SLA MAJOR THEORETICAL VIEWS:

Putting the Jigsaw Pieces Together

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ABSTRACT

Second language acquisition is a complex internal process. There no guarantee that what it is known now is the complete picture. In other words, there may be some other aspects that have not been revealed. This article tries to briefly review the major theories in Second Language Acquisition (SLA). Behaviorists sees human language is acquired and maintained via stimulus-response-reinforcement sequence. Innatist theory first of all states that conditioning model is not appropriate to explain how human language is acquired based on the fact that children can produce novel sentences in new combination that has never been heard. Interactinists point out that LAD/UG or innate capacity alone does not help much. Finally, cognitivist view sees that in acquiring a language, a human being needs a mental capacity. All theoretical views will not argue the claim that human being needs mental capacity to acquire language. This article ends in its effort to put "the jigsaw pieces" from the schools of SLA theory to form a picture of how second language is theoretically acquired.

Key-words: second language acquisition, behaviorist, innatist, interactionist, cognitivist

As a relatively new field of study, SLA has advanced through research with various theoretical underpinnings. The results often seem contradictory to each other. This article reviews the theoretical view that have influence people understanding on SLA, namely behaviorist theory, innatist theory, interactionist theory and cognitive theory, and the result of major research with the theoretical views. Finally, the writer proposes a way of understanding the theoretical views and result results to yield a complete picture of SLA based on them. In other words, he would state that the seemingly contradictory research finding and theories are actually complementary to each other in explaining different aspects of SLA.

BEHAVIORIST THEORY

Behaviorism is a school of psychology. Its key concept of behaviorism is human behavior is a product of the stimulus-response interaction. Accordingly, behaviorists also see language learning (acquisition) as a matter of "stimulus-response" mechanism. This model assumes that human mind is a blank slate when he is born.

Within this school, B.F. Skinner proposes a theory about language acquisition which he states in his writing "Verbal Behavior" (Schunk, 1991: 72-73). For him, verbal behaviors can be classified as mand, tact, echoic. Mand is a verbal operant in which the response is reinforced by a characteristic consequence and under the functional control of relevant conditions of deprivation or aversive stimulation. The word "mand" is found in the word "command" and "demand". In other words, the person will repeat the verbal behavior—for example, "take it"—if the command or demand is met by other person.

The second type of verbal behavior is tact, which mean the verbal operant in which a response of a given form is strengthened by a particular object or event. For example, mom says "Daddy" to the child each time Dad comes. The child learns to associate the word "Daddy" and the person. Then, he/she produces word by imitating other people. After the sound production is praised, his/her word learning is reinforced.

The third verbal type is echoic. One of the instances is simple imitation. For example, a father says to his child "Daddy", and his child repeats it. Afterwards, the father hugs the child or smile to him to reinforce it.

Thus, in all three types, the important sequence in learning is stimulus – response – reinforcement. According to Schunk (1992: 74), *Verbal behavior* presents a theoretical analysis of how human language can be acquired and maintained. The issue is not whether human being acquire language via reinforcement as it is

undoubtedly plays a role. Rather, the issue, according to Schunk, is whether reinforcement is the mechanism primarily responsible for language acquisition.

INNATIST THEORY

The Father of innatist theory in Second Language Acquisition (SLA) is Chomsky. He started by criticizing *Verbal Behavior,* maintaining that a conditioning model is inappropriate for explaining language acquisition and comprehension (Schunk, 1992: 74). The most influential idea contributed by Chomsky to SLA is the concept of innate hypothesis (LAD/UG)[1] and then principle and parameter. Language Acquisition Device (LAD) or Universal Grammar (UG). The LAD or UG is endowed to human being at birth. This is something innate. This position is generally referred to as innate hypothesis. This innate mechanism is activated when appropriate stimulation (input) is posed.

For Chomsky, since birth human LAD starts receiving input by which the human being stimulated to construct rules of the language. The output (utterance) he/she produces is a result of the application of the rules produced by this LAD. See the following illustration for a better picture.

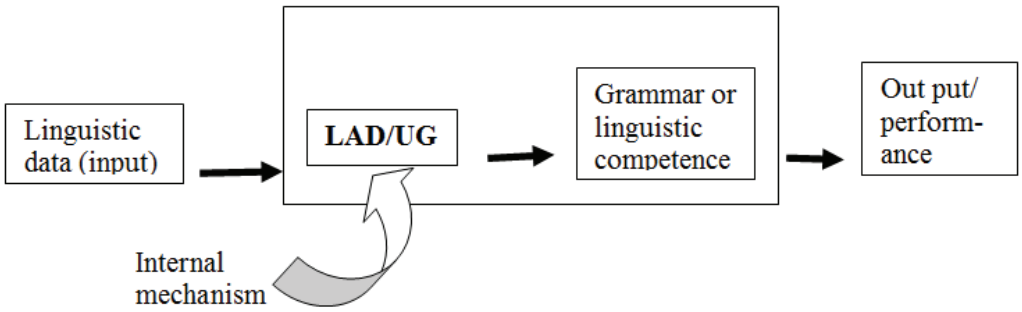

Figure 1 LAD in Language Acquisition

In the illustration above, we see a green box, showing that LAD/UG and grammar are not observable and the process is a mental process happening in the human mind. Therefore, this approach is also called rational approach. LAD and UG is about the same thing for Chomsky. In his 1965 publication, he refers it as LAD but in 1980-s onward, he calls it UG.

Triggered by research on natural order of English morpheme acquisition as a first language, Dulay and Burt (in Gass and Selinker, 1994: 80) did a research and came up with the conclusions stating that the process of SLA is very similar to that of first language acquisition (FLA) as they found that second language learners creatively construct the rules of second language in the same way as those in first language and the errors produced by SLA learners also resemble those produced by first language learners. Their theory is known as *creative construction hypothesis*. Based on this, many research were conducted and another theory came up to the surface, named "natural order hypothesis", which claims that second language learners acquire second language morpheme in the same order as the first language learners do (Gass and Selinker, 1994: 82).

Another major theory based on LAD concept is the one developed by Krashen. This theory consists of several hypotheses—together known as the monitor model—namely: acquisition-learning, natural order, input, monitor and affective filter hypotheses (Gass and Selinker, 1994: 144-150 and Cook, 1993: 51 - 55). According to acquisition-learning hypothesis, human beings have two ways in developing competence in second languages: acquisition and learning. Acquisition is the subconscious process of acquiring new language system. On the other hand, learning is a conscious process of obtaining knowledge of a new language. Monitor hypothesis states that learning will only result in knowledge to monitor or edit the language production by the learner. According to natural order hypothesis, all element of the new language is acquired in a predictable order called natural order. Second language learner will acquire the new language system if he/she is exposed to comprehensible input (*input hypothesis*). This comprehensible input should be a bit above the current state of the learner knowledge. This is defined as i + 1, where the current state of the knowledge is "i" and the next stage shall be i + 1.

The model proposed by Krashen in presented in Figure 2 below by Cook (1993: 54).

[1] Some experts classify LSD/UG theory into cognitive category is LAD/UG process the input. However, the writer thinks that this is best classified into "innatist" or "nativist" category as Chomsky seems to emphasize on the innate nature of this language-specific mental capacity.

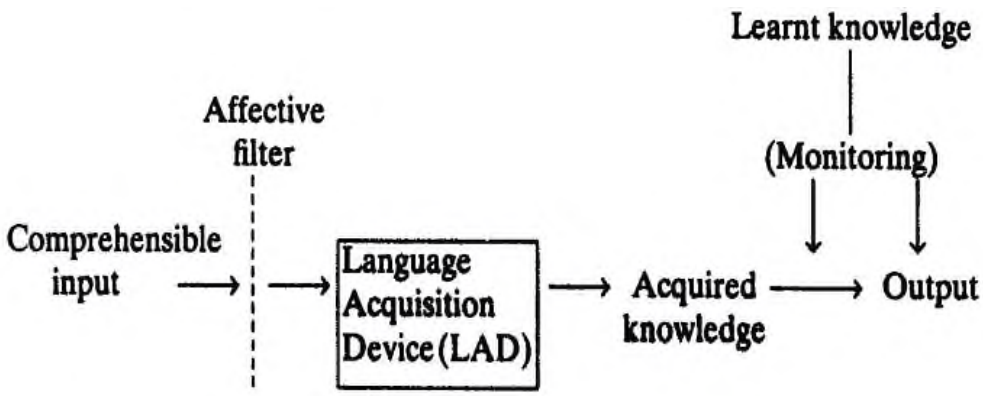

Figure 2. Second Language Acquisition Model by Krashen

From the picture, it is known that the process is quite simple. There is input, the input is process by LAD, than knowledge is acquired. Out can be generated from the knowledge acquired. While the knowledge obtained from formal learning is used to monitor the production of output.

In conclusion, this view sees that human being is indeed endowed with specific mind faculty to acquire language (LAD/UG). With LAD/UG, human being is very creative. He just needs input, and LAD/UG will process it to result in the system of the language being studies.

INTERACTIONIST THEORY

The Father of this theory is Vygotsky. He state that social interaction plays an important role in the learning process and proposed the zone of proximal development (ZPD), where learners construct the new language through socially mediated interaction (Brown in Shenon, 2005). Vygotsky's social-interactionist theory was proposed about 80 years ago, and still serves as a strong foundation for the interactionists' perspective today (Ariza and Hancock in Shanon 2005).

The basic concept in interactionism, or sometimes called social-interactionism, states that children have some innate knowledge of the structure of language, but also require meaningful interaction with others. Different from innatist view, interactionists thinks that environmental factors are more dominant than innate factors (Shanon, 2005).

Although it is different from innatist view, it recognizes the extreme differences found between behaviorists and innatists views. Its view stating that children have some innate knowledge of the structure of language represents its recognition of innatist view and the one stating that interaction with other person is important represent the importance of reinforcement, which is a behave-oristic view. Interactionist and innatists share the idea that comprehensible input is important. Further, Interactionist maintains that the comprehensible input is achieved by simplifying the input to the right level for the language learners and the input must be interactive. As a matter of fact, the modified input or negotiation of meaning concept is the major concept in interactionist theory in SLA.

In short, the claim about modified input is as follows. In talking to a language learner, a speaker needs to simplify or modify the interaction to suit the language mastery level of the language learners. Modified interaction will lead to comprehensible input; comprehensible input will entail language acquisition (Lightbown and Spada 1993 in Shanon, 2005). Then, we know the term foreigner talk (Gass and Selinker, 1994: 197) and teacher talk.

Negotiation of meaning refers to the instances in conversation when the participants interrupt the flow of the conversation so that both of them understand the conversation (Gass and Selinker, 1994: 208).

As interaction is always two-way communication, Swain proposes comprehensible output (Gass and Selinker, 1994: 212). For her, input and output is equally important. The importance of the output or interaction can be seen in the example below:

NNS: so I went to shopping yesterday
NS : oh you went shopping?
NNS:yes I went- I went shopping

From this instance, comprehensible input is as important as comprehensible output.

Comprehensible output hypothesis claims that output makes learners aware of language knowledge gaps, experiment with language forms and structures, and obtain feedback from others about language use (Ariza and Hancock, 2003 in Shanon, 2005).

Comprehensible output provides learners with a forum for several important language learning function: (Gass and Selinker, 1994: 213):

(1) testing hypothesis about the structure and meanings of the target language,
(2) receiving feedback for the verification of these hypotheses,
(3) developing automaticity in IL production, and
(4) forcing a shift from more lexical and semantic processing of the second language to a more syntactic mode.

In short, interactionists see that human being has a particular capacity to acquire language. However, this mind faculty does not help much if there is no helpful interaction. The mind cannot do anything useful for language acquition without interaction.

COGNITIVIST VIEW

Cognitive model claims that learning language is the same with learning any other knowledge. Language is acquired by means of a common mental faculty, not a specific one. There are two main models in this category: information processing models and connectionism model.

There are two information processing models: McLaughlin's information processing model and Anderson's ACT* model. According to McLaughlin, human being is an information processor limited by both how much attention he/she gives to a task and by how well he/she can process the information. This psychologist differentiates 'automatic' from 'controlled' processes (in Cook, 1994: 253-254). Controlled processes often involve new information, are under the control of attention. On the other hand, automatic processes are quick and need little attention; they have been built up by practice and therefore need little attention or capacity to perform. As learning a new language is learning new information, learners logically go through controlled process first.

The most outstanding research in SLA in this line shows that attention has an effect, while time pressure does not; extra time helps both those who know the rules of grammars explicitly and those who do not. In other word, control (attention) is not related to whether the subjects know the rule explicitly or not (Hulstijn and Hulstijn in Cook, 1994: 254-256).

The second model in cognitive school is Anderson's SCT* model (Cook, 1994: 246-249). ACT stands for Adaptive Control of Thought. And the symbol (*) represents the ultimate version in the development of the model. Like Information Processing model, this also emphasizes the automatization process. ACT* distinguishes three form of memory: working memory, procedural memory, and declarative memory. Working memory is used for the performance of the production rule based on declarative memory and procedural memory. Declarative memory is used to store actual information and procedural memory consists of processes to check the part of the rules against declarative memory. In other word, declarative memory stores the knowledge of "what" and procedural memory stores the knowledge of "how".

How do these memory work? According to Anderson, a production system consists of production rules, such as: *IF the goal is to generate a plural Noun and the Noun ends in a hard consonant, THEN generate the* Noun *+ s.* The working memory is used to produce "Noun + s". Declarative memory stores the concept of plural and hard consonants. The procedural memory relates the concept of plural and hard consonants.

In learning a new production rules, including language rule, someone starts from obtaining declarative knowledge, then he proceduralizes it (procedural knowledge) and finally generalizes the rule. When this is achieved, the production can be done quickly and automatically.

Anderson illustrate his idea using classroom L2 learning (Cook, 1994: 249), where the learners get the declarative knowledge from the teacher. This model is supported by O'Malley and Chamot's research done in 1990 (in Cook, 1994: 249), stating that learning strategies are a set of productions that are compiled and fine-tuned until they become procedural knowledge and L2 learners follows Anderson's three stages.

Another cognitive theory of SLA is Connectionism. Conecctianism sees the human mind as a single highly complex network through which spread (Cook, 1994: 265). Unlike ACT, connectionism denies the need for separating declarative and procedural memory and there is no production system convention. Connectionism views language learning as recognition of patterns in the input by learners. (ppt). Learning is based on construction of association pattern in the brain and creation of link or connection among them. The link become stronger as the association keeps recurring (happens in high frequency).

When applied to SLA, learners build up language knowledge through exposure to thousands of linguistic input. The pattern of association among linguistic items become stronger each time the learner is exposed to more linguistic input. For example, a learner hears "I read" and "She reads" so often that he develop a pattern of association between the addition of "s" with "I" and "she".

However, there were no many research studies yet on this concept. Rumelhart and McLelland (1986 in Cook, 1994: 265) support this model with their research on the simulation of past tense learning. At

least up to 1993, no other research on this concept has been done.

In conclusion, cognitive theories believe that human being employs their mind mind to learn all things, including language, in the same manner; speech-production is a matter of information processing process. Then, learning a new language is establishing patterns of connection among linguistic input received by the learners. Learning itself can progress from a declarative knowledge to procedural knowledge. When a learner produces speech, it may be controlled or not controlled, depending on the connections or type of memory involved. Finally, this view is about how human being obtain, store, and retrieve knowledge, be it language knowledge or other knowledge.

DISCUSSION

Summary

In shorts, the above discussion can be summarized into several points. Behaviorists sees human language is acquired and maintained via stimulus-response-reinforcement sequence. This can happen in informal and formal situation. As a matter of fact, behaviorist view has influenced language teaching field with the birth of Audio-Lingual Method and the use of language laboratory.

Innatist theory first of all states that conditioning model is not appropriate to explain how human language is acquired based on the fact that children can produce novel sentences in new combination that has never been heard. This theory centers on the existence of LAD/UG. Many research support the existence of natural order of morpheme acquisition.

Interactinists point out that LAD/UG or innate capacity alone does not help much. Children should interact in order to acquire the language he/she is learning. Here, reinforcement is needed. Input should be manipulated to suit the learners' current level of language mastery.

Finally cognitivist view sees that in acquiring a language, a human being need a mental capacity. However, this is not the one specific for language acquisition. This is the same mental capacity to learn mathematic and how to cook. As a matter of fact, in the discussion, the dominant topic is on how knowledge is perceived, stored and retrieved.

Putting the pieces together

Second language acquisition is a complex internal process. There no guarantee that what it is known now is the complete picture. In other words, there may be some other aspects that have not been revealed. However, based on the current understanding of SLA, the following statements are made.

1. In order to acquire a language, human being must have a mental capacity, which can be the same or different from the one used to acquire other skills or knowledge.
2. Human being use language to interact with children and adult alike, with purpose of social interaction or instructional.
4. Interaction involves stimulus and response; where certain responses can be seen as positive or negative reinforcements.
5. Interaction can be held in formal as well as informal setting.
6. There are many aspects of language to acquire, namely: (a) syntax, morpheme, (b) vocabulary, and (c) pragmatic and sociolinguistic competence.

Now lets put the pieces together.

All theoretical views will not argue the claim that human being needs mental capacity to acquire language. Behaviorist emphasizes the stimulus-response-reinforcement chain, while innatist and interactionist views believe it is a specific kind of mental capacity. Meanwhile, cognitivist state that it is the same kind of mental capacity. In this position, all are correct. The specific mental capacity is the "development" of certain aspect of the main capacity. The analogy is the capacity of our hand. We believe that some people is keen at drawing, some others are skillful in playing basketball. They all use the capacity of hand. The person can show shooting tricks that are never taught to them. This is also something creative like children speaking the novel sentences.

Innatists never talk about reinforcement, but as interaction always involves responses that can be reinforcement, we can say that reinforcement plays roles especially in maintaining the language.

When the learning of the new language takes place in informal setting, Krashen hyotheses are acceptable. When the learning is in formal setting, behaviorist view and cognitivist view can be used explain the process more adequately.

In summary, all the theories are complementary and useful for us to understand the nature of second language acquisition.

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