Over-generalization, Under-generalization, and No-generalization on a Child's Language Acquisition

Akhmad Baihaqi[a*]

[a]Department of English Education, University of Sultan Ageng Tirtayasa

Article Info	Abstract
	It seems that many young children may not comprehend the word-reference relationship even though they can produce the words accurately. Since it happens, the children may face the situation known as over-generalization, under-generalization, and no-generalization. This study aims to get an in-depth understanding of over-generalization, under-generalization, and no-generalization on a child's language acquisition. The method of research was a case study. The subject of research was a two-year-old child. Data of research were collected from the result of participant observation and documentation of speech transcription. Data analysis of this research covered data reduction, data display, and conclusion drawing or verification. The result shows that (1) over-generalization, under-generalization, and no-generalization occur when the subject aged 26 to 30 months; (2) at aged 32 months, those errors are finally revealed since the subject can manage his cognitive development and conceptualize his semantic-reference relationship for particular properties; and (3) this also proves that environment has a massive role to support and stimulate a child in acquiring and producing his language.

INTRODUCTION

It appears that the discussion of language acquisition becomes one of the interesting and debatable issues in psycholinguistics area. Language acquisition, as it is known, involves under several circumstances: how the organ of speech receives the stimuli, how the brain and cognitive development process and to comprehend those stimuli, and how physical movement reacts to the stimuli. This also can be seen as Troike (2006) viewed that language acquisition at least involves the biological development of the organ of speech, receptive development of how a child receives and produces the language, and

neurological development of how a child's brain thinks, acquires, and understands the language. The issue becomes debatable since the proposed-theories and studies are divers.

Language acquisition is greatly influenced by internal and external factors. Mukalel (2003) and Dornyei (2005) classify the internal factors or psychological factors into intelligence, resourcefulness, creativity, motivation, anxiety, self-esteem, and belief. The external factors, on the contrary, are classified into the physical environment, social environment, physical resources, and economic resources (Mukalel, 2003). These views result to which called the universality and personality principles in language acquisition.

These principles at least can be understood from Dornyei (2005) and Steinberg, Nagata, and Aline (2001). The universality principle argues that every child acquires language in common processes and stages; personality principle views that every child acquires the language uniquely (Dornyei, 2005). Moreover, Steinberg, Nagata, and Aline (2001) discuss two universal periods of language acquisition named pre-linguistic and linguistic periods. The pre-linguistic period happens since the pregnancy until the child is born and produces his first word or proto-word. The linguistic period started when the child produces and understands his first word.

Since the infant is born until the next two months, he is on a pre-linguistic period called crying. The infant is automatically crying in responding to both internal and external stimuli. Harder the crying means harder the stimuli. In the next two to six months, the infant is on the pre-linguistic period of cooing. At this phase, the infant commonly produces simple and even unsystematic sound. When the baby is on six to eleven months, he is on the babbling phase. The baby usually able to produce both vowel and consonant sounds, and even a single syllable. The psycholinguists classify this phase into marginal and canonical babbling (Scovel, 1998). Marginal babbling occurs at six to eight months when the baby starts to produce both vowel and consonant sounds randomly. Canonical babbling, moreover, occurs at nine to eleven months when the baby starts to produce a single vowel and consonant sounds, or combination of both vowel and consonant into a syllable, which at least consists of one onset and rhyme.

Starting from twelve months, the baby is now on a linguistic period. At this period, the baby is commonly ably to produce and understand his first word.

Scovel (1998) mentioned that this phase is known as idiomorph. At this phase, the baby can produce and understand simple words such as *mom* or *dad,* to call his parents. This idiomorph stage runs till seventeen months. Entering eighteen months, the baby is on holophrastic (Scovel, 1998). Since this phase, the baby starts to acquire and produce words, phrases, or clauses enormously. The speech such as *mommy, eat* or *daddy, go* when the baby requests his parents for some foods or going for play usually start at this period. The baby starts his critical period. As Syarizal, Yuniarti, and Sofyana (2020) stated that a critical period refers to the period where people are prepared to acquire the language. Many psycholinguists believe that a critical period of language acquisition happens between two to ten years old.

On language acquisition and production, as Scovel (1998) explained that this develops on four stages: (1) conceptualization, (2) formulation, (3) articulation, and (4) self-monitoring. Conceptualization talks about how speech is first conceptualized in the human mind. This is formed from syntactic thinking, the sequence of words of people think when they talk, and imagistic thinking, visual mode of communication. Formulation refers to the output of the conceptualized idea accurately into words, phrases, and clauses. When people are going to say, they are formulating about words, phrases, or clauses directly. Articulation, then, refers to how the ideas which previously conceptualized and formulated are articulated into sounds, syllable, and words. Articulation of speech sound also plays a vital role in language production. The last, self-monitoring deals with how much utterances are retreated, corrected, and revised.

Those situations above, of course, may vary from one child to another. A single word produced by one child in expressing a reference is possibly different from other children's expressions. Even, their expression will probably differ from the adult. Wray, Trot, and Bloomer (1998) assumed that children often use words in a way in which they have different understanding compared to adult usage. They also claimed that a word is considered mastered by the child when it has phonetic similarity to adults and has a stable relationship to its reference (Wray, Trot, and Bloomer, 1998). Based on this view, it seems that many children may not understand the word-reference relationship correctly even though they may produce the word or phrase accurately. Since this condition happened, the children may commonly face the situation known as over-generalization, under-

generalization, and no-generalization.

Over-generalization, also often named as over-extension, occurs when the children refer to too wide a category of things (Wray, Trot, and Bloomer, 1998). Saidan (2011) in Matiini (2016) further stated that over-generalization is the phenomenon when one overextends one rule to cover instances. This situation may also occur when the children mention the things with their first known-utterances. The children may name *orange* to refer to all fruits, or *book* to refer to all printed materials, for example.

Under-generalization or under-extension occurs when the children use a word to refer to too small a category of things (Wray, Trot, and Bloomer, 1998). This also may occur since the children difficult to understand complex words. The example can be seen when the children call *cat* for his family pet, but not for his neighbor's.

No-generalization or no-extension, next, occurs when the children difficult to understand the word's meaning (Dardjowidjojo, 2000). Close to under-generalization, no-generalization may also occur since the children difficult to understand complex words. No-generalization can be found, for example, when the children shout *go away* to things around them, such as tables or chairs.

Several previous studies, as Zapf and Smith (2007) studied to children aged 17.5 to 28 months in processes generalization to the development of morphological rules. They proved that very young children generalized the plural to novel forms. Furthermore, the study of Huang, Spelke, and Snedeker (2010) focused to children's generalization to their first number words and number concepts by training tasks to explore children's interpretation of number words; their findings suggest that children fail to map newly learned words in their counting routine to the fully abstract concepts of natural numbers. Other research, as Ambridge, Pine, Rowland, Chang, and Bidgood (2013) proved that generalizations occur as children errors in acquiring the fine-grained semantic and morph-phonological properties of particular items which conceptualized as properties in constructions [e.g., the (Verb) slot in the morphological *un* -(Verb) construction, or the transitive-causative (Subject) (Verb) (Object) argument structure construction]. The last, Hoff (2006) proved that all human environments support language acquisition by providing children with opportunities for communicative experience and motivate the language acquisition process.

The studies above prove that generalization may occur in children's language acquisition. On the other side, this also becomes a controversial issue in psycholinguistics, as stated by Dardjowidojo (2000; 2005), due to its dissimilarity of theories and findings. Undoubtedly, these dissimilarities arise because of the uniqueness of its study, subject, and also finding. These issues are also considered as the most essential reasons why children make incorrect patterns in their language acquisition. Concerning to the explanation above, this study tries to discover over-generalization, under-generalization, and no-generalization on a child's language acquisition. Accordingly, the problem of research is formulated as follows: How do over-generalization, under-generalization, and no-generalization occur on a child's language acquisition?

RESEARCH METHODOLOGY

The method of this research was a case study. Creswell (1998) stated that a case study is an exploration of a bounded system or a case over time through detailed and in-depth data collection. Emzir (2010), then, explained that the case study is a qualitative method that tries to discover meaning, process, and in-depth understanding of individual, process, or situation. Regarding this research, a case study aimed to discover in-depth information and understanding about over-generalization, under-generalization, and no-generalization on a child's language acquisition.

Data of research were collected from participant observation, non-structured interview, and documentation of speech transcription. Both participant observation and non-structured interview were used to discover (1) subject' language acquisition and production which revealed over-generalization, under-generalization, and no-generalization, and (2) the possible contexts which exposed subject's language acquisition and production. The documentation, meanwhile, was used to note (1) any occurrences of generalization from the subject's daily speech production, and (2) the label of speech production into over-generalization (OG), under-generalization (UG), and no-generalization (NG). Data analysis of this research covered data reduction, data display, and conclusion drawing or verification. The research started in April 2018, since the subject aged 24 months. Considering that at this age the subject was on the holophrastic phase, so he was able to produce and comprehend his words,

phrases, or clauses. This research was considered done since those generalizations have no longer occurred. The subject of research can be described as follows:

Table 1. Subject of Research

Name	:	Shagaf Albani Asyakir
Date of Birth	:	April 7th, 2016
Place of Birth	:	Serang City, Indonesia
Sex	:	Male
Siblings	:	1. Sinai Albani Muyasar (sister) 2. Shayen Albani Rumaisha (sister) 3. Syakir Albani Mutasham (brother)
Address	:	Griya Permata Asri, B4/11, Dalung, Cipocok Jaya, Serang, Banten Province, Indonesia

DISCUSSION

The result of research of over-generalization, under-generalization, and no-generalization on the subject's language acquisition can be explained as follows.

Table 2. Over-generalization, Under-generalization, and No-generalization on Subject's Language Acquisition

Subject's Age: 26 months			
Type: Over-generalization			
No	**Form**	**Meaning**	**Note**
1	*[buk]*	*buku*	book
2	*[ayon]*	*krayon*	crayon
3	*[pen]*	*pulpen*	pen
4	*[cokat]*	*cokelat*	brown
5	*[atu]*	*sepatu*	shoes
Type: Under-generalization			
No	**Form**	**Meaning**	**Note**
1	*[sip]*	*sheep*	sheep: cartoon's figure of Shaun the Sheep
2	*[ayung]*	*payung*	umbrella
Type: No-generalization			
No	**Form**	**Meaning**	**Note**
1	*[ga]*	*tidak*	no

The above table shows that aged 26 months, over-generalization occurs on subject production for *[buk]* means *buku* or book. This over-generalization shows that the subject names all printed materials, such as comic or newspaper, like a book. This happens since the subject mentions the things of printed materials with his first known-utterance, which is a *book*. Similar to the *book*, over-generalization of *[ayon]* for *crayon* and *[pen]* for *pen* also happens to the subject's first-known

utterances. The production of *[ayon]* refers to all colored pencils; *[pen]* refers to all kinds of ballpoints and markers. These over-generalizations occur when the subject asks for both colored pencil and oil pastel with *[ayon],* and ask for a *pencil, pen*, and even *marker* with *[pen]*. The over-generalization of *[cokat]* means *cokelat* or *brown* influenced by the environment. As Hoff (2006) proved that environments support language acquisition and motivate the language acquisition process. Brown is his mother's favorite color. Most of his mother's kinds of stuff are brown. This situation, consequently, exposes the subject's first-known color is *cokelat*. The last, over-generalization of *[atu]* means *sepatu* or *shoes* refer to all footwear.

On under-generalization, the result shows that this happens on *[sip]* for *sheep* and *[ayung]* for *payung* or *umbrella*. The under-generalization of *sheep* occurs when the subject calls his sheep puppet with *sip,* but not for other's sheep puppets (this refers to the cartoon's figure of Shaun the Sheep on TV which the subject usually watches). The subject often said *ini sip shagaf, itu ga sip* means *this is my sheep puppet, that is no.* Whereas the other's puppets have similar form and model to the subject's puppet, that is sheep puppet. A similar situation also occurs on *[ayung]* means *payung* or *umbrella*. Similar to under-generalization of *[sip],* the subject also often talks *[ayung]* for his *umbrella*, but not for other's umbrella.

On no-generalization, it is found on *[ga]* means *tidak* or *no*. In the Indonesian language, negation form *no* can be meant both *tidak* and *bukan*. The difference is that *tidak* usually followed by an adjective, such *tidak baik* or *not good;* while *bukan* followed by a noun, such *bukan buku* or *not book*. In this research, the subject seems confused to differentiate the use of *no + adjective* with *no + noun*. Thus, it is often found when the subject demonstrates no-generalization to say *itu ga sip* or *that is not sheep,* not *itu bukan sip.*

Table 3. Over-generalization and No-generalization on
Subject's Language Acquisition

Subject's Age: 27 months			
Type: Over-generalization			
No	**Form**	**Meaning**	**Note**
1	*[buk]*	*buku*	book
2	*[ayon]*	*krayon*	crayon
3	*[pen]*	*pulpen*	pen
4	*[cokat]*	*cokelat*	brown
Type: Under-generalization			
No	**Form**	**Meaning**	**Note**
-	-	-	-

Type: No-generalization			
No	**Form**	**Meaning**	**Note**
1	*[ga]*	*tidak*	no

From the table above can be described that the over-generalization for *[buk], [ayon], [pen],* and *[cokat]* are still found when the subject aged 27 months. The over-generalization for *[atu]* has no longer occurred on this age since the subject has already known the distinction of *sandal* and *sepatu* which refer to different types of footwear. *Sandal* means *sandals*; *sepatu* means *shoes*. The no-generalization of *[ga]* or *no* also still occurred at this age. It seems that the subject is still confused to differentiate the use of *no* or *tidak* for an adjective and *no* or *bukan* for a noun. The difference result, however, showed in under-generalization. At this age, the under-generalization is no longer happened. It looks that the subject has already understood the word-reference relationship for both *[sip]* and *[ayung]*. Therefore, the subject does not differentiate to name his *sheep puppet* and *umbrella* to others.

Table 4. Over-generalization on

Subject's Language Acquisition

Subject's Age: 30 months			
Type: Over-generalization			
No	**Form**	**Meaning**	**Note**
1	*[ayon]*	*krayon*	crayon
2	*[pen]*	*pulpen*	pen
Type: Under-generalization			
No	**Form**	**Meaning**	**Note**
	-	-	-
Type: No-generalization			
No	**Form**	**Meaning**	**Note**
	-	-	-

Table 4 informed that both under-generalization and no-generalization have no longer occurred. This situation happens when the subject entering 30 months. It appears that the subject has already understood the word-reference relationship, that are *[sip]* and *[ayung]*; and the meaning for the specific word, that is *[ga]*. However, the over-generalization for *[ayon]* and *[pen]* seems to be occurred due to their shapes and functioned similarities as part of stationery. At this age, the subject looks still unable and seems confused to manage his cognitive development perfectly to comprehend the meanings. Therefore, he still does over-generalize for those words.

Table 5. Subject's Language Acquisition

Subject's Age: 32 months			
Type: Over-generalization			
No	**Form**	**Meaning**	**Note**
-	-	-	-
Type: Under-generalization			
No	**Form**	**Meaning**	**Note**
-	-	-	-
Type: No-generalization			
No	**Form**	**Meaning**	**Note**
-	-	-	-

From table 5 can be explained that entering 32 months, the subject finally can manage his cognitive development. So, the acquisition errors of over-generalization, under-generalization, and no-generalization have no longer occurred. This also proves that the subject finally may conceptualize his semantic-reference relationship for particular properties.

Several discussions can be highlighted from the result. First, over-generalization, under-generalization, and no-generalization happen on child's language acquisition when the subject aged 26 months; as Smith (2007) argued that generalizations possibly occur to very young children age one to three years old, and Hoff (2006) which proved that all human environments support language acquisition (see the case of *cokelat* and *sheep* at table 2). Second, since the subject aged 27 months, the under-generalization has no longer happened because he has understood the semantic-reference relationship. Since the subject aged 30 months, both under-generalization and no-generalization have no longer occurred because he has understood not only the semantic-reference relationship but also the meaning for the specific words; as Ambridge, Pine, Rowland, Chang, and Bidgood (2013) proved that generalizations only occur as children errors in acquiring semantic and morph-phonological properties of particular properties. The last, at aged 32 months, the subject finally can manage his cognitive development and semantic-reference relationships, so all of the generalization types have no longer occurred.

CONCLUSION AND SUGGESTION

The research concludes that over-generalization, under-generalization, and no-generalization occur when the subject aged 26 to 30 months. Entering 32 months, these errors finally reveal since the subject can manage his cognitive

development, and conceptualize his semantic-reference relationship for particular properties. This research also concludes that the environment has a vital role to support and stimulate a child in acquiring and producing his language.

The last, future works are required to have a further understanding of children's language acquisition. This can be developed into various samples or subjects, and investigated through group interviews and experiments. These are considered necessary to analyze and understand how humans acquire the language.

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