A CASE STUDY OF A TODDLER EXPOSED TO THREE LANGUAGES (ENGLISH, ILOCANO, JAPANESE)

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Abstract - This case study focuses on a toddler's (2-year old) language development as an effect of being exposed to three languages with various kinds of exposure. This aims to address the following questions regarding the child's present language developments and simultaneous development. The first part focuses on her language developments in terms of: a.) early language development b.) phonological development, c.) semantic and syntactic development, d.) pragmatic development and e.) vocabulary development. The second part focuses on simultaneous development. What factors affected the child's simultaneous development? How has her exposure to various languages affected her? Will her exposure to various languages create confusion or delay in her language development? These questions will be answered in this case study.

Keywords - Bilingualism, Code-Switching, Language Acquisition, Language Development, Multilingualism, Protowords

I. INTRODUCTION

This study is about a 2-year old child born in Japan to both Filipino parents. The parents work as English teachers in Osaka City, Japan. Both parents came from the same town in the Philippines and both speak the same Philippine dialect, "Ilocano". Although the parents have lived in Japan for more than 5 years their Japanese abilities are not that developed because as English teachers, they don't really use the Japanese language in their work.

The child is then exposed mainly to English as the parents and the caregivers talk to her in English. On the other hand, the parents and her caregiver talk amongst themselves in Ilocano and sometimes they talk to her in bits of Ilocano as well. The language of the community is Japanese. The child goes to the park near their apartment and play with other Japanese children her age. The child then is exposed to Japanese during these occasions. But mainly 90% of the time, she is exposed to English and Ilocano at home. This study aims to look at her present language developments and her exposure to various languages.

II. REVIEW OF RELATED LITERATURE

Language is a complex phenomenon. Orillos(1997) defined it as essentially human, systematic, generative, set of primarily vocal, arbitrary symbols used for communication with conventionalized meaning that operates in a speech community or culture. The main question arises as to how young children acquire their first language.

There are many theories that can explain the language acquisition of language by young children depending on their perspectives (biological, cognitive, psychological, social, etc.) However, everything starts in the mother's womb. Gleason (2005) even said that infants learn their language even before birth. Thus, even before the child is born, he is already exposed to the native language (L1) which could help in his future language acquisition. That is why parents, especially mothers (speech sounds travel through bone conduction) are encouraged to talk and sing to their children in the womb. This early prenatal exposure gives the child a head start on language acquisition.

The controversy starts after the child is born. Many theorists disagree on the "nature-nurture" debate on how the child acquires the language. The empiricists believe that language is acquired because they are learned. The environment is an important tool in language acquisition. Behaviorists regard language as a skill, which can be conditioned and reinforced. B.F. Skinner (in Gleason, 2005) postulated that children are conditioned by their environment to respond to various stimuli with language; wherein they are rewarded when they speak more adult-like thus helps them become more skillful. Thus, a child who is reared in a language-rich environment could improve their language communication greatly. Environment is indeed helpful in improving and developing a child's linguistic abilities.

However, "poverty of the stimulus" as coined by Noam Chomsky states that there must be some form of innate characteristics that gives additional knowledge because there is no sufficient useful language-related input available. (Gleason, 2005) The Innatist/Nativist theory believes that language is "innate", which means its properties are built into all men. It is the "nature" side of the debate. It is instinct-based. As Orillos(1997) summed it up; this theory views language as an inborn capacity of man. And that man has the "Language acquisition device" (LAD) that makes language possible and also that there is a "universal grammar" which contains similar

grammatical categories common to all languages (both coined by) Chomsky. Thus, it can explain why language seems to appear in all various societies and at almost similar stages regardless of the different culture. Also, it answers the question that language is too complex to be just taught or imitated.

The Innatist theory also explains the certain views on infant perception of language. For example, high-amplitude sucking paradigm (HASP) studies showed that infants are able to distinguish the differences of various speech sounds even before they can speak which is lost by the age of 1 when not used in their language. Headturn-Preferences Procedure (HPP) studies also showed that infants (4months and above) are able to recognize words and are capable of segmentation tasks. Infants are also able to identify statistical patterns among words. (Gleason, 2005) These infant abilities are evidences that there must be some basic innate characteristics that young infants possess to be able to demonstrate these traits when they are still very young.

However, a young child doesn't just rely on their innate traits to acquire language. A child also needs interaction and communication. It is a combination of various factors. Thus, the infant learns to "communicate" and interact with the people around using various means such as gestures, sounds, babbling, vocalizations, signs. People around the child also learn to modify their language in order for the child to understand it better. Infant-directed speech (IDS) or "motherese" way of talking to an infant includes universal features such as higher pitch and more variable pitch and exaggerated stress.

The caregiver's interactive and "happy talk" communication is also a factor as well as encouraging "joint attention" and "responsive interactional style" in fostering a social environment for the infant in terms of acquiring a language. (Gleason, 2005) These features provide evidence that social interaction is indeed an important factor in first language acquisition.

The Interactionist theory considers various factors such as social, linguistic, biological, cognitive and others interacting together to affect the development and acquisition of language. (Gleason, 2005) As Orillos (1998) pointed out, Social Scientists view language as an "open system interacting with, changed by, and changing its environment as part of culture". This theory considers both (Empiricist and Nativist) theories' strong points thus making it a moderate compromise in looking at the language acquisition problem. It is not just about the "nature" and not just about the "nurture" but includes various factors. Second language means any "language learned after subsequent to the mother tongue" and can mean a third or a fourth language. L2 acquisition then means a way to learn a language that is not their mother tongue, inside or outside a classroom. (Ellis, 1997) Simultaneous bilingualism on the other hand is referred to as bilingual first language acquisition. (Genesee and Nicoladis, 2006) There are various studies focusing on children/people with bilingual first language acquisition. One of the earliest studies include the detailed study of Ronjat in 1913 where he published a description of his son's simultaneous acquisition of French and German. (in Genesee and Nicoladis, 2006) That started the trend of studies with bilingual first language acquisition (BFLA).

Another study done by Lage (2005) focused on a study of simultaneous bilingualism in English and Italian of a boy between the ages of 2.2 and 6.2 which followed a "one-language, one-parent rule" wherein it was concluded that a supportive and rich environment plays an important role in learning speech. (De Houwer in Lage, 2005)

One study done by Weatherford (2008) is about a 2-year old who was born with a Japanese mother and English-speaking father. This study proposes that a child with simultaneous bilingualism is apt to be more dominant with the language of the community although able to differentiate between the two languages.

Most of these studies deal with parents who have different languages. Not many studies deal with parents who have similar languages, or whether the child is exposed to 2-3 different languages.

III. METHODOLOGY

The mother (the researcher of this case study) kept a running journal of the child's language development. When there are meaningful utterances, it is written down together with the affecting behavior and other related concerns. Also, the mother recorded some interactions through videos and audio recordings. Interviews were also done. The mother interviewed the caregiver (grandmother) during the times that both parents are at work concerning the child's linguistic development for the day. The mother also interviewed the father when they (father and child) go out together. She asks what meaningful utterances were produced during their day out together. Then the mother writes all the important developments. This information would be helpful in analyzing and interpreting the data. An advantage of a parent-investigator is that they can observe in many more and larger occasions and situations over a longer period of time as compared to an occasional investigator only. Also, the parent tends to understand the child's utterances more than other people do. The study spans 3 months (from February 2017- May 2017). The study composes of over a total of 30 hours, worth of data, which is a mixture of

observation, interview with journal logs and video and audio recordings.

Presentation of Data and Analysis

Part 1: Present Language Development:

What is the present language development of the child (early language development, phonology, semantic/syntactic, pragmatic and vocabulary)?

Early language developments: When the mother was pregnant, she was aware that babies in "utero" could hear sounds. Thus, the parents made attempts to "talk" and "sing" to their baby when she was still in her womb. The parents regularly sang English songs, with the father playing the guitar. They also "talked" to the baby both in English and Ilocano while she was still in the womb.

When, she was born, they made lots of effort to "talk" to her even though other people thought it strange to be "talking" to a baby. However, it was the first time for the mother to learn during her MA class, about the infants "perceptual tuning to speech", that they are born having the ability to distinguish all the sounds in all the languages in the world. And also, that at the end of their first year, they begin to focus and "tune in" only to their native language and lose the ability to discern other sounds not in their native language. This probably explains why the child in this study can discern (and can produce) the words "play" from "pray" while her 5-year old Japanese playmate has difficulty with words having /l/ and /r/. This is probably the reason why almost all Japanese adult have difficulty with words having /l/ and /r/, also /b/ and /v/ because they are perceptually attuned to their native language, which does not have those explicit sounds separately.

When the child was younger (first year) she used lots of "protowords", vocalizations and gestures that slowly faded away as she started to learn to say words for them. She used to say "mammam" if she was hungry or if she wanted something. Then she started saying "eat" with her hand gesturing food putting into her mouth, while going to the table and sitting on the chair. Nowadays, she just says "eat" without the gestures.

Phonological developments: As the mother was studying about the phonological developments of a child, it is interesting to note that there are many trends and patterns that are actually happening to the child in the subject. There are similar trends in looking at phonological errors that many children have in common. These phonological errors were identified by Gleason (2005) and Lust (2006). With the child as a subject, such errors include:

a. consonant cluster reduction: "top" for "stop", "shak" for "shark", dofin for dolphin, "pupu" for "purple", "foots" for "fruits", "fied chicken" for "fried chicken" "con" for "corn",
b. final consonant deletion: "bell pepu" for "bell pepper"
c. substitution (gliding): "bwed" for "bread", "gwapes" fpr "grapes", "bwown" for "brown", "bwu" for "blue", "kwawa" for "koala", "yeyow" for "yellow", "kuwi" for "curry", "puwing" for "pudding", "gowiwa" for "gorilla", "wise" for "rice",
d. omission of unstressed syllable: "nana" for "banana", "mato" for "tomato",
e. assimilation: "ice gream" for "ice cream"
f. assimilation and gliding: "bwack" for "black"
g. omission of unstressed syllable in the middle of the word and omission of final consonant: "efan" for "elephant"
h. assimilation and consonant cluster reduction: "bakkin" for "pumpkin"
i. consonant reduction and final consonant deletion: "eggpan" for "eggplant"
j. assimilation (alveolar liquid/nasal to bilabial nasal); "memon" for "melon", "MMMOP" for "LMNOP" (alphabet song)

Semantic and Syntactic Development: Children learn the "pragmatic intent" of people's words before they can understand the words "by themselves". When the child (subject of study) was younger, she learned the meaning of words through "learning theory". That's probably why her first few words include the following: "mommy", "daddy", "dede" (breastmilk), "tea", "milk" through associative learning. Learning theory postulates that the words, which have concrete referents, are easier to distinguish and produce and eventually to associate. (Gleason, 2005)

When she was growing up, her semantic development probably leaned more on "developmental theory" wherein the meaning is derived from "skills on multiple domains" (Gleason, 2005). That probably explains why when the mother is talking to her about something then she usually looks at what the mother was referring to. For example, one time she was playing with her toys and is told, "Let's go out" while pointing to the door. She then looked at where her mother was pointing at, stood up, and picked her shoes up to mean that she understands that they were going outside.

Nowadays, the mother is sometimes surprised when she says some words that she has heard only a few times. As the mother could recall from her reading, the child must be exposed to a word many times before it is learned. For example, the mother was surprised when she said, "Where are you? Here I come" while playing hide and seek. It was the mother's first time to hear her say those words. A classic example of "fast mapping" and moving beyond "2-word utterances"

According to Brown's 14 morphemes, the progressive inflection (-ing) is easier acquired than

the other grammatical morphemes. (Gleason, 2005) Thus as we can see from her utterances, she says a lot of words such as "mommy coming", "daddy sleeping", "auntie cleaning", "harumi eating", walking, etc.

Pragmatic Development:

According to Bryant (in Gleason, 2005) children need to learn pragmatic skills aside from learning the phonology, semantic and syntax of a language. It is learning how to use the language in interacting with the people around. In the case of the child in the study, it can be said that she has acquired simple pragmatic skills. These are evidenced by her production of use of polite expressions such as "thank you", "pease" (please), you're welcome, "he you are" (here you are) and "sowee" (sorry).

In Japan, pragmatic skills are inculcated to children at an early age. It is a culture where consideration of other's situation is very important. For instance, in other countries, talking on the phone on trains and buses are common. This is socially frowned upon in Japan. Even eating is considered while riding the train is improper because the people are expected to be considerate of other people around them. Children are taught how to be quiet most of the time. Knowing when to speak and not to speak is a pragmatic skill generally taught to and practiced by young children in Japan. The child in the subject is a bubbly and talkative child. However, when using the elevator going home to their apartment, she keeps quiet when with other Japanese residents. She even bows her head like what the Japanese people do.

Also, she has the initiative to start a conversation with her caregivers and her playmates as well. One time in the playground, she was playing with her friend, Shuri (6-year old Japanese). She wanted to Shuri to come with her to the swing. She took Shuri's hands and led her to the swing while saying "Shuri, swing come". Sometimes, when her mother is busy typing on the computer and the child is talking, she stops her babble, would look at her mother and say "mommy, mommy" while turning her mother's face in her directions. It means "please listen to what I am saying". And she also has the capacity to wait for feedback or response by pausing in her speech and looking at the speaker, waiting for the other person to speak.

Vocabulary Development:

A quick look at the list of words (excluding 2-words and beyond) shows that she has more than English words than Japanese and Ilocano.

English	Japanese	Ilocano
209	8	10

She has about 212 words (one word) and only 8 Japanese and 10 Ilocano utterances. The reason could be her frequency of exposure and input to the three languages. People around her, like her parents and grandmother, talk to her in English most of the time. Her parents and grandmother talk in Ilocano amongst themselves. The parents work weekdays from 8:30-4:15 and the child is taken care of by her grandmother. The grandmother also talks to her in English with a smattering of Ilocano.

When her parents come home, they talk to her mostly in English. People outside their home all talk in Japanese. Because the child doesn't attend nursery, then she is not exposed to the Japanese language as much as children who go to Japanese nurseries. Aside from that, she is sometimes permitted to watch English educational materials such as songs and "Peppa Pig". Thus, her main exposure as of this moment is that of the English language. In a year, this will change, as she will be attending a Japanese nursery school where the teachers and students use Japanese and a little English. I am confident that we will see another kind of data. As of the moment, we will contend with the data at hand.

Again, a quick look at the list of vocabularies of the child can show that most of her words are nouns. The use of more nouns shows that it is normal for children to start naming things/objects first in their immediate surrounding.

Also, a look at the list of vocabularies compared to before and after the study shows that there is a tremendous increase of vocabulary within a span of 3 months. (Feb.-May)

Feb. 2017	May.2017	Total
89	120	209

Part 2: Simultaneous Bilingualism: Question 1: What factors affected her simultaneous acquisition of languages?

The child's simultaneous bilingualism or multilingualism is an effect of various factors. First, English is the language the parents chose, Ilocano being the language of both parents and Japanese being the language of the community.

Why English? Parents chose to use English as the dominant language of communication between parents and the child because of many factors. First, the parents are expats who have lived abroad for some time. The mother lived in China, before joining the father in Thailand and now in Japan. As English teachers abroad, there is a possibility that they would transfer to another country again in the future. Thus, for the child to learn English, being the most common mode of communication around the world, would be beneficial and practical for them because of this consideration. If the child will only speak Japanese, then the parents think the child would have difficulty in adjusting in the country that they would move to next. The mother's family (parents and siblings)

migrated in America, while the father's family lives in the Philippines. There is a possibility that the child and her family would move to either America to join her mother's family or the Philippines to join her father's family. Or they could decide to go to a completely different country.

Second reason: English is taught very late in Japan thus it is beneficial to learn English early from her parents. Students in Japanese public elementary school start having English classes from Grade 5. The parents think that it is already very late to study English.

Third reason: once the child enters the Japanese school system, she will be deluged with Japanese language input and exposure being the dominant language used in the community. Both English and Japanese are used in higher academic school life. So, it would be beneficial for the child to be exposed to English and Japanese at an early age. Moreover, both the parents couldn't speak Japanese very well as Japanese is not needed in their work. Ilocano is the language used by the parents but is only used when they go back home to the Philippines.

English was chosen as the language to be used in communication with minimal exposure to Ilocano and Japanese. Ilocano is the language used at home and the child has no option but be exposed to it. Japanese on the other hand is the community language and the parents are not fluent with it. As of now, the parent's choice and the prevailing home and community language affect the child's simultaneous bilingualism. This would definitely change as the child will grow up and mingle with the Japanese community outside their home.

Question 2: How has her exposure to various languages (English, Ilocano, Japanese) affected her?
Codeswitching, which means using two languages within the same utterance is considered a unique characteristic of bilinguals/multilingual. It was initially thought of as a failure but turns out to be a skilled skill in both languages. (Pearson, in Bavin, ed., 2001) As Lanza (1997 in Pearson) said if the people around the child code-switch, then the child will too. This is very evident in the study because the parents and the people around her usually codeswitch. They often talk to the child in English but sometimes lapse to Ilocano or occasional Japanese. Thus, the child also exhibits the same behavior. For instance, when the child got her fingers stuck on the playground, she said "ipit ipit, itai, itai. Daddy coming". "Ipit" is an Ilocano word for being stuck into something. "Itai" is a Japanese word for "hurt". She used Ilocano, Japanese and English at the same time.
Although she exhibits code-switching, majority of her utterances were in English. This is probably because of more of her exposure and input were received in English language as compared to the other languages.
Question 3: Will her exposure to various languages create confusion delay in her language development?
Various researches done for instance by Drs. Barbara Lust and Sujin Yang (2004 and 2007) indicated that bilingualism/multilingualism does not cause confusion nor speech delays. As we can see from the list of words, the child has over 200 words (excluding two-words and beyond).

As of the moment, and according to these data provided, the child in the study is not delayed in terms of vocabulary/linguistic development. A normal 2-year old has at least 200-300 words in their vocabulary.

Summary and recommendations:
This case study has looked at the linguistic development of a 2-year old exposed to three languages: English, Ilocano and Japanese. The study focused on two parts-present development and simultaneous bilingualism. The first part talked about the child's development from infancy to present. Her early language developments included lots of babbling, sounds, protowords and gestures. Her present phonological development was analyzed in terms of looking at the phonological errors that normal toddlers exhibit when learning a language. Her semantic and syntactic development was seen through the lenses of learning theory, developmental theory and instances of "fast-mapping" and use of the progressive inflection (ing) (Brown's 14 morphemes). Her pragmatic development was analyzed through her use of polite expressions, when not and to speak, her initiation to start a conversation and minimal ability for waiting for response. Her vocabulary development is analyzed by counting the total number of words that she could produce from the start of the case study until the end (span of 3 months).

The second part of the study looked into the child's simultaneous bilingualism and answered the questions regarding the factors that contributed and that led to the child's acquiring/exposure to three languages. English was her parent's choice of language; Ilocano is the language spoken by her parents and caregiver and Japanese is the language of the community. It also looked into instances of code switching as an effect of being exposed to different languages. Finally, it addressed the question whether her multilingualism led to language delays. This is not the case, as evidenced by the child's rich and rapid language development in terms of English. As of Ilocano and Japanese, she has minimal exposure at the moment. In a few years, it is predicted that Japanese will be her main language, as she will attend Japanese nursery in a year or two. This case study is only a preliminary look at a child's language

development and the factors surrounding its multilingualism. It is recommended that further studies be made regarding children exposed to two or more languages

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APPENDIX

List of words As of February 2017

Nouns: Total (75)-mommy, daddy, ball, shoes, mama, fish, hat, pants, socks, head, eyes, ears, nose, mouth, cheeks, teeth, hello, hi, tea, milk, pink, blue, green, “back”(black), phone, “con”(corn), queen, “sta”(star, bag, no, hat, apple, “nana”(banana), “swide” (slide), swing, bird, “fowers” (flowers), “shouders”(shoulders), “mato” (tomato), “bubbe” (bubble), Elsa, Anna, Jacob, Harumi, juice, book, “oi”(oil), cookie, rice, cake, “spaide”(spider), “pad”(ipad, fish, duck, rabbit, dog, cat, A-Z (except L,N), peach, “gwapes”(grapes, “memon” (melon), “mememon” (watermelon), one, two, three, four, five, six, seven, eight, nine, ten. Verbs: (7) close, eat, dance, “finish” (finished), drink, jump. Adjectives/Adverbs: (7) hi, hello, hot, “pease” (please), yucks, wow, up, no. Two words and beyond (13): thank you, you’re welcome, I “wove”(love) you, see saw, “le I go” (let it go), “we a you?” (where are you?) I love you, Oh no!, Oh!Oh!, Clean Up. Ilocano: (1) dede.Japanese: (3) itai, (painful) odon, nani (what) Additional Words as of May 2017: Nouns (74): back, stomach, “poon” (spoon), “pork (fork), plate, tea cup, water, coffee, “kwack: (clock), sheep, “hose” (horse, “mato (tomato), auntie, “cabbais” (cabbage), carrot, pizza, bell pepper, crown, panda, lion, deer, tummy, castle, sticker, soup, salad, “fayey” (fire), egg, jacket, “sissos (scissors), moon, house, cow, Minnie Mouse, swing, “swide” slide”, toys, “pop” (lollipop), Aika, story, storytime, “gasses” (sunglasses), knife, doll, teeth, “bash” (toothbrush), “ca” (car), “babbath” (bath time), key, wall, “chocwait” (chocolate), jelly, totoise, tissue, bike, party, rainbow, ice cream, horse, “cannel” (candle), “peet” (feet), “Owaf” (Olaf), window, door, pillow, hotdog, Papa, “bwed” (bread), “pimpe” (pimple) Verbs (34): cry, blow, catch, “finnit” (finished), print, sleeping, crying, coming, watching, jogging, cleaning, talking, running, walking, cooking, push, mix, see, go, cough, hug, kiss, cook, gone, give, come, catch, play, open, tip toe, close, Others: (12): okay, heavy, cold, scary, “pease” (please), again, down, yes, mine, me, the. Ilocano (7): bado (clothes), “wowa” (Lola-grandmother), “togtog” (sound of bumping into something), “ipit” (hair pin), “ules” (blanket), “ipit” (stuck onto something), “punngos” (ponytail). Japanese (6): Kuruma (car), maoikkai (once more), doko kana (where is it?), kawaii (cute), sashin (picture) Two words and beyond: __sit down, ___give me, where__?, I’m tow, daddy bird, mommy___(nose, tummy, etc.) “hayi up” (hurry up), no baa baa? (no sheep?), Oh I see, I’m finit (I’m finished.) I’m fine., me too, Harumi’s juice, no key, this one, oh baby cry, tea party, apple juice, daddy’s coffee, harumi apple juice, oooopp not here, here I come, 1,2,3, ready go!, chips “pease” (please), it is fun, daddy heavy)

Total Number of Words from February to May 2017: Nouns: 75+74= 149, Verbs: 7+34= 41, Others (Adjectives, adverbs…) 7+12= 19, Ilocano: 1+7= Japanese 3+7= 10. Total Number of words : 209

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