
UNITARY SYSTEM HYPOTHESIS AND DUAL SYSTEM HYPOTHESIS IN LANGUAGE DEVELOPMENT

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ABSTRACT

Many countries throughout the world use more than one language such as English, Arabis, and Mandarin as their daily communication. In Indonesia, English as a foreign language becomes a compulsory subject in Junior High School and Senior High School. It shows that children or society are encouraged to learn and/or use more than one language that it is called bilingual. Beside of that, most parents support their children to learn English because they assume that English are able to shape better future for their children. However, related to the theory, children who acquire two or more languages simultaneously will get confusion called Unitary System Hypothesis. However some scholars believe that acquiring more than one language in the same time will not undergo confusion for the children or it is called Dual System Hypothesis.

Keywords: *bilingualism, multilingualism, Unitary System Hypothesis, Dual System Hypothesis*

A. Introduction

This paper concerns on a review of theory of language acquisition in terms of mental grammar (how language is processed) and especially the controversial of unitary system hypothesis and dual system hypothesis. It reviews a book edited by Bernard Spolsky and Francis M. Hult and written by Ritchie and Bhatia entitled *The Handbook of Educational Linguistics*. It discusses language acquisition in a child and language use in adult, primarily in the monolingual and bilingual context. It concerns into two points of view; they are monolingual language and bilingual language in terms of psycholinguistics.

B. The Theory of Psycholinguistics

Psycholinguistics is categorized as one of new sub disciplines in linguistics. Psycholinguistics is derived from psychology and linguistics. Psychology is the scientific study of human behavior and cognition (i.e., how we think) and linguistics is the scientific

study of language. The union of these two fields is principally concerned with the processing and knowledge representations that underlied the ability to use language, and how they relate to other aspects of human cognition. In short, psycholinguistics appears some questions: How it is that people are able, moment-by-moment, to produce and understand language? and, by extension, how do children come to have this ability? How and why it is sometimes impaired after brain damage? (Cowles, 2011, p.10).

Steinberg (1982) describes the core of psycholinguistics that investigates relationship between language and process mental on human beings in processing the language. It has the same definition as proposed by Steinberg et.al (2001) (see also Warren, 2013; Fromkin, et.al., 1988 & Chaer, 2009). Steinberg (1982, pp.101-119) elaborated the relationship between language and mind in which language is processed in mind before producing the words or sentences.

C. Monolingual Language Acquisition

In the first discussion Ritchie & Bhatia distinguished between linguistics competence and performance in which competence is knowledge a given language but performance is as knowledge in actual speaking and listening. Similar to Chomsky (1965, cited Steinberg, et.al p.373) that competence is the knowledge that people have in their mind of their grammar while performance is knowledge of an operational to use the competence so that people can realize sentences of production and sentences of comprehension. Competence and performance have close relationship, because mental grammar (competence) plays a role in actual comprehension and production (performance). Thereby most people believe that someone's performance is represented from his/her competence; language user's mental grammar along with accompanying performance processes of comprehension and production as language user of the language system.

Acquisition of mental grammar is as the result of the interaction between the language of the learner's experiences and the language itself. Krashen gave contribution in terms of 'acquisition' and it is also called 'unconscious'. Children acquire languages without conscious so that children are not recieved to explicit correction. Thus, speech errors have been used extensively- a type of error that is frequently called 'reversal or change error'. Ritchie & Bhatia also gave examples to describe those children who cannot take advantages from correction and type of speech error in example 1 (pp.41-42):

Child : Nobody don't like me.

Mother: No, say "no body likes me".

Child : Nobody don't like me. (eight repetition of this dialog).

Mother: No, now listen carefully; say "nobody likes me".

Child : Oh! Nobody don't likes me.

Example 2:

- a. It pays to wait
- b. It waits to pay

Example 1 and 2 show that children cannot be corrected of their grammatical error directly because they speak based on the context without considering the grammar in which they merely focus on the utterance. Owens (1992, p.191) provides some examples to reinforce where children ignore grammar in speaking:

(shake doll) Here's babby! (Pause)

Mommy has baby. (gesture, pause)

Uh-huh, Betsy want baby? (gesture, pause)

Here's baby! (pause)

Oh, baby scare Betsy? (facial expression, pause)

Children have their own language system in their language development; it is attested by the systematic character of the utterance in each stage of their acquisition. They will ignore grammar system and produce sentences based on the contexts.

Language development of children is affected by environment. The case of Gannie who is isolated from their environment to acquire language input during 20 months never getting progress in the language development. Because Gannie hardly gets input either words or sentences. As the result of that is Gannie hardly can not speak like other children. Chomsky states that language acquisition is based on *nature*, but Skinner in his behaviorism perspective believes that language acquisition has characteristic as *nurture* (Dardjowidjojo, 2003, pp.234-237). Behaviorism claims that human being born are like paper; empty space

without any squiggle. It means that language acquisition development is determined by environment.

D. Unitary System Hypothesis and Dual System Hypothesis

Nowdays, majority of the population through out the world use more than one language (Romaine, 1995 in Marian & Spivey, 2003, p.173). Even in Indonesia English as a foreign language becomes a compulsory subject in Junior High School and Senior High School. It shows that children or society are encouraged to learn or use more than one language and it is also called bilingual. Beside of that most parents encourage their children to learn English because they assume that English are able to shape the better future for their children.

The concept of bilingualism is people who master and they are able to use more than one language written and/or spoken. In the other hand, monolingulism is “the ability TO USE only one language” (Wardhaugh, 2006, p.96). So that definition of bilingualism or multilingualism is proposed as the ability to use more than one language. Nowadays, most people through out the world become bilingual or multilingual because the modern era, even now children acquire two or more languages from birth and the child hear to languages from birth called bilingual first language (Meisel (1989) in Jayasundra, 2015, p.31). Even though a child acquires two or more languages simlutenously but the child tends to master merely one language. Person et.al. (1993) noted that “bilingual children’s vocabulary is measured in both languages but bilingual children tend to perform on a par with monolingual children” (Kaushanskaya, Blumenfeld, & Marian, 2011, p.409).

1. Unitary System Hypothesis

The major issue that has been addressed in this paper is on simultaneous acquisition in terms of two hypotheses: Unitary System Hypothesis and Dual System Hypothesis. Firstly, Unitary System believes that bilingual children face stage ‘confusion’ before separating those of different languages. The child’s task of bilingualism is more complex than monolingual child. Borlinger (1975, p. 389) stated that all mistakes in speech are caused by some malfunctioning in the neural commands that tell our vocal organs. Granham (1985, p.69) added the computation of syntactic structure interference of communication, involving bilingualism/multilingualism because “occasionally people speak of an ‘inner’ or ‘mental’ language” (House & Rehbein,2004: 8).

Children, who acquire two or more languages simultaneously, usually undergo interference. In this case, I will review one of the topics written by Harumi Itoh and Evelyn Hatch who conducted research of *Second Language Acquisition* in order to identify language development of Takahiro, a child who acquire two languages simultaneously between Japanese and English. Takahiro's first language is Japanese. He came to Los Angeles with his parents in September, 1997. In the first three months, Takahiro rejected all people who speak English. He had difficulty with syllables containing fricative and especially with sibilant. This problem was also evident in his English once he began to imitate English utterance. Metathesis occurred frequently in his speech, for examples; he said *borotto* for *robotto* (robot), *tebiri* for *terebe* (TV), and *kopetto* for *poketto*.

The third months Takahiro in Los Angeles, he began to imitate and make repetition, but his phonological variation influence of Japanese syllable structure on his English pronunciation. For illustration:

Eraser; *ireys, reysə, reəs, ireijər, reys, ireisə, ireyčə/*

Pencil: */pensəl, penšɔl, penšɔpu, penšelp, penšawl, penšl/*

Six: */sič, sekis, siks, seks/*

The words 'eraser' (*ireizərs*), 'pencil' (*pensəl*), and 'six' (*siks*), he pronounces in several phonological variations, because of interference of Japanese syllable structure. In this case, the consonant cluster, either simplified or a vowel was added to break up the cluster, as in */æpulu/* for *apple* and */egu/* for *egg*. It is because of interference from his first language.

Furthermore Chaer and Agustina (2010, p.90) added that when a person does not use his first language for a long time, gradually his first language will be affected by another language. It may happen because there is no opportunity to use his first language in his new place. Therefore, when he came back to his native place, he is likely to produce mix language. Another case also appears from one of my classmate experiences namely Nisa. She got confusion when moved to Java from Lombok. She said that:

"That case can be best illustrated as follow. I am a bilingual adult speaking Sasak (Lombok) and Javanese. I have learnt Sasak and Javanese simultaneously since I was a child. My father is Sasaknese and my mother is Javanese. I have lived in Lombok for 18 years and I have been spending my life for 8 years in Yogyakarta. I have less opportunity to practice Sasak since my environment mostly speaks Javanese both my family in Yogyakarta and my friends. The ability to speak Sasak is decreased. Interference mostly occurs in lexical level

since Sasak and Javanese have some similar words but they have different meaning. For example *gedang* means papaya in Sasak while in Javanese it means banana; *menek* means pee, yet in Javanese it means to climb; *saru* means not clear (blur) while in Javanese it means taboo. There are also some similarities in sound for example in Sasak language for number (3,4,5,7) is *telu, empat, lima, pituq* while in Javanese it is *tigo, papat, limo, pitu*. These similarities or differences in certain context help me even make me confused when I want to speak with different partner. Mostly interference happens unconsciously so that when I speak Javanese some Sasak words exist in my utterances and vice versa” (Anisa Ilmi).

That illustration also corresponds to what Ritchie and Bahtia say previously. According to them, a child acquires 2 languages simultaneously undergo confusion as Anisa experienced (bilingual). It is similar to Brown and Chaer and Agustina said that interference and the opportunity to use languages should be taken into account. They may cause confusion during learning or acquiring languages.

2. Dual System Hypothesis

Dual System Hypothesis claims that bilingual children do not undergo of ‘confusion’, because simultaneous bilingualism is similar to monolingual first language development. Bilinguals appear to be advantaged relative to monolinguals on cognitive tasks that engage just those control mechanisms that have been hypothesized to be required for proficient language performance (Kroll, Bagulski, & McClain, 2012, p.3). It is similar to an opinion that proposed by Dulay, et.al (1982, p.110); they state that “where the surface structure of both languages is similar, this is not a problem”. First language will support people who acquire second language when both of languages have similarities to morphology, phonology, syntax, or semantics which is called positive transfer. For example: the word *rather* in English is similar to *rodor* in Java, both words have similarities to the pronunciation and the word has the same meaning ‘agak’ in Indonesia (*rather* in English). In this case, both of languages are belonging identical will support bilinguals/multilinguals to understand and master those languages.

Poulise (cited in Kaplan, 2002, p.291) mentions that there are 3 factors in bilingual model:

1. L2 knowledge is typically incomplete.
2. L2 speech is more hesitant and errors and slips.
3. L2 speaker is often carries trace of the L1, or it is called interference.

Tertiary of those factors influence bilinguals in mastering languages. Before people produce words or sentences, those patterns of sentences are processed in neuron or mind. Related to Alan (Steinberg, et.al, 2001) claims that “the mental state of knowledge about words is referred to as the mental lexicon and the mental lexicon specifies how a word is spelled, how it is pronounced, it’s part of speech and what it means”. Sentences are processed in the brain (mental grammar or mental lexicon) before people produce the sentences. Language is produced related to the brain mechanism, such as cortex, cerebrum, parietal lobe, hemisphere, and other parts of the brain and that is one of the principle aspects in processing the language. Language, sentences, or even words are constructed by our mind because language is related to the cognition or mental process (Isacc & Reiss, 2008, p.30). It has been discussed and written by many psycholinguists or linguists in their books (Steinberg, et.al.,2001; Fromkin, et.al 1988; Arifuddin, 2010; & Steinberg, 1982).

Numerous people through out the world are bilingual/multilingual, as House & Rehbein (2004:5) noted that “numerous people participate in institutional communication worldwide and the linguistic variations that exist among the clientele increasingly demand that institutional representatives act in a multilingual fashion. Green in Spolsky and Hult (2008) proposes a model called Inhibitory Control Model-polyglot. The model attempts to address the key issue of control to account for the normal bilingual’s ability to successfully regulate language use by making an appropriate language choice. A bilingual person can switch or mix his language based on the context.

According to Halliday (2007:231) code switching is moving from one language to another, selecting according to the situation. It is different from Halliday, Hymes (1973) stated that the moving is not only between one language to other languages but also including the variety of the language itself. So, if someone is able to speak Javanese with Banyumasan dialect and Yogyakarta dialect, according to Hymes, he is considered as a bilingual person. Fasold (1990) differentiates code switching and code mixing. If someone uses one word or phrase from different language at the same time, it is called code mixing but if he switches clauses from one language (code) to another language by using grammatical system of each language, it is called code switching.

The difference between code mixing and code switching, the illustration can be described as follow. There is a dialog between two people speaking Hindi and English (Velma in Chaer and Agustina, 2010, p.116).

Vinod: Mai to kuhungaa ki yah one of the best novels of the year is.

(I will said that this is one of the best novels of the year is one of the best novels of the year)

Mira:That's right. It is decidedly one of the best novel of the year.

Vinod's utterance is code mixing because the phrases are mixed of Hindi and English. Meanwhile Mira's utterance is code switching.

E. Conclusion

Most people believe that children acquiring two or more language simultaneously will get confusion and will obstruct their first language. As the example in case of Takahiro who is 2,5 years old find difficulty involves morphology, phonology, syntax, and semantics. In Takahiro case, he undergoes 'confusion' when acquire two languages (Japanese and English) at the same time. Overall, our hypothesis, the result of discussion is most of children who acquire two or more languages simultaneously will undergo the stage of 'interference or confusion'. However, some scholars believe that children who acquire two or more languages simultaneously will not occur confusion. Even two languages will support bilinguals to understand and master first language. First language will support children who acquire other languages because some words between the first and second language have similarities and it is called positive transfer. In sum, children who acquire two or more languages simultaneously will not undergo confusion because some words and the pattern of sentences among languages are alike.

References

- Arifuddin. (2010). *Neuropsikolinguistik*. Mataram: Rajawali Pers Buku perguruan Tinggi PT Raja Grafindo.
- Chaer, A. (2009). *Psikolinguistik: Kajian teoritik*. Jakarta: Rineka Cipta.

- Chaer, A. & Agustina, L. (2011). *Sosiolinguistik: Perkenalan awal*. Jakarta: PT. Rineka Cipta
- Dardjowidjojo, S. 2012. *Psikolinguistik: Pengantar pemahaman bahasa manusia*. Bandung. Yayasan Pustaka Obor Indonesia.
- Dulay, H., Burt, M. & Krashen, S. (1982). *Language two*. New York: Oxford University Press.
- Fomkin, V., et. al. (1990). *An introduction to language*. Australia: Harcourt Brace Jovanovich Group.
- Halliday, M.A.K. 2007. *Language and education*. New York: M.A.K Halliday collection.
- Hymes, (1973). *Foundation in Sociolinguistics*. Philadelphia: University of Pennsylvania Press.
- Hatch, E.M. (1978). *Second language acquisition: A book of reading*. U.S.A: Newbury House Publishers.
- House, J. & Rehbein, J. (2004). What is 'multilingual communication'? (Eds). *Multilingual communication*. Amsterdam: John Benjamin. B.V.
- Isac, D., & Reiss, C. (2008). *I-Language: An introduction to linguistics as cognitive science*. New York: Oxford University Press.
- Jayasundra, N.S. (2015). Child language acquisition monolingual vs bilingual: A theoretical analysis. *Scientific Research Journal*, 3, 31-34.
- Kaplan, R.B. (2002). *The Oxford handbook of applied linguistics*. New York: Oxford University Press.
- Kaushanskaya, M., Blumenfeld, H.K., & Marian, V. (2011). The relationship between vocabulary and short-term memory measures in monolingual and bilingual speakers. *International Journal of Bilingualism*, 4, 408-425.
- Kroll, J.F., Bogulski, C.A., & McClain, R. (2012). Psycholinguistic perspectives on second language learning and bilingualism: The course and consequence of cross-language competition. *Linguistic Approaches to Bilingualism*, 1-24. John Benjamin Publishing Company. Doi: 10.1075/lab.2.1.01kro.
- Marian, V. & Spivey, M. (2003). Bilingual and monolingual processing of competing lexical items. *Applied Psycholinguistics*. 24.173-193. Cambridge University Press. Doi. 10.1017.S0142716403000092.
- Robert E. Owens, JR. (1992). *Language development an introduction*. New York: Macmillan Company Publishing.

- Steinberg. D.D. (1982). *Psychollinguistics: Language, mind and world*. Singapore: Longman Singapore Publisher.
- Steinberg, D.D., Hiroshi N, David.P.A. (2001). *Psycholinguistics: Language, mind, and word*. London: Longman.
- Ritchie, W.C. & Bhatia, T.K. (2008). Psycholinguistics. Spolsky, B & Hult, F.R. (Eds). *The handbook of educational linguistics* (pp.38-52). Australia: Blackwell Publishing.
- Wardhaugh, R. (2006). *An introduction to sociolinguistics*. United Kingdom: Blackwell Publishing.
- Warren, P. (2013). *Introducing psycholinguistics*. Cambridge: Cambridge University Press.