Interlanguage Analysis: How morpheme order studies do not necessarily apply to every situation

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ABSTRACT

Much research on language acquisition, from nativist to interactionist, describes Morpheme Order Studies as a major development in second language acquisition. This paper intended to discuss how spoken data from a Japanese student could be used to indicate the level of acquisition of English morphemes attained via the processability theory but actually determined that an order of acquisition does not necessarily apply. Results showed that the informant varied in success in supplying correct morphemes in obligatory contexts, that her first language did not interfere with her second language acquisition and the accuracy of using morpheme order sequence to determine the level of acquisition breaks down because learner's developmental sequence is unpredictable.

INTRODUCTION

Ranging from nativist to interactionist on language acquisition, morpheme studies show that morpheme order studies work as a major development in second language acquisition. Second language (L2) learners may only follow certain language processing trajectories, which build language components assembled in the use of an 'implicational sequence' (Pienemann, 1998: 80). The students are predicted to attain a certain sequence of the higher stage when they have completed the lower one. The stages, according to Processing Theory (PT), have five processing procedures in language acquisition: word/lemma access, category procedure, phrasal procedure, sentence (S) procedure and sub-clause procedure (Pienemann, 1998: 79).

Sakai (2007), in addition to the universality of PT, examined its validity in a way of data collected from seven Japanese learners of English as a foreign language (EFL). The students accomplished communicative tasks so that they elicited data for interrogatives, word order and negation. The results presented that the PT was validly tested for Japanese learners of English and the students were predicted to produce English structures. Peker and Celen (2020: 71-72) argue in relation to Processability Theory (PT) that students are capable of learning L2 in a good order of language processing at specific times, meaning that the students can acquire/learn L2s in a predictable order, which is called '*developmental trajectory'*. However, according to Pienemann & Lenzing (2015) their research conducted in English and Italian languages were found that the specific structures of individual languages of students' grammars are different. In other words, Processability Theory (PT) has not provided adequate instances which can fit into any language or to make this PT universal rather than language specific. In sum, it is imperative to consider the variety of between languages that are reflected in lexical-functional grammar (LFG) in distinguished ways aimed at modelling

psycholinguistic processes. There are four basic constructs of Processability Theory (PT) according to Pienemann and Lenzing (2015), they are *the processability hierarchy*, *hypothesis space*, *transfer of grammatical information and feature unification (i.e., information matching)*, and *LFG*. In this study is scouped in the relation of hierarchical problem that the processability hierarchy illustrates how language structures within a sentence interact with each other when students as the second language learners process information. This component named as the processability hierarchy is assumed that the learners follow a certain language trajectory while acquiring these language structures such as acquiring noun structures, verb structures, sentence structures, and subordinate clause structures, respectively (Pienemann & Lenzing, 2015).

Second language (L2) learners may only follow certain language processing trajectories, which build language components assembled in the use of an 'implicational sequence' (Pienemann, 1998: 80). The students are predicted to attain a certain sequence of the higher stage when they have completed the lower one. The stages, according to Processing Theory (PT), have five processing procedures in language acquisition: word/lemma access, category procedure, phrasal procedure, sentence (S) procedure and sub-clause procedure (Pienemann, 1998: 79). Considering the stage of word/lemma access, the development of morphology and syntax derived from the PT in the language of acquisition of L2 learners can be potentially determined, even though does not indicate an order of acquisition to every situation of learners' access to the second language acquisition.

Several studies on grammatical morphemes have determined that many learners acquire a second language in an order which is not affected by their first language. The studies make tentative statements that this provides support for a Universal Grammar, that there must be an innate genetic endowment in human brain that causes morphemes to be acquired in a particular order (Disbrow-Chen 2004: 2). The Multi-dimensional Model and Processability theory support this with claims that learners acquire grammatical structures in a determined order (Ellis 1994, 104.). For example, the study conducted by Widyastuti (2015) found that all participants did not acquire the Past -ed on Stage 2 of English Developmental Stages due to possible reasons of the inability of language processing in the language acquisition of using Past –ed forms. However, the study is limited to the use of past -ed as the category procedure (Pienemann & Lenzing, 2015). Critics of these theories argue that there is an indication that learner's morpheme acquisition does not support the idea the order of development but measures variation and while it allows us to measure development, we must also remember that there are many other linguistic features that affect language acquisition include the context in which language is used.

The Contrastive Analysis Hypothesis claims that the acquisition of a second language is largely determined by the structure of the first language and similarities in the structure of this first language assist in the assimilation of the second language (Lightbown & Spada 2006: 79). Critics of this hypothesis argue that it measures accuracy of use rather than acquisition sequence.

This paper is stated to discuss how oral data derived from university students from a variety of countries could be used to reach the level of acquisition of English morphemes achieved via Processability Theory (PT), but actually determined that an order of acquisition does not necessarily apply. Therefore, limited findings of all empirical studies above confirm that acquisition should not be sequentially ordered specifically in English language as a second language. In other words, learners of L2 can only produce the structures they can process in accuracy instead of sequential orders.

METHOD

The informants of the study were 15 university students who firstly took an English speaking 2 course at English Language Intensive Courses for Overseas Students (ELICOS) at the University of Canberra College English Language Centre (UCCELC), University of Canberra, Australia. The participants did

not begin their course in the time they were interviewed. The researcher conducted an interview with the informants in a discussion room and collected the data through communicative tasks in natural semi-structure interviews (Selinger & Shohamy, 1989) on 23 August 2009. The informants did not speak English as their first language and had learned the foreign language for about six years at secondary and high schools. The data were not related to any language teaching treatment during the language course as the data were authentically derived from the participants' language proficiency based on their secondary education.

Each interviewee was only given about in a 10-minute interview to use simple plural, third person singular and simple past tense. During the conversation, the questions were developed based on each informant's talk. The informants were firstly asked to talk about themselves in relation to English language learning background to initiate social engagement between the participants and the researcher. The interviews were conducted separately in a group of five students. They were then asked to participate in 'spot the difference' tasks where each was given picture 1 of a park scene and asked to describe what they saw and how it was different from the second picture which the interviewer held. The pictures were the same scene but each had subtle differences, such as the number of children riding bikes or the color of their clothing etc. Each picture was intended to invoke responses demonstrating simple plural, third person singular and simple past tense.

The data collected were transcribed using NCH online software, which used to listen recordings in which voice speed can be adjusted. The transcription data were then sent into an obligatory context table of Past –ed, Plural -s, and Third Person Singular -s linguistic morphemes.

To analysis the data, each morphological category was looked at individually and all obligatory contexts for each category were identified. I, then, identified whether the context was supplied, not-supplied or over-supplied and reported the results in a table indicating the percentage against each category. According to Pienemann (1998), obligatory contexts of linguistic features were analysed in the use of an Emergence Criteria at least four tokens to see the participants' acquisition in English as a Second Language (ESL). Pallotti (2007) argues that tokens are repetitions made by the learners in obligatory contexts when stating words/phrases/sentences. For example, the participants restate a word 'chair' four times, in which the word was counted only four tokens, but was considered a single type of the obligatory context. These tokens were selected to find the participants' language processing of the morpheme productions.

RESULTS

The first research question of this study is: are university students able to proceed information using Past –ed as the category procedure on Stage 2 of Processability Theory? The data are shown in Table 1.

Table 1

participant	1	2	3	4	5	6	7	8	9
Past -ed	0/4	0/2	0/5	1/3	0/1	0/6	0/3	0/3	0/3

participant	10	12	13	14	15
Past -ed	0/4	0/2	0/5	0/3	0/1

The second research question of this study is: are university students able to use Plural -s as the noun phrase procedure on Stage 3 of Processability Theory? The data are provided in Table 2.

Table 2

participant	1	2	3	4	5	6	7	8	9
(Noun Phrase) Plural -s/-es/-ies	0/2	1/4	0/1	0/6	1/7	1/3	0/2	0/5	1/3

participant	10	12	13	14	15
(Noun Phrase) Plural -s/-es/-ies	0/4	0/2	0/2	1/5	0/3

The third research question of this study is: are university students able to apply Third Person Singular -s of Stage 4 of Processability Theory? The data are shown in Table 3.

Table 3

participant	1	2	3	4	5	6	7	8	9
(Verb Phrase) Third Person Singular -s	0/2	1/3	0/1	0/6	1/4	1/3	0/2	0/5	1/7

participant	10	12	13	14	15
(Verb Phrase) Third Person Singular -s	1/3	0/2	1/2	1/5	0/3

The following table shows results of the obligatory contexts for the three categories above that are the subject of this paper:

Table 4

Stage	Morphology	Obligatory context	Supplied	Not supplied
2	Simple past -ed	15	1	14
	Percentage share		33%	67%
3	Plural -s	15	5	10
	Percentage share		33%	67%
4	3rd person -s	15	7	8
	Percentage share		46%	53%

Stage of Acquisition of Nominal and Verbal Morphology in English as a Second Language (from Pienemann, Johnston and Brindley, 1988)

From the Table 1, all participants produced tokens in various numbers, but only one participant enabled processing information to supply the obligatory context, the Past –ed. The fourteen participants, however, presented zero obligatory context, but participant number 4 supplied one with only three tokens produced, which does not meet the emergence criteria at least four times. This table 1 represents Past -ed processing information insufficiently.

Next in the Table 2, the fifteen participants produced tokens in a variety of numbers, but only five participants can proceed information to supply the obligatory context, the Plural –s. The tenth participants, however, fulfilled zero obligatory context, but participants number 2, 5, 6, 9, 1 supplied one within a range of between 3 and 7 tokens produced. The value range of tokens has met the emergence criteria, meaning that the table 2 indicates the sufficient data of Plural -s processing information.

As presented in the Table 2, the fifteen participants produced tokens from 1 to 7, but only seven participants were able to supply the obligatory context, the Third Person Singular –s. In contrast, the eighth participants, did not supply the obligatory context, but the participants number 2, 5, 6, 9, 10, 13 supplied one within a range of between 2 and 7 tokens produced. The tokens have met the emergence criteria, in which table 2 indicates the sufficient data of Third Person Singular -s processing information.

DISCUSSION

The researcher intended to use the multi-dimensional model and processability theory to determine what stage the informants had reached in morphological acquisition. Based on what I knew of the informants' history of English language learning, I expected the analysis to demonstrate that they had mastered one or two of the lower stages but had not reached the higher stage, however, the results of the analysis did not support this.

The participants acquiring Past –ed in the study represent a significant fact the reason of the participants' inability to produce the Past –ed. Here are some possible reasons why the participants in this study failed in the Past –ed acquisition.

The first reason is that the first language (L1) might have interfered to their second language (L2). The participants are from different countries, which their first language is not dominantly covered in the use of past simple tense using -ed form on their verbal languages and nor do inflections. This indicates that changing verbal tenses are influenced by a variety of time (present or past). In addition to the language interference, Hawkins & Liszka (2003) conducted research on three advanced ESL learners' language in which the first language was different from one to another: Chinese, Japanese, and German. They found that Chinese learners could not produce past simple tense -ed forms in English due to the absence of this feature in Chinese. However, the past tense is found in both Japanese and German, and both the participants could produce this feature. Therefore, the participants were considered deficit in the use of past simple tense of -ed forms in L2 when their first language does not represent the same way as the L2 does.

The second reason presents that the participants intended to use irregular verbs and nominal verbs instead of using regular past Past –ed, even though in some cases the use of nominal verbs do not supply to the obligatory context. Therefore, they tend to use L2 irregular verbs in mostly correct forms, while they have suffered from using correct nominal ones. Only one participant could handle the irregular verbs and nominal ones accurately.

Ellis describes two possible methods of measuring if a person has acquired morphological proficiency in obligatory contexts. This first defines successful acquisition as the first occurrence of the correct morpheme (Ellis 1994: 385). Based on this theory, the participants were considered successful at stage 4 because they have correctly used the appropriate morpheme once for stage 2, once for stage 3 and once for stage 4. However, the participant number 4 does not support this theory as she was successfully at the stage 2, but failed at 4 and 5. This fact does not necessarily prove the sequential order of morpheme proficiency that works for every situation on language processing.

The second theory of morpheme order analysis is that the informant's percent of accuracy must be between 80%-90% (Ellis 1994: 386). Using this theory, the informants have not mastered any of the stages because the participants' highest level of correct obligatory contexts is just 46% for third person singular.

Although the results of both theories can support a determination that informants are at a defined level of acquisition competence, because of the low number of obligatory contexts for past simple tense and third person singular, it is not practical to say without a doubt that the informants have not mastered any of the levels and I would require more data to accept that they are only at stage 1 in most their language acquisition. Similarly, to say one occurrence of correctly supplying the obligatory context means that they acquired up to level 4 competence and do not account for the fact that it could be simple luck that they provided one out of three contexts correctly. Based on the lack of obligatory contexts for two categories, I believe that the amount of data I have analysed is not sufficient to draw a firm conclusion on the informants' stage of language learning progress for morphological acquisition.

In conclusion, the contrastive hypothesis which suggests that the learner's first language impact on their second language acquisition (Klein 1986: 25). The informants' use of English in obligatory contexts does not support this hypothesis because for past simple tense, they produced the greatest amount of non-supplied occurrences in obligatory contexts; for plural s-, they produced a reasonably moderate percentage of correct usage and their incorrect usage did not reflect the person/thing distinction that applies in their first language; and for the 3rd person singular, where the first language does not use a morpheme at all, the informants attained 46% accuracy in obligatory contexts. Even though stage 2 and 3 have reached similar number of percentages in 33%, they failed to supply the obligatory context of using third person singular, which left inaccuracy of 53%, the greatest number of all stages.

The above analysis demonstrates the informants' level of acquisition of English does not fit into a number of defined theories of language acquisition. This is not a reflection on the informant but a reflection on the actual methodology where a theory such as processability does not take into account the contexts in which the English was used (Gass and Selinker 2001: 115).

CONCLUSION

The obligatory contexts elicited for this exercise do not support the morpheme acquisition order defined by the multi-dimensional model and processability theory. Neither do the data collected support the contrastive hypothesis where the learners' first language influences the acquisition of a second language. This project has demonstrated that general theories of language acquisition do not apply to all cases and each person must be judged in their own right, with an analysis of a much greater amount of data, and also looked at the context in which the English was used rather than by a count of errors. For a more successful interview, it would need to be conducted in a private place in a more relaxed style with less of a question-and-answer format and more of an opportunity for the informants

to have a two-way conversation rather than single responses. I would also need to collect a much greater amount of data to come to a firm conclusion on the stages of language acquisition.

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