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博士学位請求論文要旨

論文題名　Developmental stages in the acquisition of English *wh*-questions by Bisaya-speaking children
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論文の要旨

① 論文の主題、当該研究分野における位置づけ

The theme of this study is second language acquisition of English subject and object *wh*-questions. This study investigated whether Bisaya-speaking children could acquire T-to-C movement (also known as Subject-Auxiliary Inversion) in English and how *wh*-questions develop in their second language (L2) grammar. Some studies show that native and L2 children go through a similar pattern of development in acquiring English *wh*-questions. However, this study found the developmental pattern of English *wh*-questions in the speech of Bisaya-speaking children is different from both native and other L2 children. Furthermore, previous studies identified the stages of development of *wh*-questions in general but this study found that subject and object *wh*-questions develop separately. Subject *wh*-questions develop faster and is acquired earlier than object *wh*-questions by Bisaya-speaking children

② 論文の構成 (各章の概要)

The first chapter talks about a brief historical background on the spread of English language in the Philippines. English came to the Philippines during Spanish colonial period but it was during American occupation in which English was taught to the general population, around the same time the Americans established the public-school system in Philippines. At present, English is taught from Kindergarten (around 6 y.o.). Filipinos are exposed to English from quite an early age. Despite this, English remains to be a second language to Filipinos. Thus, Filipino learners also experience some of the problems that other L2 learners may encounter during acquisition of English.

In the second chapter, I gave a general description of Bisaya grammar. Bisaya is a language spoken in Central and Southern Philippines. The syntax of Bisaya can be explained using (1):

(1)	a.	Gi-kaon	ni	Taro	ang	pan.	‘パンは太郎に食べられた。’
		食べられた	に	太郎	は	パン	
	b.	Mu-adto	sa	iskwilahan	si	Hanako.	‘花子は学校へ行く。’
		行く	へ	学校	は	花子	

/Gi-/ and /Mu-/ are affixes representing past and future tense. As seen in (1a~b), sentences in Bisaya start with a **verb**. Topics/Subjects can be found at the end of the sentence. Just like in Japanese, there are noun markers in Bisaya that specifies the role of a noun; whether it is an agent, theme, goal, or topic/subject.

In the third chapter, I compared *wh*-questions in English and Bisaya. This study investigates the acquisition of two types of *wh*-questions in English: subject (2a) and object (2b) *wh*-questions.

(2) a. Who is pushing the monkey? 誰がサルを押しているの？
誰が 押している サルを

b. What is the car pulling? 車が何を引っ張っているの？
何を 車が 引っ張っている

In Bisaya, the equivalent sentences for (2a~b) are shown as (3a~b)

(3) a. Kinsa ang nag-tuklod sa unggoy 誰がサルを押しているの？
誰(が) 押している サルを

b. Unsa ang gina-bira sa awto 車が何を引っ張っているの？
何(を) 引っ張っている 車が

There are two differences between English and Bisaya *wh*-questions. First, the word order of subject *wh*-questions (2a-WH AUX V N) in English is different from object *wh*-questions (2b-WH AUX N V). By contrast, there is a single word order for Bisaya *wh*-questions (WH ang V N), which is similar to that of an English subject *wh*-question (2a). Second, there is T-to-C movement (or SAI) in English but not in Bisaya. The word *ang* in (3a~b) is not an auxiliary verb but actually a functional word (i.e. a word that has no meaning in itself, but has a grammatical function) that is found after the *wh*-word in Bisaya *wh*-questions like (3a~b).

In chapter four, I explained the role of Universal Grammar in language acquisition. It is said that a child can acquire his/her native language without receiving explicit instruction. A child can also form sentences and make grammatical judgments about his native language beyond the input (i.e. spoken and written language etc.) s/he is exposed to. Thus, there must be a set of structural rules (UG) that are innate to every human being. Whether UG plays a role in second language acquisition or not has been the subject of debate. Others claim that UG becomes unavailable to the L2 learner. Instead of UG, a learner may rely on general learning strategies to acquire a second language.

Other factors that may affect L2 acquisition is age. Some claim that learning an L2 or achieving native competence in an L2 becomes difficult if a learner starts the acquisition process after a “critical period” which ends around the age of 14. Another factor is the learner’s first language (L1). It is said that some L1 properties are transferred in the L2 during acquisition. Some researchers even claim that the initial state of L2 is actually the L1. For this study, we will examine the utterances and see whether we can find L1 effects in the data.

In chapter 5, I have presented previous studies on the L1 and L2 acquisition of English *wh*-questions. I have found that L1 and L2 learners may go through the same stages of development in their acquisition of English *wh*-questions. Both L1 and L2 learners make mistakes related to auxiliary verbs (e.g. auxiliary omission etc.). However, I have to point out also that most of these studies, if not all, were conducted in a naturalistic environment (i.e. countries where English is spoken as the first language by the majority of the people). My study involves children learning English in a classroom environment. But based on previous studies and L1 properties, I have predicted that Bisaya-speaking children will commit errors when they form

wh-questions. Specifically:

(i) Bisaya-speaking children will omit the auxiliary verb (e.g. *What ~~is~~ the monkey pushing?*)

(ii) Some auxiliary verbs will remain in their original position (e.g. *What the monkey is pushing?*)

(iii) They may use an auxiliary but the inappropriate type (e.g. *What does the monkey pushing?*)

To validate these predictions, conducted a role-play oral production task. The method and results of this task is summarized in chapter six. There were three people involved in the task: the assistant controls the flow of the task. She is also responsible for explaining the eight (8) picture cards used in the task. Four (4) cards each were used to elicit subject and object *wh*-questions. A sample of a picture card is presented in Figure 1.

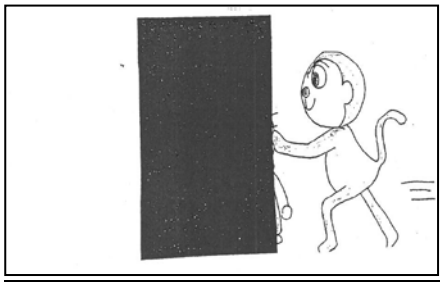

Figure 1. A picture card used to elicit an object *wh*-question: *Who is the monkey pushing?*

The assistant explains what is going on in every card twice: in Bisaya and then English. After this, she prompts the child to form a question. The child directs the question to a hand puppet (played by the main experimenter) who answers every question by the child. The entire task is recorded using an IC recorder.

A total of 48 children participated, but only 33 were able to complete the task. The results presented in this study were based on the data from these 33 children. The results showed that the children were able to produce *wh*-questions with the appropriate auxiliary verb. They committed auxiliary verb-related errors but these were very few. Instead, I found another error involving the use of subject *wh*-question patterns in response to object *wh*-question stimuli (e.g. Figure 1). Meaning to say, they produce questions like e.g. *Who is pushing the monkey?* as a response to the object *wh*-question stimulus e.g. *Who is the monkey pushing?*.

Because of limited data, I decided to conduct a follow-up experiment. This is summarized in chapter seven. For the second experiment, I used the same method as the first one but this time, there were more participants (see Table 1) and 4 picture cards were added in the task.

Table 1. Distribution of participants in experiment 2.

Grade	Bisaya-speaking children	Native English children	Total
1	85	9	94
2	69	10	79
3	69	8	77
4	71	10	81
5	61	4	65
6	65	7	72
Total	420	48	468

The results of experiment 2 confirmed that Bisaya-speaking children are more accurate on subject than object *wh*-questions. They also produced many subject *wh*-questions even when the intended structure was object *wh*-questions (e.g. *Who is the monkey pushing?* → *Who is pushing the monkey?*). However, they did not do so in all types of object *wh*-questions. Actually, in the second experiment I divided subject and object *wh*-questions further into two types based on the *wh*-word used in the questions. For your reference, see Table 2.

Table 2. Four (4) types of stimuli (sentences) used in Experiment 2.

Type	*Wh*-question type	*Wh*-word type	Example
1	Subject	Who	Who is pulling the boy?
2	Subject	What	What is pulling the car?
3	Object	Who	Who is the monkey pushing?
4	Object	What	What is the airplane pushing?

Many object-who questions were transformed into subject *wh*-questions. This was observed too for object what-questions but to a lesser degree. Some children erroneously produced object questions for subject what-questions but to an even lesser degree.

In contrast to the previous findings, the present study found that subject and object *wh*-questions develop separately in the L2 grammar of Bisaya-speaking children. The difference can be summarized as follows:

(i) Subject *wh*-questions

Who pulling the boy? → *Who the/does pulling the boy?* → *Who is pulling the boy?*

(ii) Object *wh*-questions

What the car pulling? → *What the car is pulling?* → *What is the car is pulling?* →
What does the car pulling? → *What is the car pulling?*

Bisaya-speaking children use more patterns before they arrive at the target object *wh*-questions compared to subject *wh*-questions.

Chapter 8 tries to answer the question: Why is there a tendency by Bisaya-speaking children to form subject questions even when the context requires an object question? One possible answer has something to do with the syntactic structure of English subject and object questions. Object questions are harder to process because the *wh*-word is far from its original position in object (4b) than subject (4a) *wh*-questions. The farther it is, the more costly it is in terms of working memory.

(4) a. Who_i is_j ~~who_i~~ ~~is_j~~ pushing the monkey?

b. What_i is_j the car ~~is_j~~ pulling ~~what_i~~?

The other possible reason is L1 influence. The structure of Bisaya *wh*-questions is similar to subject *wh*-questions (see 2 and 3 above). However, this was not the only observation. The study also found that this effect is not the same for both types of object *wh*-questions. There were more object who-questions (*Who is the monkey pushing?* → *Who is pushing the monkey?*) that were turned into subject *wh*-questions than object what-questions (*What is the car pulling?* → *What is pulling the car?*). This suggests that animacy may also influence the L2 production of English *wh*-questions.

As for the developmental stages, the development of subject and object *wh*-question was separate in the case of Bisaya-speaking children unlike in the previous studies. This might have something to do with the quality of input that Bisaya-speaking children are exposed to. Learners who acquire L2 in a naturalistic environment are exposed to natural, spontaneous speech whereas in the case of Bisaya-speaking children, the only input they get is from the classroom and fellow L2 learners. This might be the reason why the pattern of development among Bisaya-speaking children is different from that of native children or other L2 learners.

Regarding the acquisition of T-to-C movement (SAI), the data shows that the learners do not have access to UG in the same way that L1 learners were able to acquire this property in their L1. What the data suggests is that learners use a combination of L1 transfer and general learning strategies to form English *wh*-questions based on their inconsistent use of auxiliary verbs.

③ 本研究の独自性

In terms of methodology, this study used a hybrid cross-sectional/longitudinal methodology by getting participants from six grade levels. In doing so, this study was able to compare the utterances found in each group. With regard to the number of participants, this study offers data from a total of 496 children (448 L2 children and 48 native children). In terms of scale, this study is probably one of the biggest if not the biggest study ever done to investigate the acquisition of English *wh*-questions. Most of the previous studies focused on L2 learners who acquire English in a naturalistic environment. Other researchers have conducted study on L2 learners in a classroom setting but the participants were mostly late child or young adult learners.

This study provides an enormous amount of data from children, some as young as six (6) years old, who are learning English in a classroom setting. Based on data collected from these children, I was able to establish a separate set of acquisition patterns for subject and object questions.

④ 今後の課題

1. The stages suggested in this study are based entirely on forms. This study was not able to establish stages based on age/grade level. Some patterns/forms were even found across all grade levels. Although there was an observable fluctuation in the number of occurrences/tokens of a particular pattern in every grade level, this was not enough to determine a clear stage boundary based on age/grade level.
2. As suggested by another researcher, it might be interesting to test whether the task will yield the same results if the stimuli used were double object constructions (*Who is passing the ball to John?*/ *What is Mary passing to John?*)