

## **Error analysis of the language transfer in Grammar construction of the brain**

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### **Abstract**

This study attempts to analyze the reason for students making fossilized errors on the sentence uttered in their effort of language transfer and related it with the grammar construction in the brain. Fifty-six students participated in this study. The technique used to collect the data is an analysis of transcription on conversation video. This study found out that the students make those due to their active trial in making sense of the limited knowledge of the language they are exposed to in the brain in order to express some phrases systematically. Thus, learners need to enrich out the input of target language from the native language resources which can be gained from many kinds of authentic material; those are music, movie, games, advertisement, and information of the stuff. This study is expected to be a reference for the future research to find the best way in stimulating learners in acquiring grammar of L2 sentence considering that they need maturity in the regular changing sequence of acquisition of morpho-syntactical structures, impervious to teaching.

### **Keywords:**

Error analysis; language transfer; grammar construction in brain

## **1 INTRODUCTION**

Some students find it difficult to study English as their subject in their education. However, they cannot be denied that the English Language is urgent to be learned precisely. In learning the English Language, the Indonesian students always found errors in communication (Weda, Samad, Patak, & Fitriani, 2018), particularly to respond correctly with a proper sentence. The mistakes by learners are an inevitable sign of human fallibility. Therefore, they always exist in second or foreign language learning. This condition of language process is caused by a linguistic, grammatical set in mind which is at the output process cannot form an L2 set as the native speaker has. In the context of Indonesian language teaching class, the language transfer from L1 to L2 and vice versa seems to show many errors regarding grammar. It becomes the source for studying the system of the learners' Second Language (L2) or interlanguage (IL) in this current research.

Students' brain is involved in creating grammars of their second language acquisition, as opposed to being passive recipients imitating their surroundings. Students do not directly absorb the second language they have been pursued, but dynamically attempt to clarify the language they are exposed to in the brain. They construct grammars. In so doing they make generalizations, they test those generalizations or hypotheses, and they alter or

reformulate them when necessary or abandon them in favor of some other generalization (Gass, 2013). The utterances of L2 learner displayed systematically. Their language could be studied as a system; it is not just as deviations from the language they were exposed to. In so, there are many utterances by the L2 learner who is described as crude imitation but rather as representing their attempt to express some phrases systematically.

A theory which stated about the brain that often works on autopilot when it comes to grammar has been around for years. However, neuroscientists have now captured elusive evidence that people indeed detect and process grammatical errors with no awareness of doing so (Batterink & Neville, 2013). However, this theory can explain clearly that the brain mechanisms underlying words and concepts are distributed by neuronal assemblies reaching into sensory and motor systems of the cortex and, at the cognitive level, this mechanism is mirrored by the sensorimotor grounding of form and meaning of symbols. Rules exist as brain mechanisms call for concrete mechanistic and brain-inspired models of syntactic and grammatical processing. A brain model of recursion and embedding was reviewed and related to abstract structural approaches to grammar (Knoblauch & Pulvermüller, 2005).

Forming a grammatically the correct sentence may seem to require advanced cognitive skills. However, creative language capacity might rely on a less sophisticated system than is commonly thought. The ability to construct sentences may arise from procedural memory—the same simple memory system that lets our dogs learn to sit on command (Damasio & Damasio, 1992; Fischler, Bloom, Childers, Roucos, & Perry Jr, 1983). Branan explained about the finding that amnesiacs used similar constructions to non-amnesiacs which indicate that both groups were using common grammatical rules rather than memory to form the sentences. The fact in her research showed that the amnesiac person still used syntactic structure because it suggests that the procedural memory system is responsible for putting grammatical sentences together. The findings also shed light on the understanding of procedural memory itself, which was thought to be restricted to specific experiences and motor skills.

Richards (2015) described about definition of error in relation to the speech or writing of a second a foreign language learner as the use of linguistics item, such as “a word, a grammatical item, and a speech act” by a native or native-like speaker of the language regards as showing faulty or incomplete learning. Crystal (2011) stated about ‘error’ as a psycholinguistics term denoting to mistakes in impulsive speaking or writing skill which are identical with an out of order new well-developed command from the brain. He clearly explained how language processed in mind. The error could be concluded as in current use of language in its structure of components. Error occurs when the learner’s brain do not realize about the language produced whether it is in L2 or L1 setting, the learner only focus on how to make the sentence according to what he is going to say.

Some categories for describing errors are classified regarding the difference between the learners’ utterance and the reconstructed version (Stephen P Corder, 1975; Stephen Pit Corder, 1982). Errors fall into four

categories; they are the *omission* of some required element, the *addition* of some unnecessary or incorrect element, *selection* of an incorrect element, and *misordering* of the elements. Due to the insufficiency of classification on the error, the linguistics level of the errors was included under the sub-areas of morphology, syntax, and lexicon (Stephen Pit Corder, 1982). Ellis (1997) agreed that classifying errors in these ways describe educator how to diagnose learning problems at any stage of students' development and to map out how changes in error patterns occur over time. An error is various actually regarding a phoneme, a morpheme, a word, a sentence or even a paragraph. Errors may also be considered as being either *global* or *local* (Brown, 2000). Global errors may hinder communication and causing the message cannot be comprehended. However, local errors do not because the message can not be understood by others because there is still a minor violation of one segment of a sentence that allows the hearer to guess the intended meaning.

Previously, errors were assumed as being the only result of interference of the first language habits to the learning of the second language. By the prevailing error analysis, the nature of errors involves the existence of other reasons for errors to occur. The errors sources could be categorized into the interlingual transfer and intralingua transfer. Richards (2015) distinguished two types of error; they are interlanguage error and intralingual error. The interference of the native language causes Interlanguage errors. The intralingual errors reflect the learners' competence at a particular stage and illustrate some of the general characteristics of language acquisition.

## 2 METHOD

This study aims to analyze the grammatical errors made by the first semester students of at four study programs majoring in Teacher Training. Method of this research is descriptive qualitative research. Richards and Schmidt (2013) defined descriptive study as an investigation that attends to describe accurately and factually a phenomenon, subject or area. It does not answer questions about how, when, and why the characteristics occurred. Instead, it addresses the "what" question (What are the characteristics of the population or situation being studied?). Descriptive research provides information about conditions, situations, and events that occur in the present.

Fifty-six students in the area of a colleague in Makassar, Indonesia participated in this study; their utterances were chosen as a sample to analyze. Data of this study is the students' video recording of a conversation of their final examination. The data has been collected when the students conducted the examination. The video is then chosen based on the condition of the recording regarding clear sound and natural conversation. The video chosen is 25 videos and which had been transcribed one by one. The technique used to collect the data is through analysis of video transcription of the conversation. In analyzing the data, the researcher checked the errors of each sentence, then described the type, source, and cause of the errors.

In analyzing the data, the researcher conducted four steps: 1) collecting conversation video recording of students, 2) choosing the best video to analyze, 3) transcribing the conversation, and 4) describing the errors 5) analyzing the

errors. The data was collected through documentary technique. The data is student's final test which is documented by the researcher. From the documented video, it was chosen by using purposive sampling technique regarding clear sound and natural conversation. The video chosen was 25 videos conducted by 56 students. The discourse in the video chosen than transcribe simplicity. The researcher took some errors in the transcription and then analyzed the errors into their type, source and causes and explained them based on the teacher's perspective. The researcher analyzed the errors by interrelated them with some theories and findings from the previous researches.

### 3 FINDINGS

From the chosen transcription, it was found some constructs which described based on three kinds of analysis; type of error, the source of error and cause of the error.

#### 3.1 Construct 1

*"I want to invite you birthday my friend." (Saya mau mengundangmu ke ulang tahun temanku)*

The placement of L2 words is exactly the same as the structure of L1 words. It is caused by false concept hypothesized as the result of the interlingual process. The student failed to use a possessive pronoun in the word 'birthday' as his friend's birthday. It is disorder error as well as the omission of possessive pronoun ('s) after 'my friend.' The first error of disordering 'my friend' after 'birthday' is from interlingua and the second error of omission of possessive pronoun ('s) after 'my friend' is from intralingua.

#### 3.2 Construct 2

*"When your birthday, Sani?" (Kapan ulang tahunmu, Sani?)*

The omission of 'is' in this sentence is just because the learner followed the sentence rule of L1 which shows the same order of words without any additional function of a word such as 'is.' The cause of the error is false concept hypothesized, and it is from Interlingua.

#### 3.3 Construct 3

*"I very love my family" (Saya sangat mencintai keluargaku)*

*'I am very very like it.' (Saya sangat menyukainya)*

*'I'm start school 7 years old'. (Saya mulai bersekolah di umur 7 tahun)*

*'I'm come late.' (Saya datang terlambat)*

The using of 'am' is because the learner did not know well the use of 'to be' in the sentence, so he just put it as the same way as L1 structure. L1 of the learner did not recognize about rules of sentence structure such as 'to be' in L2. The learner use 'am' as they always use after 'I,' that is the only clue that the learner noticed. Thus, she used the double verb, 'am' and 'love,' 'like' or 'start' and 'come.' This error is inappropriate addition; the source is from intralingua as it caused by overgeneralization of the learner.

### 3.4 Construct 4

*'I third child in my family' (Saya anak ketiga di keluargaku)*

The sentence omits 'am' as the L1 do not recognize the use of this kind of grammatical feature. The omission of 'the' before the word 'third' shows that the learner does not understand about the use of comparison degree in L2 that L1 does not have. First error of the omission 'am' is from Interlingua caused by false concept hypothesized and the second error of omission 'the' is from intralingua caused by incomplete application of the rule.

### 3.5 Construct 5

*'You are serious?' (Apakah kamu serius?)*

The learner intended to ask the question, but he failed to make question sentence grammatically correct. She made a definite sentence to ask the question. This kind of disorder error is because the learner did not become aware of how to make the question in L2 sentence pattern but make a false concept hypothesized by asking the question in L1 sentence pattern. The source of error is interlanguage.

### 3.6 Construct 6

*"What you finish the text of English?" (Apakah kamu menyelesaikan soal Bahasa Inggris?)*

This is an error in the selection of word to ask a question. The learner has no idea about the use of 'to do' in question form of the target language. The learner failed to recognize form of question sentence in L2; he took 'what' which has meaning 'apa' to perform his curiosity without any awareness of using 'do' in 'yes/no question' because of is false concept hypothesized. The source of error is interlingual.

### 3.7 Construct 7

*"How I can more motivate?" (Bagaimana saya bisa lebih termotivasi?)*

This spoken language uttered by the learner imitated the L1 structure, it is caused by false concept hypothesized. This is a disorder error between 'I' and 'can' because the learner failed to recognize the concept of WH question. The source of error is Interlingua, and it is caused by false concept hypothesized.

### 3.8 Construct 8

*Why don't you go out to school yesterday? (Kenapa Kamu tidak ke Sekolah kemarin?)*

The error in this sentence is about tenses in WH question form. The sentence shows selection error in using 'to do' which should be in past time form. The source is intralingua which is the learner knew the form of WH question but failed to recognize the time expression 'yesterday' which need 'did.' This error caused by overgeneralization.

### 3.9 Construct 9

*He has three child (Dia punya tiga anak)*

This kind of sentence shows the error of selection as it put 'have' after subject 'He' that it should be 'has' and the second error is the omission of 'ren' in the word 'child' for plural. Those errors are from intralingua as the learner had already known about the correct sentence form but failed to recognize the word in morph-syntax and grammatical. The cause of the error is an overgeneralization.

## 4 DISCUSSION AND CONCLUSION

### 4.1 Language Transfer as A Result of Learning Experience

A sentence is composed of words and phrases which is arranged in a certain way. It is not just a long series of speech sounds to achieve the speaker's goals. Similarly, words are composed of smaller units, each of which has its meaning and arranged in a certain way. We requisite to recognize the minor parts from which it is formed and the patterns that determine how these parts should be arranged to analyze the structure of a word or sentence. Reasonably, memorizing a large inventory of sentences, speakers create sentences as needed as they are aware of the rules of the language makes people knew only a limited number of words; they could potentially produce a substantial number of sentences.

There are two kinds of rules about using language that must be consciously learned, the kind of rules we often learn in school, or it is called prescriptive rules. The rules define a standard form of the language, and some authority must explicitly state for the benefit of other speakers. The next type of rules is the native speaker is usually unaware of – the kind of knowledge about the language that children learn naturally and unconsciously from their parents and other members of their speech community, whether they attend school or not. People learn a set of patterns when they acquire language. The brain constructs a set of rules based on these patterns and uses those to produce and interpret language.

A behaviorist notion underlying that learning is a cumulative process. Knowledge and skills which are acquired by individual will become his new learning that is shaped by his past experiences and activities. The more knowledge and skills acquired, the more learning he gets. In real life, an adult rarely or even almost never learns anything entirely new; however unfamiliar the task that we met, the information and habits we have built up in the past will be our point of departure. Accordingly, the transfer of training from old to new situations is part and parcel of most learning. The study of the transfer is coextensive with the investigation of learning (Gass, 2013).

There are two kinds of transfer; they are positive transfer (also known as facilitation) and negative transfer (also known as interference). These terms refer respectively to whether transfer results in something correct or something incorrect and, to repeat a point made earlier, do not imply two distinct cognitive processes. It was hypothesized that what made a crucial difference in the cognitive processes of the students involved were the settings in which the L2 was being learned. Learner systems did not develop in settings where there was an *absence* of native-speaking peers of the target language. Thus, the quality

of the input to the learner was seen as a central variable in second language outcome. The quality of the input in the teaching of grammar depends on the educator himself and his peers. If they have a habit of speaking English badly (many grammatical errors), it will absorb to the learners and will process in their brain with their own perceptive according to the L1 whether it is heritage language or national language.

#### **4.2 Grammar Acquisition in Brain**

The crucial to aware consciousness is based on whether or not a person can declare an error, and the tones disrupted the ability to declare the errors. However, even when the person did not notice these errors, their brains responded to them, generating an early negative ERP response. These undetected errors also delayed the reaction times to the tones. Even someone does not pick up on a syntactic error; the brain is still picking up on it. There is a brain mechanism recognizing and reacting, processing unconsciously for proper understanding. The brain practices syntactic information discreetly in the deficiency of awareness. The other aspects of language, such as semantics and phonology, they could also be processed implicitly. Children regularly pick up the grammar rules implicitly through daily routine interactions with parents or peers by only hearing and processing new words and their usage before any formal instruction.

The differences between the native and non-native grammars are claimed to be only a result of mapping difficulties of syntactic features to overt forms or L1 transfer (Sopata, 2010). The automatic acquisition through mere exposure to a given language disappears after puberty. Thus, the adult learner has to be more aware of the structure of the sentence, which has become the object of this study. Most educators believe that if the child has target language peers, there is a greater social context where the child learns the L2 rules as if the L2 were an L1, with no language transfer occurring. There are several exciting hypotheses that McLaughlin (1987) discusses, it is the regression hypothesis, according to which the child uses the language skills used in first language acquisition with L2 data but at a very primitive elementary and straightforward level. A second hypothesis, the recapitulation hypothesis believed that the child is recapitulating the learning process of a native speaker of the target language. In other words, when learner learns a second language, she or he uses the same processes available to children of the target language.

Wode (1976) pointed out that “children *occasionally* use first-language structures to solve the riddle of second-language structures.” It means that in the process of second language acquisition, learners are more likely to use first language structures when they are encountered with the difficulty of L2 structures (See Construct. 1,2,4,6 and 7). McLaughlin argued that the same processes are involved in all language acquisition; that is, language learning is language learning. What is involved is a unitary process. He concluded that “there is a unity of process that characterizes all language acquisition, whether of a first or second language, at all ages. He claimed that both L1 and L2 learners use the same strategies in learning a language. McLaughlin concluded in his research that it is wrong about the fact in learning a language which many discussions said that the younger, the better.

### 4.3 Errors in Grammar Teaching

English as a lingua franca shows that certain ‘errors’ are widespread but do not interfere with communication (See all constructs). This fact cannot influence English Language Teaching, especially regarding grammar teaching. There is no educator will teach the students these ‘errors’ due to their professional remit in the teaching of acceptable grammar. Even at the fact, when second language learners speak each other in the English language in which the communication still shows many errors in the sentences uttered, the educator could not always give interference during its process. However, such uses of L2 still cannot be accepted or be corrected. The fact is that the native speaker is the model of the language, it cannot alter our conception on ‘acceptability’ where English is being taught as a lingua franca especially in Indonesia context of English language teaching. Pienemann (1984) also overlooks another study of adult learners of German as a foreign language in a formal classroom setting, which displays data from spontaneous language samples produced by three informants throughout one year (some 30 hours of recorded speech). The study systematically compares the teaching objectives, and the classroom input the students received and the language produced.

### 4.4 Teaching English with Native Resources

For a second language, teaching grammars indirectly lacking any semantics in the least like a child does (Batterink & Neville, 2013). The role of native language took on great significance, because, in this view of language learning, it was the major cause for lack of success in learning the L2. Thus, teaching grammar needs substances from a native language not only giving a set of rules from sentences made, included the context of the sentence in a discourse. Research result of Cominguez (2016) revealed that L2 learners could acquire and process grammatical features that absent in their L1 in a native-like fashion. They also showed that post puberty L2 speakers could parse grammatically complex representations in a native-like way.

The nature of L2 systems is fundamentally identical to that of the native. That is why this study optimists to suggest to the English educator to give more motivation to their learners about the effect of acquiring English naturally. It is in line with the statement by Pienemann (1984) which concluded that teaching of a feature when a learner is not ready might have a detrimental effect. This statement leads the researcher to conclude that learners need to rich out the input of target language from the native language source which can be gained from many resources of authentic material, those are music, movie, games, advertisement, and information around the stuff.

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