its large claws, and big mouth. The girl is casting an intense look at the wolf and there is a drop of tear on the girl's cheek.
4. While the wolf is falling into the well, the girl and her granny look on. The bird and a squirrel are cheering nearby.

ii:- "The demon city"- Four pictures depicting:

1. An old king in the foreground, and three young princes behind him. They all look very happy.
2. Three princes stand under a tree where there is a bee hive. There are bees flying around. One young prince looks worried and waving his hands. The other one looks surprised and one very pleased.
3. There are two stone statue of the two older princes in the background. In the foreground, the young prince looks sad and there is a drop of tear on his cheek.
4. A happy couple - the young prince and a princess.
   Huang, H.(Ed), (1993). Cai Tu Yinger Gushi 100 Ji. Hai Feng Pub., Shanghai, China.

Session 3

✗ (a) Retell - "Little lamb and a big rock" (Chinese text) - Cai Tu Ji, (Huang Hua ed., 1993, Yinger Gushi 100 Ji, p57-54).

Translated by researcher as English text for the children to retell.

1. There was a big rock rolling down the hill and blocking the entrance of the little lamb's house.

2. The little lamb was pushing very hard, but "mei-mei" he could not move the rock.
3. Little chick and little frog came to help, and still could not move the rock.
4. "Little bear, please come and help us!", said the lamb to the bear.
   The bear said, "No, no. I want to go home to sleep."
5. The lamb said, "Little bear, I will tell you a little secret when you finish pushing the rock."
6. Then, the bear came and pushed the rock. "One, two, three! Push"
7. What is the secret? "You are a good boy!", whispered the lamb.
   The bear was very pleased to hear that.

(b)- Story generation. Six pictures about a bird, a cat and a dog.
   Source of the pictures - Hickmann & Liang, 1990. Clause-structure variation in Chinese narrative discourse: a developmental analysis. Linguistics, n28, p1179.
   Picture story:-
1. Mother bird sitting in the nest perched on a brunch of a tree.
2. The bird took off leaving a nest of little birds. A cat comes towards the tree.
3. Cat sitting under the tree staring at the nest.
4. Cat crawls up on the tree trunk
5. Cat hanging from the brunch of the tree where the nest is. A dog is pulling at the tail of the hanging cat. The bird flies back towards the tree, with a worm in her mouth.
6. The bird arrives at the nest. A dog chase after a cat under the tree.

Session 4
(a) Retell - "The three little rabbits and the gray wolf" (bilingual text).
   Jiang Cheng'an, (1996), Zao Hua Pub. Co., Peking, China.

1. Mother Rabbit has three children. They are called Red Eye, Long Ear, and Short Tail.
2. One day Mother Rabbit must go out to pull turnips in the field. She tell her children to keep the door locked and not to open the door for strangers while she is gone. "Only open the door for your mum." She says, "I'll be back before too Long."
3. Mother Rabbit goes out with her basket to gather turnips. Her children remember their mum's words and lock the door carefully.
4. After a while a big gray wolf comes to the rabbit's house. He wants to eat the little rabbits but he can't enter the house because the door is locked.
5. Then Mother Rabbit comes back. While knocking on the door, she sings, "My little dears, open the door. Please be quick and let mum in."
6. This is heard by the gray wolf who is hiding nearby. He remembers the little song that Mother Rabbit sings. "I have a plan", he says with a smile.
7. "Mum's back! Mum's back!" the little rabbits cry as they open the door for their mum. Mother Rabbit ("kisses Red Eye, Long ear and Short Tail" deleted from the original text during retell to be consistent with

the Chinese text") praises the three little rabbits (substituted, instead of "them" to be consistent with the Chinese text) for being good children.

8. Meanwhile the gray wolf says to himself, "The next time Mother Rabbit goes out again, I'll sing to the little rabbits as she does. They will think I'm their mum and will open the door."

9. The next day Mother Rabbit goes to gather mushrooms. The gray wolf comes to the rabbit's front door and sings, "My little dears, open the door...."

10. Red Eye and Short Tail think mum is back and started to open the door. Long Ear stops them. "That doesn't sound like mum," says Long Ear.

11. Long Ear look s out through a crack in the door. "Oh! It isn't mum! It's big gray wolf!" she says. The three children answer together, 'We won't open the door! We'll only open the door for our mum."

12. The gray wolf says. "But I am your mum. My little dears, open the door!" The little rabbits say to the gray wolf, "Put your tail through the crack in the door so we can see if it's our mum's tail."

13. The gray wolf puts his tail through the crack in the door. The children close the door tightly. The gray wolf cries "Ouch. Ouch."

14. The Mother Rabbit comes back. She puts down her basket and picks up a stick to beat the gray wolf.

15. The gray wolf is frightened and wants to run away- but his tail is still stuck in the door. He pulls on his tail with all his might. At last, his tail breaks and he runs away.

16. Mother Rabbit knocks on the door and sings, "My little dears, open the door. Please be quick. Let mum in."

17. "Mum's back!" "Mum's back!" the little rabbits say happily. They rush to open the door. Mother rabbit is very glad her children didn't open the door for a stranger and says, "You're really good children!"

(b) Generation - "A little red flower." (Chinese text deleted) Lu P, et al, (1993), *Cai Tu Yinger Gushi 100 Ji, pp115-120,* Xin Hua Publisher, Shanghai, China.

Story pictures:-

1. A boy supporting a falling girl who has tears rolling down her face. A cat standing on the side with a surprise look.

2. The girl sitting on a stool wiping tears while the boy applying red medicine on her knee. The cat rest its paws on her thigh looking on.

3. The boy points at the knee and both children look at the knee. Cat looks puzzled.

4. Girl is jumping. Boy looks happy and the cat runs away.

5. Both children playing hide and seek game.

Session 5

(a) Retell - "Peter and the Cat"(English text) - Allen, Leitao & Donovan (1993). The school age oral language assessment (SAOLA). Language-Learning Materials, Research and Development Co. Pty. Ltd., South Fremantle, WA.

1. Once there was a boy called Peter who loved animals.

2. One day, when Peter was walking home after school, he heard a cat go meow. At first Peter didn't know where the cat was. He looked behind him but he couldn't see it. Then the cat meowed again, louder this time, and Peter saw it stuck up a tree.

3. Being a kind boy. Peter decided to climb up the tree to rescue the cat.

4. When he got to the top though, Peter was very frightened. It was a tall tree and Peter was afraid that he would fall. He sat on a high branch with the cat, hanging on very tight so he wouldn't lose his balance. Peter wondered what to do. Maybe if I call out loudly someone will come and rescue me he thought. So Peter yelled as loudly as he could. He yelled again and again but no-one heard him.

5. Finally, after a long time, and when Peter was nearly exhausted, a man, watering his garden down the street, heard him.

6. When he saw that Peter was stuck up the pine tree, the man quickly got a ladder and helped Peter and the cat to get down.

7. Still shaking with fright, Peter thanked the man and went home.

8. When Peter got home his mother growled at him because he was very late. Peter explained what had happened and asked her if he could keep the cat. His mum said, "OK, but climbing trees is dangerous. Next time get an adult to help you.

(b). Generation from a textless book "Shopping". - Shakespeare Readers-
Shakespeare Head Press.
Story pictures:-

1. A boy and girl are getting dress. Father is at the desk, picking up a shopping list from the table in the same room.

2. Boy sliding down the stair rail while father and the little girl walk on the steps. On the street, the girls is holding father's hand while the boy skips.

3. At the entrance of the supermarket, the boy is ahead, pulling a trolley out from the stack.

4. Boy hanging from the shelf along the aisle in the supermarket while sister hanging on the trolley with the father.

5. Father collects item from the food bin. The boy slides on the potato bin.

6. The boy throws items from the shelf onto the floor.

7. Father and girl go ahead in the aisle. The boy hide himself in the large freezer.

8. Boy has a mouthful and handful of lollies from his pocket.

9. Father carry a bag of shopping's in each hand while the girl hang onto his wrist. The boy also hold a bag in each hand , but swing the bag till items dropping onto the foot path from the bag.

Session 6
(a). Retell - "Mountain goats crossing bridge" (Chinese text) - Cai Tu Ji, (Huang Hua ed., 1993, Yinger Gushi 100 Ji p255-26260).
Translated by investigator as English text for the children to retell.

1. Once upon a time there was a bridge over a river.

2. One day, a little white lamb came to this side of the bridge and he wanted to go across on the bridge.

3. On the other side of the bridge, there was a black lamb, he also wanted to cross the bridge.

4. When they walked to the middle of the bridge, they could not pass each other because the bridge is to narrow.

5. And so, no one could go across.

6. The little white lamb then said very angrily to the black lamb: "You go back, let me go first/".

7. But the black lamb stomped angrily on the bridge and said: "You go back, let me go first". They started to quarrel.

8. Then the white lamb put his head down and pointed his horn towards the black lamb, wanting to push him over.

9. The black lamb did the same.

10. He lowered his head, pointing his sharp horn towards the white lamb, wanting to push the white lamb over too.

11. And then, "bang!"

12. They knock the head together and fell down into the water.

13. In the end, no body could get across the bridge.

(b). Story generation - "Frog, Where Are You?" (testless). Mercer (1980), Dial Books for Young Readers, New York.

Session 7

(a) Retell - "Frog has a bear father." (Chinese text). Lu P, et al, (1993), *Cai Tu Yinger Gushi 100 Ji, pp. 241-254*, Xin Hua Publisher, Shanghai, China. **Translated into English by investigator.**

1. There was a dog sleeping under a tree and there came a little frog who was leaping around. He accidentally stepped on the dog's leg.

2. The dog woke up and caught the little frog. He was going to bite the little frog. The frog was so frightened and he called out, : "Don't bite me! Don't bite me! I didn't mean to step on your leg."

3. The dog didn't take any notice of him and still wanted to bite him. Just then, an old bear came. He saw what was happening. He was very angry and gave the dog a smack.

4. It hurt so much that the dog quickly let the little frog go.

5. "Well! The old bear is really strong and smart. He can be my daddy.", thought the little frog. He said: "Bear, Bear, will you please be my daddy?" The old bear was very pleased to hear that because he didn't have a child himself. He said, "All right, you'll be my boy."

6. The little frog was so happy. He hops around singing, "Qua qua, I have a bear daddy!"

7. Just then, a mother hen comes near the little frog. She was carrying a bamboo basket full of worms. The little frog wants to eat the worms and mother hen wouldn't let him. The little frog said, "I'll tell my bear daddy to give you a big smack if you don't let me have it."

8. The mother hen was frightened of the bear's big fist. She gave the basket to the little frog. Little frog ate up all the worms.

9. One day, turtle's granny was sick. The turtle took his granny on a trolley to go and see a doctor. On their way to the doctor, the little frog saw

them and thought it was fun to ride on the trolley. So, he jumped onto the trolley.

10. The trolley became too heavy for the turtle to pull. He asked the little frog to get off, but the little frog wouldn't. He wanted the granny to get off instead and said, "I'm sick also, and I can't walk either."

11. The turtle refused to pull the little frog. The little frog boasted and said loudly, "Hm, if you don't pull, I'll tell my bear daddy to give you a big smack!"

12. At this moment, the old bear really came out from behind a big tree. When the little frog saw the old bear, he became even more proud and he said to the old bear, "Daddy, you see, they are bullying me."

13. But, when the daddy bear came over, he lifted the little frog's leg and throw him onto the river. The old bear was so sad and said, "I don't want this child, I don't want to this child anymore!"

(b) Generation - "Horse in the paddock."

Source of the pictures - Hickmann & Liang, 1990. Clause-structure variation in Chinese narrative discourse: a developmental analysis. Linguistics, n28, p1178.

Six pictures depicting: -

1. A horse runs on the grassy paddock towards a wooden fence.

2. The horse and a cow stand on each side of the fence while a bird stands on the fence.

3. The horse jumps over the fence.

4. The horse is lying on its back on the other side of the fence. One rail of the fence is broken. The cow and the bird are looking at the horse.

5. The horse stands with a leg raised. The bird spreads its wing holing a first aid box by its feet. The cow holds onto one end of the bandage with its mouth, bandaging the horse's leg. There is a pair of scissors on the ground.

Session 8

(a) Retell - Wolf Is Coming (Chinese text).

Source: Yong, A. & Ma, W.(1996) The Wolf Is Coming!, Dolphine Books, Beijing.

Translated into English by researcher for retell.

1. Long ago , there was a little boy who lived in mountains His family raised sheep and everyday the boy took the sheep out to graze.

2. His father always told him, "The wolf is the sheep's most feared foe, wolves eat sheep!"

3. The boy asked, "Father, what should I do if a wolf comes?" "If you see a wolf," answered his father, "yell out for help as loud as you can. People will hear you shout and come to save you. Remember this well."

4. One day, as the boy was up in the mountains he felt a little bored. He thought it might be fun to find out if he yelled people would really come save him as his father said. "Help!" he cried, "Wolf!"

5. All the people working nearby heard him yell and hurried u the mountains, asking "Where is the wolf? Where is the wolf?" as they ran.

6. When the boy saw how worried the people all were, he thought it was funny.

7. The people ran to the top of the mountain where there wasn't even a shadow of a wolf. When they realised that the boy was playing a joke on them, they all said, "You shouldn't tell lies".

8. A few days later, the people heard the boy shout again: "Help! Wolf!" They all ran up the mountain again, "Where is the wolf?" they asked. But once again, there wasn't a shadow of a wolf.

9. And they knew that the boy had lied to them again. No one said anything as they all left.

10. Several days later, the people heard the boy shout, "Help! Wolf!"

11. But nobody paid any attention. Everyone thought that they had already been tricked twice, and were not going to be tricked a third time.

12. But this time there really was a wolf! A big gray wolf jumped on a sheep and killed it. The boy was scared as can be. He was afraid that the wolf would bite him too. "Help!" he screamed, "Wolf!"

13. When the boy saw no one was coming to save him, he ran down the mountain as fast as he could yelling, "Father! Mother! Help! Help!"

14. He ran all the way home without stopping and threw himself into the arms of his mother crying.

15. "Son, what's the matter?" his mother worriedly asked. The boy felt very ashamed, but told her the story from the beginning.

16. "Remember, son," his mother told him, "never tell a lie."

(b) Generation - A messy boy eating rice (Chinese text deleted). Lu P, et al, (1993), *Cai Tu Yinger Gushi 100 Ji, pp. 279-288,* Xin Hua Publisher, Shanghai, China.

Story depicts a messy pre-school child who spills grains of rice while feeding himself sitting in the backyard. He was menaced by a rooster picking the grains off his shirt and face. Then came the grandmother who was seen explaining the reason for the rooster's action. He took the grand mother's advice and is no longer spilling the grain. The rooster then walks away disappointed.

Session 9

(a) Retell - "Farmer Duck" (bilingual text).

Waddell, M. & Oxenbury, H.(1993) Farmer Duck. Magi Publication, U.K.

1. There once was a duck who had the bad luck to live with a lazy old farmer. The duck did the work. The farmer stayed all day in bed.

2. The duck fetched the cow from the field. "How does the work?" called the farmer. The duck answered, "Quack!".

3. The duck brought the sheep from the hill. "How does the work?" called the farmer. The duck answered, "Quack!"

4. The duck put the hens in their house. "How goes the work?" called the farmer. The duck answered, "Quack!"

5. The farmer got fat through staying in bed and the poor duck get fed up with working all day.

6. "How goes the work". "Quack!"

7. The poor duck was sleepy and weepy and tired.

8. The hens and the cow and the sheep got very upset. They loved the duck. So they held a meeting under the moon and they made a plan for the morning. "Moo!" said the cow. "Baa!" said the sheep. "Cluck!" said the hens. And that was the plan.

9. It was just before dawn and the farmyard was still. Through the back door and into the house crept the cow and the sheep and the hens.

10. They stole down the hall. They creaked un the stairs.

11. They squeezed under the bed of the farmer and wriggled about. The bed started to rock and the farmer woke up. and he called, "How goes the work?" and .....

12. "Moo!" "Baa" "Cluck"   They lifted his bed and he started to shout, and they banged and they bounced the old farmer about and about, right out of the bed.....
and he fled with the cow and the sheep and the hens mooing and baaing and clucking around him.

13. Down the lane...."Moo" through the field "baa" over the hill "Cluck" and he never came back.

14. The duck awoke and waddled wearily into the yard expecting to hear, "How goes the work?" But nobody spoke.

15. Then the cow and the sheep and the hens came back. "Quack?" asked the duck. "Moo" said the cow. "Baa" said the sheep. "Cluck" said the hens. And they told the duck the whole story.

16. Then mooing and baaing and clucking and quacking they all set to work on their farm.

(b) **Generation - "A boy, a dog, a frog and a friend" (textless).**
Mercer (1982), Dial   Books for Young Readers, New York.

Appendix B

PRINCIPLES GUIDING TRANSCRIPTION AND CODING

<u>Transcription and coding guidelines. (26/1/2000)</u>

The audio recorded narratives were transcribed using standard English orthography for the children's L2 narratives. For the L1 narratives, the recorded data were first transcribed phonetically into English orthographic form using standard Han Yu Ping Yin (Chinese phonetic system) based on Xinhua Zidian, 1988 (New Chinese Dictionary). They were then translated into English by the author, a native speaker of both Chinese dialects. Each of the L1 phonetic form was checked with the respective mother to test the accuracy of the transcription before translating into English. All the pauses and incidental comments were included in the transcription. The number of the utterances and T-units were identified according to the definitions below and counted. The T-units were analysed for the presence of cohesive ties, number of complete episodes, total number of grammar components, frequency of grammar components, and stage of development. The guidelines for story analysis on the T-units was adopted from Hayes et. al. (1998) as follows:

<u>Procedural guidelines for story analysis (Hayes et al 1998, p169)</u>

T-units that were repetitions of story stems were counted and assigned to the setting category.

T-unit that met criteria for more than one story grammar category were assigned to those categories. Excluding from analysis were : -

a. false starts, dysfluencies, and fillers and incomplete utterances,

b. any statements unrelated to the story,

c. any statements that repeated information already expressed,

d. ending codas (The end. That's all.),

e. statements that contained non-specific information, making it difficult

to assign that statement to an appropriate story category, either

because of an unclear referent or because the information did not

make sense in the context it was communicated,

f. statements that contained contradictory information.

Definitions

Utterance - "a stretch of speech preceded and followed by silence or speaker"

(Crystal, 1991, p. 367).

T-unit - "a single, independent clause and any subordinate clauses that are

grammatically attached to it" (Hayes et.al., 1998, p163).

Clause -basic unit - "any unit that contains a unified predicate" - " a predicate

that expresses a single situation (activity, event or state), including finite

and non-finite verbs as well as predicate adjectives" (Berman & Slobin,

1994). They are present in both utterances and T-units.

Episode - A complete episode minimally consists of initiating event and/or

internal response, attempt and direct consequence (Merritt & Liles,

1989).

Criteria for Cohesive Score. (Adapted from SAOLA - Allen et.al., 1993)

Listener orientation :
0   Fails to provide orientation at commencement of story or between episode.
1   Some initial orientation is given, but it is not reintroduced or re-established
2   Character and place orientation are provided but story lacks time orientation; or character and time, but no place.

3   Character, time and place orientation are provided and maintained throughout the story

Adverbial
0   Little or no evidence of adverbial
1   Occasional use of adverbial of place, or time, or manner
2   Occasional use of more than one type of adverbial, (of time, or place, or manner)
3   Evidence of use of adverbial of place, time and manner

Vocabulary
0   Non-specific or inappropriate vocabulary used; mostly labelling and over use of deixis
1   More specific vocabulary used However still concrete, familiar and lacks variety
2   Developing description and elaboration within the story. Some use of adjectives, adverbial, expanded noun phrases etc.
3   Use of more formal literate vocabulary evident, e.g mental verbs, modals. A wider use and range of descriptive vocabulary throughout re-tell.

Connectors
0   Lacks intersentential links and connector use, re-tell consists mainly of simple sentences or phrases. Active sentences (little passive), repetition of exact lexical items or identical grammatical structure.
1   Mostly temporal connection. e.g. *and, and then,*
2   Causal connectivity evident, e.g. *but, because -therefore*
3   Greater variety of connectors used and more literate types, e.g. *until, suddenly, firstly, therefore*

Referencing
0   Does not use referencing or fails to indicate referent clearly resulting in confusion re-tell
1   Cohesive skills developing - referencing attempted nut use not consistent and often inappropriate.
2   Cohesive ties generally exist between successive utterances; anaphoric referencing used more consistently and referent usually identified.
3   Cohesive skill are used consistently and correctly.

Sum of all above ratings is 15.
Cohesive Score = sum of actual score for the above rating divided by 15.

Stage of development (Based & adapted on Applebee's stages 1978)
Rate :   0   Heap (Labelling and/or describing events or actions without a central theme. There is a conceptual "whole" organised by the linking of immediate perception.)
1   Pre-narrative sequence (Stories contain factual bonds between events. There is an arbitrary and superficial sequence of time. Associations between events are based on their similarity rather than on causality. Basic time sequence in labelling events, no intentional planning, simple association with a central theme).
2   Primitive narrative (Stories have a concrete core [an object or event] rather than a conceptual one around which child gathers other related concrete events. Basic macrostructure, evidence of causality, some exploration of character, e.g. feelings, planning and some use of inference).
3   Unfocussed chains (At this stage, incidents in a story lead directly from one to the next but the attributes which connect them keep shifting. The child can manage a lot of story material but the story lacks a central point Of which all parts can be related

back. It also include a miscellaneous category because it does not fit in a clear schema

4 Focused chains (Stories have a central point which is concrete rather than conceptual. Events are linked around one central concrete attribute. The appearance of four story grammar components, three of which are initiating event, attempt or action & consequence. There may be an ending but it's abrupt.

5 True narrative (The incidents in a story are tied to a concrete perceptual or abstract core. Stories have a theme of moral, incidents develop out of the previous one and elaborate a new aspect of the theme or situation. Fully developed plot, must have orientation, complication + resolution, intention/goals of characters dependent on attributes/feelings and microstructure is linked to macrostructure)

Information packaging (based on Berman & Slobin, 1994; McFadden & Gillam, 1996)

Level 1 - Temporal packaging - Weak - Heap, Pre-narrative sequence.
Level 2 - Causal packaging - Adequate - Primitive narrative, Unfocussed chain
Level 3 - Constituent packaging - Good - Focused chains, True narrative.

Appendix C

COHESIVE SCORES

Table a. Cohesive ties of Child LN

Sessions	1	2	3	4	5	6	7	8	9	10
Chinese retell										
Lis. orientation	3	1	3	2	3	3	2	3	3	2
Adverbial	2	1	1	2	2	2	2	2	3	2
Vocabulary	2	1	1	1	2	2	1	1	2	2
Connectors	2	0	2	1	1	1	2	2	2	2
Referencing	2	1	1	2	2	2	2	2	2	2
Cohesion score	0.73	0.27	0.53	0.53	0.67	0.67	0.6	0.67	0.8	0.67
English retell										
Lis. orientation	2	1	2	2	3	2	2	2	3	2
Adverbial	2	1	1	1	2	1	2	2	2	2
Vocabulary	1	1	1	1	2	1	2	1	2	2
Connectors	2	1	1	1	1	2	2	1	1	2
Referencing	2	2	1	2	2	2	2	2	2	2
Cohesion score	0.6	0.4	0.4	0.47	0.67	0.53	0.67	0.53	0.67	0.67
Chinese generation										
Lis. orientation	1	2	1	2	2	2	1	2		
Adverbial	2	2	1	2	2	1	1	1		
Vocabulary	1	2	1	1	2	1	1	2		
Connectors	1	2	1	1	1	1	1	2		
Referencing	1	2	2	1	2	2	2	2		
Cohesion score	0.4	0.67	0.4	0.47	0.6	0.47	0.4	0.6		
English generation										
Lis. orientation	0	1	2	2	2	1	2	1		
Adverbial	1	1	2	2	2	1	1	2		
Vocabulary	1	0	1	1	1	1	1	1		
Connectors	1	0	1	1	1	1	2	2		
Referencing	1	1	2	1	2	2	1	2		
Cohesion score	0.4	0.2	0.53	0.47	0.53	0.4	0.47	0.6		

Table b. Cohesive ties of Child LI

Sessions	1	2	3	4	5	6	7	8	9	10
Chinese retell										
Lis. orientation	0	0	1	0	1	1	1	1	2	2
Adverbial	1	1	2	1	1	2	1	1	1	1
Vocabulary	0	0	1	1	0	1	1	1	2	1
Connectors	0	0	0	0	0	1	0	0	1	1
Referencing	0	0	0	1	0	0	0	0	2	2
Cohesion score	0.07	0.07	0.27	0.2	0.13	0.33	0.2	0.2	0.53	0.47
English retell										
Lis. orientation	0	1	1	1	2	0	1	1	2	2
Adverbial	1	2	0	0	2	1	1	1	1	1
Vocabulary	0	1	1	1	1	0	0	1	1	1
Connectors	0	0	2	0	0	0	0	1	1	1
Referencing	0	1	1	1	1	0	1	0	2	1
Cohesion score	0.07	0.33	0.33	0.13	0.4	0.07	0.2	0.27	0.47	0.4
Chinese generation										
Lis. orientation		0	0	1	2	1	1	0	2	
Adverbial		0	1	1	1	0	1	0	1	
Vocabulary		0	0	1	1	1	0	1	1	
Connectors		0	0	0	1	0	0	0	1	
Referencing		1	0	1	1	0	1	1	2	
Cohesion score		0.07	0.07	0.27	0.4	0.13	0.2	0.13	0.47	
English generation										
Lis. orientation		0	2	0	2	2	0	0	1	
Adverbial		0	2	1	2	1	1	0	1	
Vocabulary		0	1	1	1	1	1	0	1	
Connectors		0	0	0	0	0	0	0	1	
Referencing		0	1	1	1	2	0	2	1	
Cohesion score			0	0.4	0.2	0.4	0.4	0.13	0.13	0.33

Table c. Overall Progress of Child LN

Chinese - retell

Dependent measure	Sessions									
	1	2	3	4	5	6	7	8	9	10
Story Length										
T-unit	17	15	8	28	18	8	26	28	28	21
Utterance	28	33	12	32	27	12	33	42	45	23
T/Utt. ratio	0.6	0.46	0.67	0.88	0.67	0.67	0.79	0.67	0.62	0.91
Complete episode	4	2	1	5	4	2	3	6	4	4
Story grammar										
Attempt	7	4	1	5	5	3	5	9	7	5
Init. event	3	2	2	7	5	1	7	6	7	5
Consequence	4	2	1	7	4	2	3	8	5	4
Inter. response	2	7	0	6	2	1	7	5	4	3
Setting	4	3	2	4	3	2	3	1	3	3
Reaction	2	1	1	3	2	0	3	3	1	2
Ending	0	0	0	0	0	0	1	0	1	0
Total	22	19	7	32	21	9	29	32	28	22
Text cohesion										
Lis. orientation	3	1	3	2	3	3	2	3	3	2
Adverbial	2	1	1	2	2	2	2	2	3	2
Vocabulary	2	1	1	1	2	2	1	1	2	2
Connectors	2	0	2	1	1	1	2	2	2	2
Referencing	2	1	1	2	2	2	2	2	2	2
Cohesion score	0.73	0.27	0.53	0.53	0.67	0.67	0.6	0.67	0.8	0.67
Dev. staging	4	2	4	4	4	3	4	4	4	4

Table d. Overall Progress of Child LN

English - retell

Dependent measure	798 1	998 2	1098 3	1198 4	199 5	299 6	499 7	599 8	799 9	899 10
Story Length										
T-unit	12	16	7	22	18	9	30	27	26	18
Utterance	18	38	9	27	28	11	37	42	42	21
T/Utt. ratio	0.67	0.42	0.78	0.82	0.64	0.82	0.81	0.64	0.62	0.86
Complete episode	2	3	1	2	3	1	4	6	3	3
Story grammar										
Attempt	8	4	1	5	4	3	7	9	10	4
Init. event	2	4	2	6	6	1	6	10	4	3
Inter. response	0	5	1	7	2	2	6	4	4	3
Setting	3	6	2	4	3	1	4	3	2	3
Consequence	2	2	1	3	3	1	5	6	4	3
Reaction	0	0	1	2	2	1	2	2	1	3
Ending	0	1	0	0	1	0	0	1	0	0
Total	15	22	8	27	21	9	30	35	25	19
Text cohesion										
Lis. orientation	2	1	2	2	3	2	2	2	3	2
Adverbial	2	1	1	1	2	1	2	2	2	2
Vocabulary	1	1	1	1	2	1	2	1	2	2
Connectors	2	1	1	1	1	2	2	1	1	2
Referencing	2	2	1	2	2	2	2	2	2	2
Cohesion score	0.6	0.4	0.4	0.47	0.67	0.53	0.67	0.53	0.67	0.67
Dev. staging	2	2	1	4	4	4	4	4	3	

Table e. Overall Progress of Child LN

Chinese - generation

Dependent measure	Sessions 2	3	4	5	6	7	8	9
Story Length								
T-unit	11	6	7	10	29	5	10	41
Utterance	15	14	10	19	43	7	18	57
T/Utt. ratio	0.73	0.43	0.7	0.53	0.67	0.71	0.56	0.72
Complete episode	2	1	1	2	6	1	1	4
Story grammar								
Attempt	2	1	5	3	14	1	4	10
Init. event	3	3	2	2	3	1	4	12
Consequence	2	2	2	1	11	1	1	9
Setting	2	1	0	3	5	1	1	4
Inter. response	3	0	0	2	4	1	2	4
Reaction	1	0	0	0	0	1	0	4
Ending	0	0	0	1	0	0	0	0
Total	13	7	9	12	37	6	12	43
Text cohesion								
Lis. orientation	1	2	1	2	2	2	1	2
Adverbial	2	2	1	2	2	1	1	1
Vocabulary	1	2	1	1	2	1	1	2
Connectors	1	2	1	1	1	1	1	2
Referencing	1	2	2	1	2	2	2	2
Cohesion score	0.4	0.67	0.4	0.47	0.6	0.47	0.4	0.6
Dev. staging	3	4	3	2	4	2	2	4

Table f. Overall Progress of Child LN

English - generation

Dependent measure	Sessions 2	3	4	5	6	7	8	9
Story Length								
T-unit	6	5	8	10	29	10	14	31
Utterance	8	10	11	16	30	11	27	47
T/Utt. ratio	0.75	0.5	0.73	0.63	0.97	0.91	0.52	0.66
Complete episode	1	2	1	1	5	1	2	3
Story grammar								
Init. event	2	3	3	2	7	2	4	12
Attempt	2	2	2	6	5	3	4	5
Setting	1	1	1	2	2	3	2	3
Consequence	0	2	2	0	5	2	3	4
Inter. response	2	1	0	1	7	1	1	6
Reaction	1	0	1	0	2	0	2	5
Ending	0	0	0	1	0	0	0	0
Total	8	9	9	12	28	11	16	35
Text cohesion								
Lis. orientation	0	1	2	2	2	1	2	1
Adverbial	1	1	2	2	2	1	1	2
Vocabulary	1	0	1	1	1	1	1	1
Connectors	1	0	1	1	1	1	2	2
Referencing	1	1	2	1	2	2	1	2
Cohesion score	0.4	0.2	0.53	0.47	0.53	0.4	0.47	0.6
Dev. staging	1	1	4	1	4	1	2	3
Total							10	11

Table g. Overall Progress of Child LJ

Chinese - retell

Dependent measure	Sessions 1	2	3	4	5	6	7	8	9	10
Story Length										
T-unit	11	9	10	24	17	6	20	14	34	9
Utterance	25	31	17	51	55	14	56	43	49	14
T/Utt. ratio	0.44	0.29	0.59	0.47	0.31	0.43	0.36	0.33	0.69	0.64
Complete episode	2	0	1	0	1	1	1	2	4	1
Story grammar										
Inter. response	0	3	1	13	3	3	4	4	6	4
Init. event	5	1	3	6	2	1	8	1	8	4
Attempt	3	4	4	0	5	2	4	3	6	1
Consequence	4	2	1	0	1	1	2	3	5	1
Setting	0	0	1	6	6	0	2	1	3	0
Reaction	1	1	0	1	1	0	0	2	2	0
Ending	0	0	0	0	0	0	0	1	1	0
Total	13	11	10	26	18	7	20	15	31	10
Text cohesion										
Lis. orientation	0	0	1	0	1	1	1	1	2	2
Adverbial	1	1	2	1	1	2	1	1	1	1
Vocabulary	0	0	1	1	0	1	1	1	2	1
Connectors	0	0	0	0	0	1	0	0	1	1
Referencing	0	0	0	1	0	0	0	0	2	2
Cohesion score	0.07	0.07	0.27	0.2	0.13	0.33	0.2	0.2	0.53	0.47
Dev. staging	0	1	1	2	1	2	1	1	2	2

Table h. Overall Progress of Child LI

English - retell

Dependent measure	Sessions 1	2	3	4	5	6	7	8	9	10
Story Length										
T-unit	11	9	4	17	17	5	19	17	28	13
Utterance	17	12	9	52	33	11	38	35	45	18
T/Utt. ratio	0.65	0.75	0.44	0.33	0.52	0.46	0.5	0.49	0.62	0.72
Complete episode	1	1	1	0	2	0	0	2	3	1
Story grammar										
Init. event	4	2	1	7	4	2	7	4	6	4
Inter. response	1	4	1	7	3	1	7	2	5	3
Attempt	1	3	2	2	5	0	3	3	7	3
Setting	2	1	0	1	5	1	2	5	3	1
Consequence	1	1	0	1	2	1	2	2	6	1
Reaction	1	0	1	0	0	0	0	0	0	0
Ending	0	0	0	0	1	0	0	1	0	0
Total	10	11	5	18	20	5	21	17	27	12
Text cohesion										
Lis. orientation	0	1	1	1	2	0	1	1	2	2
Adverbial	1	2	0	0	2	1	1	1	1	1
Vocabulary	0	1	1	1	1	0	0	1	1	1
Connectors	0	0	2	0	0	0	0	1	1	1
Referencing	0	1	1	1	1	0	1	0	2	1
Cohesion score	0.07	0.33	0.33	0.13	0.4	0.07	0.2	0.27	0.47	0.4
Dev. staging	1	2	2	1	3	0	1	0	2	2

Table i. Overall Progress of Child LI

Chinese - generation

Dependent measure	Sessions 2	3	4	5	6	7	8	9
Story Length								
T-unit	10	6	14	17	21	7	13	22
Utterance	42	9	28	46	44	16	28	33
T/Utt. ratio	0.24	0.67	0.5	0.37	0.48	0.44	0.46	0.67
Complete episode	0	0	1	0	1	0	2	2
Story grammar								
Inter. response	5	2	7	6	9	0	4	5
Init.event	3	1	2	12	6	2	3	6
Attempt	0	3	1	0	4	5	4	7
Setting	2	0	1	2	2	1	1	3
Consequence	0	0	1	0	1	1	2	2
Reaction	0	0	2	0	3	0	0	1
Ending	0	0	1	1	0	0	0	0
Total	10	6	15	21	25	9	14	24
Text cohesion								
Lis. orientation	0	0	1	2	1	1	0	2
Adverbial	0	1	1	1	0	1	0	1
Vocabulary	0	0	1	1	1	0	1	1
Connectors	0	0	0	1	0	0	0	1
Referencing	1	0	1	1	0	1	1	2
Cohesion score	0.07	0.07	0.27	0.4	0.13	0.2	0.13	0.47
Dev. staging	0	2	4	1	0	1	1	2

Table j. Overall Progress of Child 1.1

English - generation

Dependent measure	Sessions 2	3	4	5	6	7	8	9
Story Length								
T-unit	4	5	7	20	22	8	5	24
Utterance	15	10	15	28	24	16	17	36
T/Utt. ratio	0.27	0.5	0.47	0.71	0.92	0.5	0.3	0.67
Complete episode	0	0	0	1	1	0	0	2
Story grammar								
Init. event	2	1	1	6	8	3	2	10
Inter. response	1	2	3	3	5	3	1	4
Attempt	1	1	0	6	5	2	0	4
Setting	0	1	1	3	2	0	2	2
Consequence	0	1	0	1	2	0	1	3
Reaction	0	0	0	1	1	0	0	2
Ending	0	0	0	1	0	0	0	1
Total	4	6	5	21	23	8	6	26
Text cohesion								
Lis. orientation	0	2	0	2	2	0	0	1
Adverbial	0	2	1	2	1	1	0	1
Vocabulary	0	1	1	1	1	1	0	1
Connectors	0	0	0	0	0	0	0	1
Referencing	0	1	1	1	2	0	2	1
Cohesion score	0	0.4	0.2	0.4	0.4	0.13	0.13	0.33
Dev. staging	0	3	1	3	1	0	1	2

Appendix D

Summary of Child LI's language skill at age 5 years 10 months, based on the

Speech Pathologist's report (courtesy of Helen Knott*, 1998).

<u>1. Expressive language</u>

Used language to label, comment, initiate, respond, narrate/report.

LARSP analysis of spontaneous and narrated language approximate 3 to 3 & half year

level.

<u>2. Oral narrative</u>

Applebee stage 2 sequences, i.e. 2 - 3 years level. Formal scoring for content and

form was less than 3 years. Severe delay.

<u>3. Comprehension</u>

Using Marion Blank Discourse model - mainly at Level II. Severe difficulty in

using language to analyse, infer, solve problem in both languages. Severe

comprehension delay in both languages with Chinese being marginally stronger. He

followed single stage instruction with some support, repetition. Inconsistent locative

knowledge.

<u>4. Metalinguistics</u>

He wrote his full name readily, but did not know which sound started his name.

He had difficulty rhyming and could select the initial sound of a word when a choice

of words was given.

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Appendix E
Sample data

9/1/99. Child LN

(2) Retell - "Peter and the cat" in English.

Child LN	Researcher

1. Once there were Peter.
2. Peter loves lots of animal.
3. One day Peter went home from school, Peter hear the cat meow.
4. Peter don't know where is the cat.
5. And then Peter looked back/. peter didn't saw him.
6. And the cat meow louder.
7. And then Peter saw the cat up in the tree.
8. Peter is a kind boy.
9. Peter started to climb up the_the tree......   What did he climb up the tree
                                                        for?

10. To get the cat, then Peter was very frightened.
11. He hold_hold on to the tree xxx.....   What happen then ?
12. ....um_Peter think if_he_shout very loud/ someone will come.
13. But no_but no one came_
14. Then when Peter was nearly tired,
15. a man was watering the garden....and the man.....
16. the man.....man saw Peter up the tree and the man.....
17. and the man get the ladder and help Peter.
18. And Peter was shaking_
19. And Peter said thankyou.
20. And the man...and....
21. Was still shaking_
22. And when Peter got home, his mum was very /angry/
23. His mum said why do you come home very late.
24. Peter said, Peter he is climbing up the tree to rescue the cat.
25. Peter ask: "Can I keep the cat?"
26. And mum said: "Yes"
27. Mum said: "You have to ask the /adult/ if you saw something_
    something like that, you-you don't climb- up you use to call the adult.   Why?
28. That's dangerous.

(3) Story generation from a textless book about a naughty boy misbehaving when taken out
    shopping with his younger sister by their father.

Child LN	Researcher

1. *Ji ei dapo jia pai.*
   A boy very naughty.
2. *Jit lit, hi lo_ hi ei dapo gina yin_hi ei dapo gina hilo_*
   One day, hi lo_ the boy he_the boy_
   yin ei pa-pa bo ki "shopping", *xoa yi yin duo wa xa wa ko lo.*
   his dad want to go shopping, therefore they then get changed.
3. *Hi ei dapo gina gu loki lao dui_hi lo lao dui chiu lo.*
   the boy slide down the stairs_ the arm of the stairs
4. *Hi lo gina he ke diow lo lang ei* letter box *lo*
   The boy want to jump over people's letter box.
5. *Hi ei dapo gina gan hi ei chia du lo* /crash;/   (Where did he push the
                                                            "car")

   The boy push the "car" (trolley)
6. *Di* shopping *ah/.* /Crash/!
   At the shopping?. /Crash?
7. *Ah hilo dapo gina bo _hi lo lei tiao lai tiao ki hi lo_*
   *Urn_*the boy want_ *hi lo* was_jumping about_

gan na guerilla lo.	(Where did he jumping about?)
like a guerilla.	

8. *Mng si tiao,jit ei si xia mi?*
   It's not jumping, what is this? (Pointing to the picture
   of the boy hanging off the shelve in the supermarket.)

9. *Wa mng jai ah · lei hei mng gia ei ah.*   *Hei mng gia ei kei-ah.*
   I don't know/ it's for putting things.   Shelve for putting things

10. *Hei ei dapo he tiao lo ki potato.*
    The boy want to jump onto potatoes

11. *Hi ei dapo he kua diou xia mi ei dang zoa.*
    The boy want to look for somehting to do

12. *(Wa buei hiao hi ei.)*   *I lei zoa xia ?*
    I don't know.   What is he doing?

13. (wa nng zai ah/)
    (I don't know !)
    Ah: I lei hi chip lei do ka lei.   (Where did he get the chips
                                              from?)

    Ah ! He threw chipd onto the floor.

14. *Di shopping.*   (From the shelve.)
    At the shop.

15. *Hilo pa-pa si di hilo jit buing lo,*
    And the dad was at this side,
    hi ei dapo si di hit buing.   (What is the father doing?)
    that boy was at that side

16. *Pa-pa lei du chia.*   (What about the boy.)
    Dad was pushing the cart (trolly).

17. *Dapo bo gan ei yi an nei hi lei ho giang.*
    The boy was doing _ like this _ and not frightened

18. *Ah dan pa-pa lei xng zii ei si juei, hi ei dapo bo gina tao_*
    And while dad was counting the money (*at the check out*),
                        that boy stole_
    hi lo duei jiei dng ah di shopping lo
    a_ sweet at the shopping_
    jia tau jia lo ki.
    and ate (it)

19. *Hi lo dan pa bei ki chia_dan pa bo ki yin ei chu ei si juei,*
    and when dad was getting into (the) car_
                        when dad was going home
    hi ei dapo goa tat lai tat ki, tat lei mng kia
    that boy again kicking here and there, kicking the things.

20. *Ho, tei lo.*
    Well, finished.

28/2/99
(2) Story generation - Frog, where are you?
(a) Child LI - English

<u>Child LI</u>	<u>Researcher</u>
1. Frogie in the_um_put in this box, um	
2. and doggie look at the frog	
3. And the boy look at the frog	
4. And the doggie is like a puppy	Um_what happen there?
5. He is sleeping, the frog is go away/	
6.. And he sleeping.	
7. Oh no/ the frog is gone/	
8. Um, are you in there frog?	
9. No/ frog is outside, come back here/	
Come on/ come back/	
10. Um, frog come_um,	What happen there?

um, come back you.
Come back. Where's the frog,/where's the frog

11. Come on frog.   So what happened?
12. Frog is down:_ and the frog
    the/ the dog is under the ground
13. He down under the ground   Where does he come from?
14. He come from I don't know/   Where did he jump from?
    Jump from, I don't know/   So what happen there?
15. He_he pat a dog / he pat
16. "Frog:/. Where are you?"
17. "In forrest" "Where are you?"
    Where are you. Where are you going?
18. In honey there? You in there?
    Honey in there/ The frog in honey.
19. Oh no, that's not a frog/. The dog in the honey.   What's the dog doing?(*Shaking the*
                                                             tree)

    Um_ I don't know.
20. He is here/_ honey is not a fog/   This is a bee hive, where the bees
                                                             live.
21. Bee hive. Oh no! Bee hive.   What happen to the bee hive.
22. Bee hive is go on the ground.
23. "Frog! Where are you!"
24. Are you in there? He see a _frog.
25. Where frog? I want find frog!   What happen to the boy?
26. The boy find a frog.
27. "Oh_ where are you frog? Where are you?"
28. "I:_in there!"
29. "Um_ that's not a frog/that's is not a frog. That is not..."
30. "Oh no! Frog is over there!"
31. Down. "He push me. He's down.:_"
32. Where frog. "Yes, frog over there."
33. "We see_ over there. Come on!"
34. "Let's go"   What happen to the boy?
35. The boy is see a frog.
36. um_ sh_frog_um_frog:_
    "Where is the frog though."_" Come with me."
37. "Um, I'm not find every frog."
38. And I find a frog, many frog over there."
39. "Good bye frog. Bye bye!"

(b) Child LN - Hokkien
Child LN

Researcher
Ijuing u zi ei ginna...
Once upon a time....

1. *ijuing u zi ei ginna geow ji jat gow lo.*
   Once upon a time there were a child and a dog....
2. *hi jat gow geow ginna kua/kua _hi lo_ching wa.*   *ching wa di doa loa?*
   That dog and child *(were)* look*(ing)* at the_hi lo*(you know)* _frog   Where was the frog?
3. *ching wa di_di gan lei.*
   Frog was in the jar.
4. *uh ji am mi, gow geow ginna koon lo, hi ei ching wa tao tao zao chu lai lo.*
   One night, dog and child were asleep, that frog stole away.
5. *ah/ah hi lei_hi lei ginna sei: "oh. oh: hi ei gow/ching wa di doa loa ah?"*
   And/ and that_that child said: "Oh! Oh_where is that dog/frog ?
6. *"Ching wa ah! lidi hi lai min hei?"*
   "Froggie! Are you in there?"
7. *Ah, bo siang yim lo.*
   And there was no noice.

8 *ah ie keo "chingwa ah, li di gua min ni?"*
And he called "Froggie! are you outside?"

9. *ah bo siang yim lo.*
And there was no noice

10. *ah hi let gow pu lak lo lai lo.*
And then the dog fell down

11. *ah ie guam kiu hi lei gow lo.*
And he quickly rescued the dog.

12. *ah gow eng zi ah ga yi zi ginna ei min lo..*
And dog was licking the child's face with its tongue.

13. *ah ie kio "chingwa' li di hi lai min ni?'*   *yi di de lo ah' gow ga ginna di de lo?*

And he called out "Frog! Are you in there?"   Where are dog and child?

14. *ie di yin ei chu lei lo gua min lo.*
They are inside their house_ outside.

15. *ie lei chingwa! li di lai min lei?*
He was/(repair)froggie! Are you in there?

16. *mng ku chit chia lo chi chu lai lo.*
But, a mouse came out.

17. *ah hi zia gow kua dio_bid pang lo.*   *bid pang xiu.*
And that dog saw _ (the) bee.   Bee hive.

18. *bid pang xiu lo. ah yi bo zia lo*
Bee hive. And it wanted to eat.

19. *ah gow ga chiu lei yeo yeo lei, hi lei bid pang xiu jiu lak lo lai lo.*
And then dog was shaking the tree, the bee hive then fell down.

20. *ah hi ei ginna hei ki chiu lei sei : "chingwa , li di hi lai min ni?"*
And the child climb up the tree and said "Frog, are you in there?"

21. *ah bo sing yim lo.*
There was not any noice either.

22. *bid pang chow hi lo chib hi zia gow lo.*
Bees ran 'You know')/ chase after that dog.

23. *ah hi ei du po doa lak lo lai.*
And then that boy fell down.

24. *ah hi ei mow toa eng lei chib hi lei ginna lo.*
And that owl was chasing after that child.

25. *ah hi lei ginna sei : "chingwa:/ li di hi lia lei?"*
And that child said : "Frog:/ Are you in there?"

26. *ah bo siang yim lo.*
There wasn't any noice either.

27. *ah hi lei.....bei lei jio tow lei.*
And that....climbing up rock.

28. *"O:/ li si jit jia lok lo? _ mng si chingwa o/"*
"Oh:/ You are a deer?_Not a frog!"

29. *lok eng hi ei ginna ka yi tuk ki lo. ah lok lei chib hi ei kow lo.*
Deer jacked up the child, and deer was chasing after the dog.

30. *kow lei zao lo.*
Dog was running.

31. *ah lok gang hi ei ginna kio kow ka yi lu lo ke lo.*   *lu lo ke de loa?*
Deer pushed the child and dog down.   Down where?

32. *luk lo ki toa ka lei lo.*
Pushed down onto the ground.

33. *luk lo ei zui lei.*   *dui de lo luk lok ke?*
Pushed down the water.   Where did it push from?

34. *eng suang lei lo.*
From the hill.

35. *ah ie sei: "chingwa ah/ li di hi lia ni?"*
And_he said "Froggie! Are you there?"

36. *ah bo siang yim lo.*
No noice either.

37. *ah hi ei kow bei ki hi ei da ho ginna ei tow kak lo.*
And the dog climb up onto the boy's head.

38. *ah ei sei: "/suei sing lei, huey si lei chingwa di lu lia lei/"*
And he said "Be quiet! Maybe the frog is there!"

39. *ie sei: "/lai kuang. "*
He siad "Come and look!"

40. *chei teo lo nerng ei chingwa lo.*
Has found two frogs. (*Lack of reference*)

41. *ah jiang juei chingwa lo.*
And there were many frogs.

42. *ah......yi bo xiung ho tuei hi ei chingwa lo.*
And....He wish to take the frog.

43. *ah yi tuei jit jiat chingwa lo, ah yi sei: "bye bye", bat ei chingwa lo.*
And he took one frog, and he said "Bye bye" to other frogs.

(c) Child LI -Cnatonese

Child LN	Researcher
1. *yau yiet ko nam jai tai ko jiat ngokyu.*	*Mng hai ngokyu, hai chingwa.*
There was a boy looking at that crocodile.....	Not crocodile, is a frog.
ko jiat nam jai tai ko jiat chingwa.	
That boy look at that frog.	
2. *yanwei kuei yat jan yiu fan kow ah.*	
Because he wanted to sleep soon.	
3. *ko chingwa yiu zao huey chut bien ah.*	
That frog wanted to go outside.	
4. *"chingwa hai bin ah?"*	
"Where is frog?"	
5. *huey chu bien ah.*	
Gone outside. (*No reference*)	
6. *"ngoa wan chingwa fan lei ah"*	*zung yau li doa lei?*
"I am finding back (*the*) frog!"	What about here?
7. *ah_wan mng doa ah/, wan doa hai bin doa ah?*	
And_ Can't find it! (Have) found where is it?	
8. *"chingwa, chingwa/ lei hai bin doa ah?"*	
"Frog! Frog! Where are you?"	
9. *um_ "aiya/ aiya/ kow zai zo mei yei dit lok huey ah?"*	*huei wan bin doa dit lok huey?*
Um_ "Oh dear/ oh dear! Little doggie why did you fall down?	
10. *yanwei gow zai dit lok huey, zan hai ho xiu ah.*	
Because doggie fell down, it's really so funny.	
11. *yanwei huey di lok huey_dit doa, mng xiu sam ga.*	
Because it fell down_fell down, was careless.	
12. *"Chingwa:/ lei hai bin doa ah?"*	*kuey hai bin doa kiu ?*
"Frog:/ where are you?"	Where did he calling from?
13. chingwa_huey tiu lo.	hai lo xuiang.
Frog_went onto the road	On the road.
14. "chingwa lei hai bin doa/chingwa lei hai bin doa?" zet?	jiet kow zai hai bin doa
"frog where are you/ frog where are you?"	Where is the doggie?
15. do mng hai chingwa, goa jiet mng hai chingwa.	
It's not the frog either, that is not frog	
16. tai mng doa chingwa hai goa doa. Yanwei kuei tai mng toa goa di yei.	
Can't see (the) frog there. Because he can't see those things.	
17. mad fung zuei ngo dei. wan mng doa kuey ah.	sai lo zai hai bin doa?
Bee chased after us. Can't find it. Um...um....	Where is the boy?
18. sai lo zai wan ngok yui/ frog.	Wan chingwa. Find the
kuei wan chingwa.	

The boy was finding crocodile/ he finding frog. (*At this point, there was a great deal of anxiety, frantically trying to retrieve appropriate words and formulate what to say next*)

19. aiya! hak xei ngoa ah.
    Oh dear! Scaring me!
20. chingwa hai bin doa doa nng hai chingwa gei/
    Frog where are you? It isn't frog either!

21. mad fung zuey kow zai ah
    Bee chasing after the doggie

22. hak xei kuey goa zei ei
    Frighten him that one (*classifier for animal*)
    mow tow yien.
    Owl

goa chei hai mei yei?
What is that animal?
mow dow yien
Owl.
mow tow yien zuei bin goa?
Who is the owl chasing?

23. zuei kow zai.
    Chase after the dog.
24. "mow tow yien, yau mo kien doa goa zet chingwa hai bin ah?"
    "Owl, did (you) see that frog?"
25. 'hai goa doa ah" "chingwa/ lei hai bin doa ah, chingwa/"
    "It's there!" " Frog! Where are you?"
26. "aiya/ do mng hai chingwa gei."
    "Oh dear! It's not frog either."
27. "a:/ kow meng ah, fai di ah/ chingwa lei zo ah/"
    "Oh dear! Help! Quickly! Here comes the frog."

bin goa kiu kow meng?
Who asked for help?

28. kiu goa zet_um_(repeat)_um....du mng hai ngokyui geh
    (*Experincing great deal of difficulty with audible heavy breathing*)
    Called that one (classifier for animal)_um_.....is not frog either!

li zet hai lok lei ga.

This one is deer.

29. Ngo ji doa huei goa doa ah.
    I know has gone there.

li doa dim ah
What happen here?

30. yanwei kuei hai goa doa chui ah
    Because he is there chasing
31. yanwei goa jet um_ goa jet_ngokyui hai bien doa.
    Becasue that um_ that_where is crocodile. (*Fatigue*)

chingwa hai bien doa.

32. chingwa hai goa doa ah.
doa?
    Frog is there.
boy?

kow zai sai lo zai hai bien

Where are the dog and the

33. kow zai sai lo zai wan chingwa
    Dog and boy are finding frog.
34. chingwa hai bien ah? chingwa hai goa doa. (Repeat and thus unterrupted by BL)

Kow zai sai lo zai dim ah? Di zoa lok......

    Where is the frog? Where is the frog?
down......
35. yanwei di zoa lok xuei chi goa doa ah. (*When prompted with a key word, JC was able to spontaneously produce a well formed utterance*).

What happen to the dog and boy? Falling

Chung bien doa dit lok huei?
Where did they fall from?

    Because has fallen down into the pond.
36. *yanwei huei dit lok huei*
    Because they fell down.
37. *um_um_/sh:_mo choa ah.*
    Um_um_ /Sh:_be quiet.

Bin goa wa mo choa?
Who said be wuiet?

38. *yau mo hai doa.*
    Are they here?
39. *Ngo wan doa kuei dei/wan doa lei dei.*
    I have found them./ Have found you.
40. *Nwan doa ah/ wan doa.*
    Have found (it)!/ Have found.
41. *kuei jung yau yet goa pang yau hai goa doa o.*
    There is another friend there!

42. *yanwei ngo wan yet gaa ngokyiu ah.* (Show sign of fatigue and drifted back to the favourite lexical term-crocodile)

Because I am finding a crocodile

43. Um_ /bye bye *gaa gaa yan/*

Um _ Bye bye everyone!

44. *yat zat xxx ngok(yu)* (repair)

yat zat xxx bei fan bei lei chingwa ah, bye bye

One croc(*repair*)

(In a while xxx) "(I'll) return frog to you! Bye bye!"

(d) Child LN - English

Child LN	Researcher
1. Once upon a time there was a little boy and his dog, and they all look at the frog.	
2. One night, the little boy and the dog sleep and the frog creep out of the _	Jar, this is a glass jar.
3. "O_O:/ where is the frog."	
4. The frog is not in.	
5. Are you in the shoe frog?	
6. Are you outside, frog? No one answer.	
7. And the dog fell down.	
8. And the jar broke.	
9. And the little boy was crossed and the dog licked the littel boy.	
10. And the little boy said "Frog_ are in the forrest. Frog, are you under the ground?"	
11. "No:/ You are_/mouse/."	
12. And the little dog shake the tree to get some honey.	Good boy, to get some honey. What happened then?
13. And the bee hive fell down and all the bees come out.	
14. And the little boy call; "Frog, are you in the tree?"	
15. And the bee chase the dog, and the owl come out, and the little boy fell down on the ground.	Look, Jason, the little boy fell down. Then what happen after that?
16. Chase the dog.	Yes, who chase the dog?
17. The bee.	OK> What happen there?
18. The owl chase the boy. And the owl fly through the tree again.	
19. And the little called: "Frog, frog, are you in there?"	
20. "No, you are a reindeer"	
21. And the reindeer pick the little boy up and chase the little dog.	And then what happen?
22. And then the reindeer push the boy and the dog into the water.	Where from?
23. From the mountain, the hill.	
24. Splash! "Frog, where are you?"	
25. Behind the log. Is that a log? (Directed the question to BL)	Yes, tha's a log.
26. "/sh--May be the frog's over there/"	
27. /Yes/ The frog's over there.	
28. And seven baby frogs. And the little boy try to get a frog.	
29. The little boy get a frog.	
30. The little boy say bye bye to the seven baby frog, and one mother frog and the other mother frog.	