City University of Hong Kong
Department of Linguistics and Translation
LT4227 First Language Acquisition Semester B, 2016/17
Instructor: Cecilia Chan

Term Paper Title:

Early Words and Language Development of an English-Speaking Child

Student Name:	Ng Yuen Ki Cynthia
Student EID:	cynthiang7
Word Count:	2403
Submission Deadline:	29th April, 2017

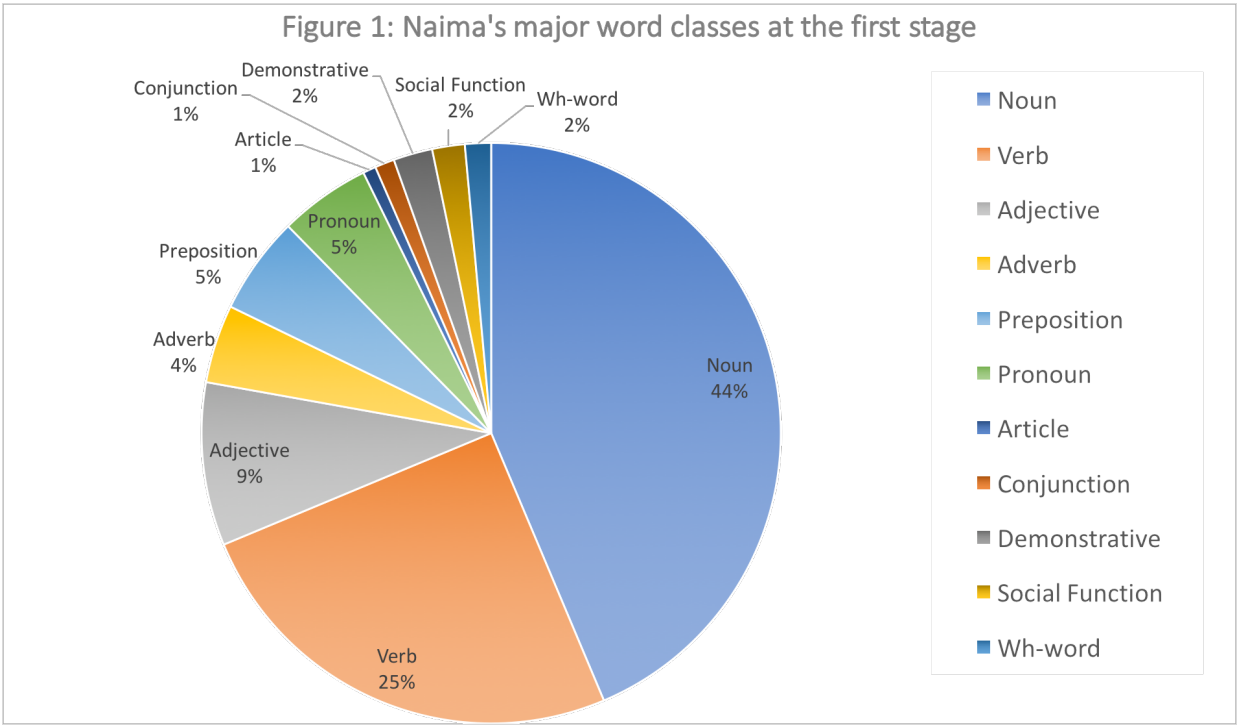
1. Introduction

Language is inseparable with human. It is a major tool for human to communicate and collaborate and first language acquisition has long been one of the major topics in linguistics studies. In order to study first language acquisition, we gather child language data from CHILDES. Child Language Data Exchange System (CHILDES) is a system which shares and learns conversational interactions of the child language operated by TalkBank (CHILDES, 2003). Child language data are collected from conversations with children and stored in terms of transcripts and media documents. In this project, two data files, nai28.txt and nai81.txt in the CHILDES database, are selected to investigate. The two data files are collected from an English-Speaking Child named Naima at the age of 1years and 8 months old and 3 years and 3 months old respectively who came from the Rhode Island in the U.S. state. This project is outlined as follow: i) analysis of Naima's early words acquisition and the role of parents, ii) discussion on her four aspects of language development included lexical, morphological, syntactic and pragmatic development and finally iii) provide a theoretical explanation on the language development.

2. Data Analyses and Discussion

2.1 Early words

In this section, the first file (nai28.txt) is examined and analysed according to word categories. We divided the types of words produced by Naima at the age of 1 year and 8 months old into eleven word categories, namely Noun, Verb, Adjective, Adverb, Conjunction, Preposition, Pronoun, Demonstrative, Article, Social Function and Wh-words. The word class distribution is as follow.



From the above pie chart, Noun occupied most early word produced by Naima, as almost half of the words belonged to this category (44%). In the noun category, around 40% of them were common nouns, which referred to the general names for classes of objects, for example guy and table. Then, there is 8% of proper nouns, which have a specified referent. For example, Mammy and Liza. Finally, there is 5% of pronoun, which is used to refer to someone or something such as she and them. Having noun as the largest percentage of early word is aligned with previous researches (Nelson, K. ,1973; Anglin. J. ,1995; Gentner, D. ,1982). They suggest that most of the early object names are noun as they are concrete and tangible which allows children to map the word to the referent. It is easier for child to identify the meaning encoded in them.

Moreover, verb is the second largest word category for child acquisition. ¼ of the early words are verb, such as see and go. Compared to noun, children are weaker in acquiring verbs because verbs have a higher variability according to different linguistic contexts in which the verb was presented. (Northwestern University ,2013) As a result, verbs for accompanying actions are abstract and more difficult to understand.

Besides, adjectives in early words (e.g, green, wet) accounted for 9% while adverbs (e.g. again, careful) accounted 4%. These words do not have a goal-directed referent

to refer to, but rather words for modification. (Nelson ,1973) As they are less necessary in expressing ideas and harder for them to grasp the meaning precisely by their cognitive ability, Naima did not acquire lots of modifications words.

Furthermore, for function word, Preposition is 5%, alongside with 1% article, 1% conjunction, 1% wh-word, 2% social function word and 2% demonstratives. These words are function words and the low percentage of these word classes in early age reflected that they are acquired late by child. Due to the limited cognitive ability of children, children are less likely to use abstract words such as determiners, prepositions and conjunctions. These words are more abstract and relatively harder than the concrete words for children to acquire. According to Zhu (1991), he pointed out child acquires words faster if they have a close relationship with actions and they rely on context to interpret the words unclear meaning and pronunciation. It explains why most of the early words are noun and verb, which allows fast-mapping to occur.

Although there are a variety of factors in influencing the child language development, most scholars agreed that the role of parents greatly affect a child's acquisition of language (Nelson, K. ,1973; Ingram, D. ,1999; Mushi, S. ,2010).

	Naima's Mother		Naima	
Word Categories	**Types**	**Percentage**	**Types**	**Percentage**
Noun	**166**	**43%**	**120**	**50%**
Common Noun	140	33%	97	37%
Proper Noun	26	6%	23	8%
Pronoun	17	4%	14	5%
Verb	**100**	**24%**	**69**	**25%**
Words for modification	**85**	**21%**	**37**	**13%**
Adjective	49	12%	25	9%
Adverb	36	9%	12	4%
Function words	**40**	**9%**	**26**	**9%**
Preposition	27	6%	15	5%
Article	2	1%	2	1%
Conjunction	6	1%	3	1%
Demonstrative	5	1%	6	2%
Social Function	**5**	**1%**	**5**	**2%**
Wh-word	**9**	**2%**	**4**	**1%**
Total	422	100%	275	100%

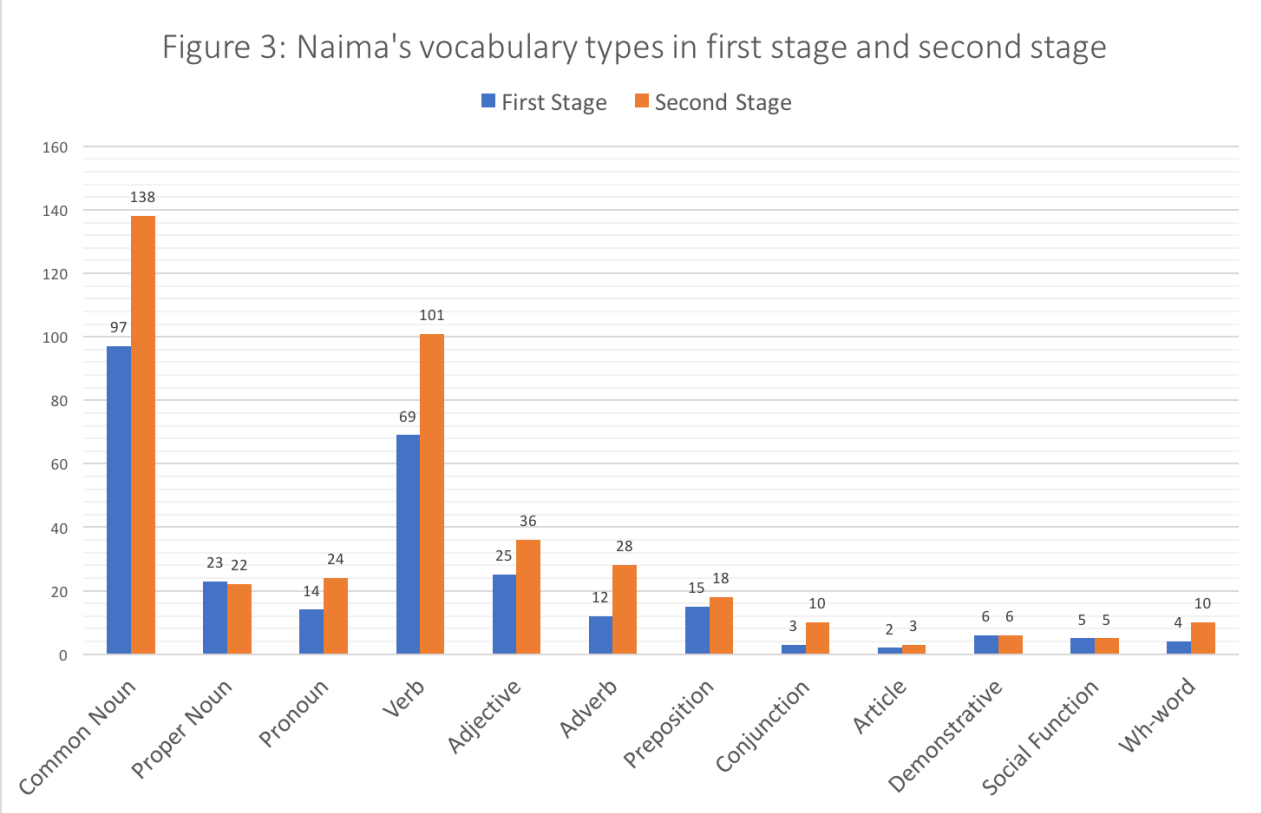
Table 2 : comparison of word types distribution between Naima and her mother

When we look into the above table, there is a positive relationship between Naima's mother vocabulary types and Naima's. The distribution of early words produced by Naima is similar to her mother as both of them have the highest percentage in nouns, followed by verbs and words for modifications. It shows that the more frequently the parents mention about a word, the more rapid the children uptake it. Research shown that 'Parentese' produced by parents mostly consists of nouns for objects and verbs for actions and it can explain why in Naima's speech, there is more noun and verbs than other word categories (Sandhofer; Catherine M.; Linda B. Smith and Jun Luo ,2000). There is about 10% of vocabulary produced by Naima were not found in her mother's speech. It can conclude that parents did play a major role in child language acquisition. The variety of lexicon in daily life produced by Naima's mother will consequently influence Naima's language acquisition.

2.2. Language development

Child language development increased rapidly at the age of 3 and 6. (Nelson, K. ,1937) In an attempt to study the lexical, morphological, syntactic and pragmatic abilities of the child development, data from nai28.txt and nai81.txt were collected and compared. Nai28.txt represents the first stage of language acquisition of Naima at the age of 1 year and 8 months old while nai81.txt represents data in the 2nd stage of language acquisition at the age of 3 years and 3 months old.

2.2.1. Lexical development



When we compared the two files, we can see that there is an increase of vocabulary types in all categories. Among them, increase in common noun and verb categories are the greatest.

First of all, when we look into the content of common noun produced by Naima, other than there is a greater variety in the vocabulary types as she gets older, the majority of content changed from concrete and closely related objects to a more diverse content and abstract nouns. At the first stage, a large proportion of the common nouns were about

toys(blocks), drinks(juice) and foods (bananas), while at the second stage, it was expanded to household objects (freezer), substances (pennies) and abstractions(trouble).

Secondly, the types of verbs produced by Naima became more diverse in nai81.txt.. Other than the motion verbs, static verb (stay), process verb (drop), and action verb (pick) observed in both files, some more abstract types of verbs, for examples, resultative verbs (shaped), causing verb (cause) and imaginative verb (pretend) only included at stage two (Pye, C., Loeb, D. F., Redmond, S. & Richardson, L. Z ,1995). It implies that Naima acquired many new verbs used to describe or indicate abstract state at the second stage.

From the above analysis, we can see that the types of vocabulary are getting more abstract and require the child to have a higher cognitive ability as the child grows older. It can be explained by learning theory. Children learn the word meaning by associative learning and it is highly relied on their cognitive ability to the target word. The more abstract the word is, the more indirect relationship between word and the meaning. It causes vocabulary for everyday life concrete objects surrounding them are relatively easier to learn because of the repeated exposure.

2.2.2 Morphological development

Morphology is a category which children tend to pay less attention to compared to concrete meaning of a sentence as they belong to function word. Firstly, Naima sometimes omitted auxiliary verb at the first stage while started to use auxiliary verb at the second stage in the utterance.

At the first stage:	At second stage:
1. CHI: horse sitting there. 2. CHI: supper gone! 3. CHI: he standing on?	4. CHI: what is this ? 5. CHI: I'm doing something here . 6. CHI: are you done ?

Table 4: Auxiliary verb usage of Naima at the first and second stage

Same as Brown's observation, auxiliary uncontractible verbs in predicative constructions produced by Naima are missing at the first stage. (Brown, R. ,1973) However, when we look into the data at the second stage, Naima not only didn't miss out the auxiliary verbs but also used them correctly in both declarative sentences and interrogative sentences. produced by Naima became more complete and grammatical.

At the first stage:	At second stage:
1. CHI: it yyy eat beans tonight . 2. CHI: the green train don't [= doesn't] go in it . 3. CHI: grapes I wonders	4. CHI: I bet she does. 5. CHI: she throws the paper, she puts the xxx yyy 6. CHI: Emma says I found a book .

Table 5: third-person singular markers usage of Naima at the first and second stage

Secondly, another difference between two data file is the usage of third-person singular markers (-s/-es) in present tense. At the first stage, there is no third-person singular agreement is found and used correctly in the examples provided in graph 5. Even in example 3, even '–s' is observed after the first person singular marker 'I', Naima failed

in using the morphological agreement in singular form correctly while at the second stage, third-person singular morpheme, is marked correctly in present tense. It reflects that both auxiliary uncontractible verb and third person singular present tense morphology are difficult for children to acquire. (Brown, R. ,1973)

2.2.3 Syntactic development

In terms of syntactic development, there are two major differences between the stages and they are the usage of Wh-words and omission of auxiliaries in questions respectively.

At the first stage, only four wh-words, namely “What”, “Where”, “Who” and “How” appeared while in second stage, three more wh-words, “When”, “Which” and “Why” appeared. “What”, “Where” and “Who”, wh-words which requires a concrete object (An object/place/person) as an answer, are acquired earlier than the other wh-words and used most frequently in both speech data. This is because wh-words “When”, “Why” and “How” requiring answers about time/reasons/methods. These abstract ideas require a high level of cognitive and linguistics ability of the children and acquired late.

At the first stage:	At second stage:
1. CHI: what's Naima give the sticker to ? 2. CHI: Grandma said , what Grandma said to Naima ? 3. CHI: where the apple go ?	4. CHI: what doesn't belong ? 5. CHI: why are you doing that ? 6. CHI: why do you think they'll be very surprised ?

Table 6: Auxiliaries in questions produced by Naima at the first and second stage

Moreover, we can observe that at the first stage, the syntactic rule of adding auxiliaries in wh-questions have not yet acquired by child at the age of 1 year and 8 months old. When we look at example 2, “what grandma said to Naima?” Naima used “said” as the main verb in this question. It proves that Naima recognized the morphology in past tense but failed in recognizing the syntactic rule for wh-questions, the tense should be

reflected on the auxiliary instead of the main verb. When Naima reached 3 years and 3 months old, she mastered the wh-question syntax and able to use different auxiliaries correctly. For examples, she used different auxiliaries in the questions according to different tenses.

3.2.4 Pragmatic development

The first pragmatic developmental problem in Naima case is Naima had difficulty in adjusting to others' perspectives and speech roles at the first stage.

At the first stage:	At second stage:
1. CHI: xxx blow ~~your~~ my nose . 2. CHI: Naima look for it 3. CHI: xxx what's Naima give the sticker to ?	4. CHI: I think so . 5. CHI: you , let's pretend that you are out of the car when your child is driving away . 6. CHI: I need the seat up a little .

Table 7: Deictic pronouns used by Naima at the first and second stage

Form the above table, Naima failed in adjusting to listeners in their use of deictic terms at the first stage caused by the rapid changing role between the speaker and listener. In example (1), reversal errors appeared. Naima wanted to say 'blow my nose' and she failed in adjusting the perspective from her mother to her own. Examples (2-3) also showed Naima failed to use first person perspective in naming herself as she used her name in calling her instead of first person deictic pronoun 'I'. When we look into the second stage, Naima was able to adjust the visual perspective in the conversation by using correct deictic pronouns.

The second pragmatics developmental problem found in the first stage is conversational skills.

At the first stage:
MOT: today is December +... CHI: Mommy . MOT: fifth +//. MOT: uh no , today is December sixth , Friday . CHI: Mama read that .

At second stage:
MOT: and look at all the snow on the ground . CHI: that's where polar+bears live too CHI: I bet they're being very careful . MOT: about the polar+bears ? CHI: yeah . 208025_210023 MOT: I think you're right . CHI: I think you're right .

Table 8: Pragmatic development by Naima at the first and second stage

In terms of turns taking, Naima overlapped her speech with her mother and failed to continue the topic as shown in the table. On the contrary, Naima was able to elaborate on the topic and respond to her mother by her own knowledge. She developed the skills of initiating a topic, maintaining the topic and saying something relevant to the same topic and also exhibited the precise timing of taking turns. It shows a development of pragmatic language ability between two different stages.

4. Discussion and Conclusion

From the above comparison of the speech data produced by Naima at the age of 1 year 8 months and 3 years 3 months, we can see that there was a great improvement in the language development of Naima in lexical, morphological, syntactic and pragmatic aspects. She was able to acquire more abstract words, more complex syntactic and morphological structures as well as pragmatic knowledge.

The improved ability in language as the child grows older can be explained by the cognitive theory by Piaget (1929). He suggested that language development is a result of interaction of cognitive ability and experience. Our cognitive ability allows us to learn from the environment and construct knowledge in our mind. The more we are exposed to the environment and the higher cognitive abilities we have, the more rapid our language development can be.

Besides, the linguistics input in child language acquisition (parent's role) can be explained by the social interaction theory (Bruner, J. ,1983). This theory suggests that human language development is urged by the needs of children for social communication initiated by the parents. Language is treated as a mean of social communication and expression of intentions to the children. The more they want to express, the more complex the utterance is. The source context like parents did have an influence on Naima's language growth. It means that Naima's language acquisition is affected by the social interactions she had.

Last but not least, this paper investigated the characteristics of early words and discovered the role of parents in child language development. The speech data at the age of 1 year and 8 months old and 3 years and 3 months old in four aspects, lexical, morphological, syntactic and pragmatics were discussed and compared. Finally, theoretical approaches were adopted in justifying the feature of first language development.

References

Anglin, J. (1995). Classifying the world through language: Functional relevance, cultural significance, and category name learning. International Journal of Intercultural Relations, 19, 161-181.

Brown, R. (1973). A first language: The early stages. Cambridge, MA: Harvard University Press

Bruner, J. (1983). *Child's Talk: Learning to Use Language" Oxford: Oxford University Press.*

CHILDES - Child Language Data Exchange System. (2003, October 18). Retrieved April 13, 2016

Gleason, J. B. (1993). *The Development of language (Eighth ed.)*. New York: Macmillan.

Gentner, D. (1982). Why nouns are learned before verbs: Linguistic Relativity versus Natural Partitioning. In S.A. Kuczaj (ed.), Language Development: Volume 2 Language, Thought and Culture (pp. 301-334). New Jersey: Lawrence Erlbaum Associates.

Nelson, K. (1973). Structure and strategy in learning to talk. *Monographs of the Society for Research in Child Development* Vol. 38, Nos 1–2, Serial No. 149:1–135.

Northwestern University. (2013, March 25). Language acquisition: Nouns before verbs?. *ScienceDaily*.

Ingram, D. (1999). *First language acquisition: method, description, and explanation*. (pp.130-136) Cambridge: Cambridge Univ. Press.

Mushi, S. (2010). Acquisition of Multiple Languages Among Children of Immigrant Families: Parents' Role in the Home-School Language Pendulum. *Early Child Development and Care,172*(5), 517-530. doi:10.1080/03004430214546

Pye, C., Loeb, D. F., Redmond, S. & Richardson, L. Z. (1995)) When Do Children Acquire Verbs? In E. V. Clark (Ed.), The Proceedings of the Twenty-sixth Annual Child Language Research Forum, pp. 60-70. Stanford: Center for the Study of Language and Information

Piaget, J. (1929). The child's conception of the world. London: Routledge and Kegan Paul