

# A Quarter Century after the Monitor Model

YAMAMOTO, Akio

This paper endeavors to overview Krashen's Monitor Model theory and its critics. The Monitor Model, which consists of five hypotheses, has been one of the most influential and controversial theories in second language acquisition. Most of the critics came from the definitions of terminology in the hypotheses. In the late 1970s and the 1980s, when the theory had reached the height of its popularity and declined, syntax was thought to be the core of language acquisition and vocabulary, peripheral. In the 1990s, vocabulary research became conspicuous in place of grammar. Krashen made a breathtaking 90-degree turn over to the reading Hypothesis, Free Voluntary Reading for the defense of the Monitor Model. Research on vocabulary in context including the affordance theory will have an important role in uncovering the mystery of second language acquisition.

## Key Words:

the Monitor Model    vocabulary    written language    Free Voluntary Reading    affordance

## 1. Introduction

"It's all Greek to me" is a saying which means "I cannot understand it." Greek has been a typical example of foreign languages which have troubled numerous people since the Roman era. Unfortunately foreign language or second language seems difficult to master. Billions of people in the world today have had encounters with a second language (L2) and struggled with it.

Second language acquisition (SLA) research has also been difficult to pursue. Bialystok and Hakuta (1994:4) states that understanding how we acquire a second language is much more challenging than understanding the learning of a first language (L1). If observing L1 acquisition is like studying the forces of gravity at work by dropping feathers in a vacuum, perhaps taking a look at SLA is more like watching a feather from an airplane, buffeted by winds, weighted by moisture, and slowed by air pressure (ibid 1994:4). Lev Semenovich Vygotsky, a famous psychologist in the Soviet Union in the early 20<sup>th</sup> century, claims that the acquisition of a foreign language differs from the acquisition of the native one precisely because it uses the semantics of the native language as its foundation (159-160).

Researchers have to consider SLA from many different viewpoints: What is the target language of the learner? What is the L1 of the learner? How old is the learner? How much ability

does the learner have? At which stage of proficiency is the learner? Where does the learner learn L2? How does the learner learn it? Why does the learner learn it? We need to take the L1, the L2, the learner's age, language ability, proficiency, the place of learning, the method of learning, the learner's motivation into account.

Stephen D. Krashen, who studied neuropsychology at UCLA, set up the Monitor Model in 1976 after investigating the research of formal and informal linguistic environments, natural sequence of morpheme acquisition in the first and L2, individual learners' differences.

In this paper we will overview theories of SLA historically by observing pro and con on Krashen's theory as a principal axis and will find what we have learned and what we have failed to learn from the Monitor Model.

## 2. First language acquisition

We will have a short view of L1 acquisition research because L1 acquisition research has contributed to the development of SLA theories.

There are two distinctive approaches to L1 acquisition. One is the behavioristic approach and the other, the nativist approach. The former focuses on the immediate perceptible aspects of linguistic behavior—the publicly observable responses—and the relationships or associations between those responses and events in the world surrounding them (Brown, 1987:17). B. F. Skinner is the most influential researcher in this approach. In the latter approach, language acquisition is innately determined and we are born with a built-in device of some kind that predisposes us to language acquisition—to a systematic perception of language around us, resulting in the construction of an internalized system of language (ibid, 1987:19). Norm Chomsky, who claimed the existence of an innate ability of language, was a strong opponent of Skinner. The ability is called Language Acquisition Device (LAD). McNeill (1966, cited in Brown 1987:20) described LAD as consisting of four innate linguistic properties:

- (1) the ability to distinguish speech sounds from other sounds in the environment.
- (2) the ability to organize linguistic events into various classes which can later be refined.
- (3) knowledge that only a certain linguistic system is possible and that other kinds are not.
- (4) the ability to engage in constant evaluation of the developing linguistic system so as to construct the simplest possible system out of the linguistic data that are encountered.

Brown (1987) argues that though LAD is an unobserved invention that only superficially accounts for language acquisition, McNeill's proposal led to some very rich possibilities for further research in such ultimate areas as the abstract system of language, linguistic universals, theories of meaning, and the nature of human knowledge.

## 2.1. Debate between nature and nurture

Skinner had attempted to explain linguistic behavior in terms of the same stimulus-response chains and laws of reinforcement and had, for the most part, ignored the intricate structural properties of language that fascinated Chomsky; creativity of language (Gardner, 1985).

Mitchell & Myles (1998) compare Skinner's behavioristic concept with Chomsky's generative grammar as follows:

Skinner and Chomsky sparked the best-known controversy on the L1 learning process. Skinner believed that language could be learned like imitating others' behaviors in the surrounding environment. Chomsky believes that human language is too complex to be learned from the performance data actually available to the child: we must therefore have some innate predisposition to expect natural languages to be organized in particular ways and not others.

(Mitchell & Myles 1998)

As Mitchell & Myles points out, child language researchers now generally accept the basic notion of an innate predisposition to language although they also believe language development results from an interaction between innate and environmental factors. As for L2 learning, teachers and researchers tried to set the same 'natural' circumstances as L1 in the 1970s, but the last two decades of the 20th century have been devoted to the examination of 'environmental' factors. We will discuss the influence of environmental factors later.

## 3. Before the Monitor Model

### 3.1. Poor rationale behind grammar translation method

In the Western world, Latin or Greek had been learnt as a "foreign" language at school. Latin, thought to promote intellectuality through "mental gymnastics," was taught by the Classical Method: focus on grammatical rules, memorization of vocabulary and of various declensions and conjugations, translation of texts, doing written exercises and the Classical Method came to be known as the Grammar Translation Method (Brown 1987:74).

It has been widely used because of its convenience, efficiency, and effectiveness. Prator and Celce Murcia (1979:3 cited in Brown 1987:74) list the major characteristics of Grammar Translation:

- (1) Classes are taught in the mother tongue, with little active use of the target language.
- (2) Much vocabulary is taught in the form of lists of isolated words
- (3) Long elaborate explanations of the intricacies of grammar are given.
- (4) Grammar provides the rules for putting words together, and instruction often focuses on the form and inflection of words.
- (5) Reading of difficult classical texts is begun early.
- (6) Little attention is paid to the content of texts, which are treated as exercises in grammatical analysis.

- (7) Often the only drills are exercises in translating disconnected sentences from the target language into the mother tongue.
- (8) Little or no attention is given to pronunciation.

However, there is little rationale behind the effectiveness of the Grammar Translation Method for learning a foreign language. What is clear is that the Grammar Translation Method is merely “mental gymnastics,” and is not effective for SLA according to the above list.

### 3.2. The role of L1: Contrastive Analysis

Many teachers and researchers of SLA predicted that the L1 would disturb the acquisition of L2 in the 1950s to 1960s. They believed that all the errors the SLA students made were due to their L1. They also believed that the more different the L2 and the mother tongue of the learners are, the more difficult for them to master the target language.

These predictions had been the research question of Contrastive Analysis (CA), which was rooted in the practical need to teach L2 in the United States and on the other hand was an area of considerable theoretical interest for general linguistics in Europe (Ellis, 1985: 23).

### 3.3. The Birth of the Monitor Model: morpheme studies and others

In the early 1970s, three major types of criticism against CA were raised. The ‘crisis’ in CA was the result of empirical, theoretical, and practical considerations (Ellis, 1985: 27-33). In particular the empirical data from a number of studies on Error Analysis affected the decline of CA. The data showed that errors made by SLA learners were not always from their mother tongue. Rather, their errors were similar to the ones found in L1 acquisition. Roger brown (1973) and other researchers in the 1970s found the order of acquisition in L1. The set of those studies is called ‘morpheme study.’ The simplified form of the fixed order is listed below (Mitchell & Myles 1998: 27):

Order	Morphemes	Examples
1	Present progressive	<i>boy singing</i>
2	Prepositions	<i>dolly in car</i>
3	Plural	<i>sweeties</i>
4	Past Irregular	<i>broke</i>
5	Possessive	<i>baby's biscuit</i>
6	Articles	<i>a car</i>
7	Past regular	<i>wanted</i>
8	3 <sup>rd</sup> person singular	<i>eats</i>
9	Auxiliary <i>be</i>	<i>he is running</i>

Figure 3.1. Order of acquisition in L1

This order of acquiring morphemes in L1 was highly influential for SLA research. Dulay and Burt were the pioneers of morpheme studies in L2 and they claimed that the order of acquisition was quite similar to the one in L1, which Roger Brown argued. They conclude that children from different language backgrounds acquire grammatical morphemes in a similar order (Dulay et al. 1982: 34). Figure 3.2. shows that the acquisition hierarchy.

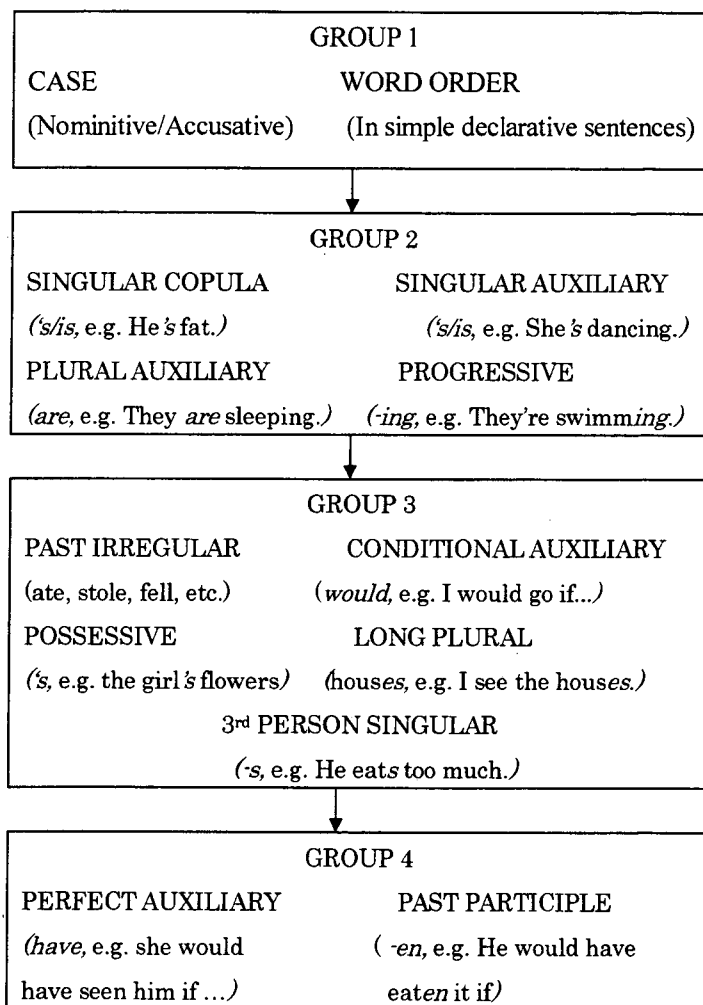


Figure 3.2. Acquisition hierarchy for 13 English Grammatical morphemes

#### 4. The Monitor Model

No other person has been referred to in research papers more times than S. Krashen after he launched the controversial theory called the Monitor Model, which was proposed about a quarter century ago. Through a vast amount of heated debate against the Monitor model, the hypotheses have become tiring, but his strong message and influence has not been worn out.

#### 4.1. Five hypotheses of the Monitor Model

Krashen has theorized his idea of the Monitor Model since 1977. In the late 1970s and the early 1980s he completed the theory which is based on a set of five basic hypotheses below:

- (1) the Acquisition-Learning Hypothesis
- (2) the Monitor Hypothesis
- (3) the Natural Order Hypothesis
- (4) the Input Hypothesis
- (5) the Affective Filter hypothesis

##### 4.1.1. The Acquisition-Learning Hypothesis

Krashen defined language acquisition as a totally different concept from learning. In his definition, 'acquisition' is a subconscious process identical in all important ways to the process children utilize in acquiring their L1, while 'learning' is a conscious process that results in 'knowing about' language (Krashen 1985:1). In short, 'acquisition' takes place in meaningful communication of natural settings, and 'learning' is produced in classroom where the learner is learning about linguistic rules of the target language. If you learn subjunctive form in class and can answer the grammatical questions but cannot use it in a conversation outside classroom, you 'learn' the form but do not 'acquire' it.

The crucial point Krashen has argued is not the contrast between outside the classroom and inside the classroom, but the difference between meaningful communication without conscious processes and conscious attention to the form of language rather than meaning. He seems not to be able to abide the typical mechanical grammar drills with no meanings, which the Oral Approach recommends. He believes more in cognitive science than behaviorism.

Two problems have been raised against this hypothesis. One is the definition of consciousness. Krashen has been criticized for his vague definition of what constitutes conscious versus subconscious processes, as they are very difficult to test in practice (Mitchell & Myles 1998).

McLaughlin (1990) criticizes Krashen's theory by saying that the terms 'conscious' and 'Unconscious' Krashen uses are prescientific vocabulary. McLaughlin has been criticizing the Monitor Model since Krashen proposed the theory in the late 1970s. Instead he proposed another vague terms 'conscious' and 'subconscious.'

Most of his critique of the Monitor Model is about the methodological problems in Krashen's research. However, researchers in other fields such as neuroscience might be able to define and identify what are conscious and subconscious processes in language use in certain ways.

The other controversy of the Acquisition-Learning Hypothesis was due to its strict definitions of acquisition and learning. Krashen claims that what learners 'learn' cannot turn into 'acquisition.' Other researchers do not accept the idea because the definitions are too strict and they do not believe that learning could not become acquisition in any way. Here we have another

definition problem and go back to the starting point; what is learning and what is acquisition?

#### **4.1.2. The Monitor Hypothesis**

This hypothesis is concerned about language in production and the role of 'learning,' or conscious knowledge. According to Krashen, 'learning' serves only as an editor which is called Monitor. In order to use the Monitor, we need to focus on form, have the knowledge of vocabulary and the rules, and have time to think about and use the knowledge consciously and effectively.

The problem of the Monitor Hypothesis lies in his vague definition of consciousness and unconsciousness and lack of scientific evidence again. Gregg shows some examples against the Monitor Hypothesis (1984:82).

#### **4.1.3. The Natural Order Hypothesis**

This hypothesis states that we acquire the rules of language in a predictable order, some rules tending to come early and others late. The order does not appear to be determined solely by formal simplicity and there is evidence that it is independent of the order in which rules are taught in language classes (Krashen 1985:1).

The number of research papers which support the hypothesis is much more than the ones which do not. Makino (1980) examined the learning of morphemes of junior high school students in Japan and the results showed that the students learned the morphemes irrespective of the seven different textbooks they used but almost in accordance with the natural order.

The acquisition of the morphemes was examined by accuracy production tests, which has been criticized as an inappropriate way of determining the natural sequence.

#### **4.1.4. The Input Hypothesis**

This hypothesis claims that humans acquire language in only one way – by understanding messages, or by receiving 'comprehensible input' (Krashen 1985:2). Krashen shows the famous formula 'i+1' in this hypothesis. The controversial point is the vague definitions of the terminology. What is 'i' and what is '+1'? SLA researchers have wondered if they could be examined. However, it is worth trying to prove the hypothesis because the hypothesis has given teachers a great message on learning. It is quite understandable for learners to acquire language from easy to difficult, step by step like eating and walking. No babies eat hard bread and meat from the beginning. They never fail to follow the steps: They drink 50 ml of milk, have a kind of soup, and a small piece of soft bread without jam. Their moms start to serve the babies normal dishes when they are 1 or 2 years old. Before becoming 1 year old, they are served milk or meals which increase gradually over a thousand days and nights. There are, I believe, more than a hundred different steps: each one is a little more difficult to eat than the previous one. As for walking, babies kick their moms belly tens of millions of times first in order to train their foot muscles before birth. When they are out, they kick the air. They hug the floor, crawl on the floor,

crawl on their hands and knees, pull themselves up,

The Input Hypothesis provides other researchers with hints of new hypotheses such as Interaction Hypothesis (Long, 1981), Output Hypothesis (Swain, 1985), comprehended input (Gass, 1988), and i-1 (Day, 1998).

#### **4.1.5. The Affective Filter Hypothesis**

The 'affective filter' is a mental block that prevents acquirers from fully utilizing the comprehensible input they receive for language acquisition. When it is 'up,' the acquirer may understand what he hears or reads, but the input will not reach the LAD (Krashen 1985:3).

Mitchell & Florence (1998) argues that it is easy to accept that affective variables play an important role in SLA, but the hypothesis remains vague and far from being an established theory. They draw an analogy between self-conscious adolescents who suffer from low self-esteem and have a 'high' filter and confident and extrovert adults. They wonder if the former can all be bad language learners while the latter can all be good language learners. However, I believe that Krashen does not intend to compare such learner-types but to compare the state of mind of learners.

#### **4.2. Why has it been criticized?**

Gregg (1984) justified the absence of an overall theory of SLA about two decades ago. He claimed that SLA might simply be too difficult and too complex to be dealt with in a single theory. He also believed that the cleft between SLA research and generative linguistic theory was growing. He did not admit Krashen's theory would work well because it might be too simple to explain about an SLA process.

The vague terminology of the five hypotheses was attacked. Acquisition of syntax has been a major role of SLA research. UG has been considered core, and vocabulary, peripheral.

#### **4.3. Expanding the Model**

There are several hypotheses which were influenced by the Input Hypothesis.

Gass (1988, cited in Ellis 1994:349) shows a theoretical framework of L2 in a diagram (Figure 4.1.). In the diagram, There are four stages in acquiring L2;

- (1) noticed input
- (2) comprehended input
- (3) intake
- (4) integration



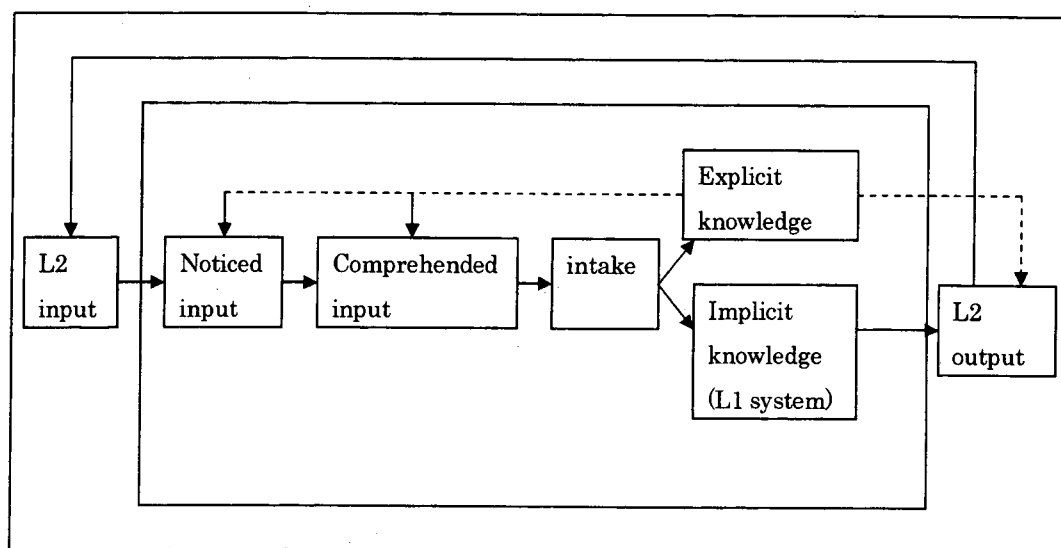


Figure 4.1. a diagram by Gass (1988)

Gass (1988) defines intake as a process which mediates between target language input and the learner's internalized set of rules.

Modification and restructuring of interaction that occurs when learners and their interlocutors anticipate, perceive, or experience difficulties in message comprehensibility (Pica, 1994, cited in Swain 2000. p.98).

Comprehensible output hypothesis (Swain 1985, cited in Mitchell & Myles 1998) is an example. One role for output in L2 learning is that it may promote 'noticing.' (Swain, 2000)

McLaughlin's information processing model is called the most detailed attempt to apply an information processing model to L2 acquisition. The model has four types of knowledge which are controlled by factors or are automatic, or explicit or implicit. (Ellis 1994: 389-391)

As for automaticity, Diane McGuinness (1997) argues the necessity of creating efficient and automatic subroutines in the sensorimotor skills that should not require overt attention, such as encoding and decoding for a child to be a good reader, a good speller, and a creative writer.

## 5. Vocabulary research

Vocabulary research emerged in the late 1980s when the Monitor Model started to fall down. Vocabulary had been considered to be peripheral in language learning and teachers wanted to teach grammar mainly though learners know that vocabulary should be the most important thing to master the target language.

Vygotsky claimed that meaning, the central component of thought, and linguistic form are united in the word (Lantolf 2000). He distinguishes between the stable, or conventional, meaning of a word and its *sense*, or personal, and contextualized, meaning that emerges from particular ways people deploy words in meditating their mental activity (ibid. 2000).

Many papers and books on vocabulary research on SLA deal with vocabulary size, instructions, and learning techniques of vocabulary. Word inference is more related to reading than vocabulary. It is still unclear how we acquire vocabulary. We have had a lack of learning theories.

## 6. The Reading Hypothesis

Krashen started to focus on vocabulary and reading in the late 1980s in order to support his Monitor Model from a different viewpoint (Krashen 1989). He launched another controversial hypothesis called “the Reading Hypothesis (Figure 6.1).” The Hypothesis claims that more reading will result in better reading comprehension, writing style, vocabulary, spelling, and grammatical development (Krashen 1993:12-13).

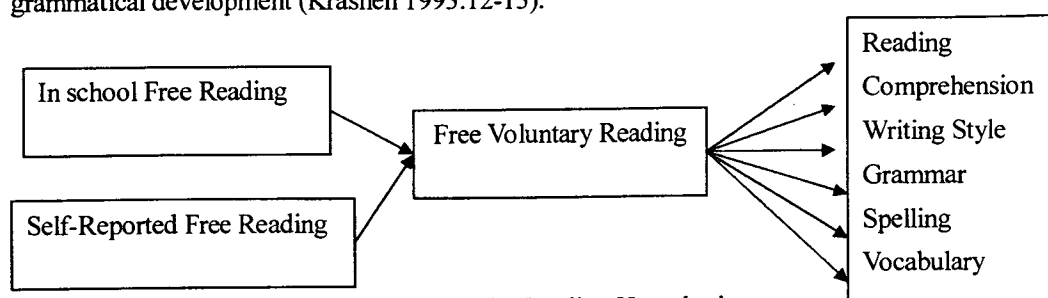


Figure 6.1. The Reading Hypothesis

In the 1980s, ‘context’ means a natural setting or a classroom in the SLA research (Ellis, 1987). In the 1990s, researchers began to investigate the surrounding environment. Their research is called Sociocultural linguistics, which covers Gibson’s affordance theory.

## 7. Affordance

Affordance is a term coined by James J. Gibson in the late 1970s. It means something that refers to both the environment and the animal in a way that no existing term does. It implies the complementarity of the animal and the environment (Gibson 1979: 127). The affordances of the environment are what it offers the animal, what it provides or furnishes, either for good or ill (ibid. 1979: 127).

Van Lier is considered to be the first researcher who introduced the concept of affordance to SLA research in the context of sociocultural linguistics.

What becomes an affordance depends on what the organism does, what it wants, and what is useful for it. In a forest a leaf can offer very different affordances to different organisms. ... in all cases, the leaf is the same. ... Parallels to language can easily be drawn. If the language learner is active and engaged, she will perceive linguistic affordances and use them for linguistic action.

(van Lier, 2000. p.252)

If we apply the above analogy of forest = environment to reading, the whole story can be

'forest' and readers can be 'animals living in the forest.' Words can be 'leaves of trees,' 'trunks,' and 'fallen trees.' The words of the story always exist, but the meanings of them vary from reader to reader.

In terms of learning, language emerges out of semiotic activity. The context is not just there to provide input (linguistic models or objects) to a passive recipient. The environment provides a 'semiotic budget' (analogous to the meaning making activities together with others, who may be more, equally, or less competent in linguistic terms. The semiotic budget does not refer to the amount of 'input' available, nor the amount of input that is enhanced for comprehension, but to the opportunities for meaningful action that the situation affords.

Knowledge of language for a human is like knowledge of the jungle for an animal. The animal does not 'have' the jungle; it knows how to use the jungle and how to live in it. Perhaps we can say by analogy that we do not 'have' or 'possess' language, but that we learn to use it and to 'live in it.'

(van Lier, 2000. 252-253)

Reading is a very complex activity. We have to control many factors surrounding the learners when we want to explain the mechanism of reading by input-output theories. The more you control the factors around the learners, the more like a laboratory experiment the research becomes.

Affordance theory, which argues that information exists in the environment, can take the place of input-output theories in order to explain about reading in the learners' natural environment. This is a paradigm shift of cognitive theory and reading research.

Edward Reed developed the way to use affordance given from the environment. He claimed that we humans would do things before we could do them. A child's learning of actions often starts before he or she has any real autonomous ability to realize the affordances toward which the activity is directed (Reed 1996:149). It would be interesting to connect such a child's adjusting of actions to Krashen's  $i+1$  theory.

## 8. Conclusion

This brief overview of the Monitor Model shows that the criticisms against the Monitor Model are mostly due to its vague definitions of terminology and difficulty in examining the hypotheses. Moreover, other researchers as well as Krashen have been concerned only about syntax although language acquisition largely depends on vocabulary. All the hypotheses except the Natural Order Hypothesis can be reconsidered from the perspectives of vocabulary acquisition naturally, which Krashen has tried to prove by advocating extensive reading. Free Voluntary Reading is a practical use of Reading Hypothesis.

Unfortunately, few theories on vocabulary acquisition have come out while many ways of instruction and learning techniques are introduced though SLA research has been focusing on

vocabulary. We need to set up more convincing theories on vocabulary acquisition in SLA.

Memory study on the L1 acquisition has contributed to the vocabulary acquisition in SLA. More models should be examined in SLA research. However, the metaphor of a language learner as an information processor that receives input and produces output can be replaced by the metaphor of a language learner as an apprentice in a community of practice. Language is not seen as input but as a tool for getting other things done. The focus of research is not on how symbolic systems are acquired but on how members of a language learning community organize language practices (Kramsch, 2002).

Vocabulary is connected to its context and culture. As for culture, sociocultural linguistics will also contribute to the clarification of vocabulary acquisition theory. Vygotsky's theory has taken the role of explaining the mechanism of SLA. Gibson's ecological approach which Reed supports will provide a breath of fresh air to SLA research.

## References

- Bialystok (1978) A theoretical model of second language learning. *Language Learning* 28:69-84  
 cited in Ellis, R. (1994) *The Study of Second Language Acquisition*. Oxford. 356-357
- Bialystok, Ellen & Hakuta, Kenji (1994) *In Other Words*. New York: Basic Books.
- Brown, H.Douglas (1987) *Principles of LANGUAGE LEARNING AND TEACHING* 2<sup>nd</sup> edition  
 New Jersey: Prentice-Hall.
- Brown, Roger. (1973) *a First Language: The Early Stages*. Cambridge, MA: Harvard University Press, cited in Mitchell, Rosamond and Myles, Florence (1998) *Second Language Learning Theories*. London: Arnold.
- Day, Richard R. and Bamford, Julian. (1998) *Extensive Reading in the Second Language Classroom*. Cambridge: Cambridge University Press. 16
- Dulay, C. Heidi., Burt, Marina Kei. and Krashen, Stephen. (1982) *Language Two*. New York: Oxford University Press.
- Ellis, R. (1985) *Understanding Second Language Acquisition*. Oxford: Oxford University Press.
- . (1994) *The Study of Second Language Acquisition*. Oxford: Oxford University Press. 350-351.
- Gardner, Howard (1985) *The Mind's New Science*. Basic books.
- Gass, S. (1988) Integrating research areas: A framework for second language studies. *Applied Linguistics* 9: 198-217, cited in Ellis, R. (1994) *The Study of Second Language Acquisition*. Oxford. 349
- Gibson, James J. (1979) *The Ecological Approach to Visual Perception*. Boston: Houghton Mifflin Company. 127
- Gregg, Kevin R. (1984) Krashen's Monitor and Occam's Razor. *Applied Linguistics*, Vol. 5, No.2
- Kramsch, Claire. (2002) *Language Acquisition and Language Socialization-Ecological*

- Perspective. (eds) By Kramsch, Claire. London: Continuum. 2
- McGuinness, Diane. (1997) *Why Our Children Can't Read And What We Can Do About It* New York: Touchstone.
- McNeill, David (1966) *Developmental Psycholinguistics*. In Smith and Miller. Cited in Brown, H.Douglas (1987) *Principles of Language Learning and Teaching* 2<sup>nd</sup> edition New Jersey: Prentice-Hall.
- Krashen, S. D. (1976) *The Input Hypothesis: Issues and implications*. Oxford: Pergamon Press.
- . (1977) Some Issues Relating to the Monitor Model. in H.D. Brown, C. Yorio, and R. Crymes (Eds.) *On TESOL '77: Teaching and Learning English as a Second Language: Trends in Research and Practice*. Washington: TESOL. 144-158.
- . (1985) *The Input Hypothesis: Issues and implications*. Oxford: Pergamon Press.
- . (1989) We acquire vocabulary and spelling by reading: Additional evidence for the Input Hypothesis. *Modern Language Journal*. 73:440-464.
- . (1993) *The Power of Reading*. Colorado: Libraries Unlimited.
- Long, M.H. 1981 "Input, Interaction and Second Language Acquisition." In Winitz (ed): *Native Language and Foreign Language Acquisition*, New York, New York Academy of Sciences, 259-278. cited in Mitchell, Rosamond and Myles, Florence (1998) *Second Language Learning Theories*. London: Arnord. 128
- McLaughlin, Barry. (1990) "Conscious" versus "Unconscious" Learning. *TESOL QUARTERY*. Vol.24, No.4, Winter. P.617.
- Mitchell, Rosamond and Myles, Florence (1998) *Second Language Learning Theories*. London: Arnord.
- Reed, Edward S. (1996) *Encountering the World-Toward an Ecological Psychology*. New York: Oxford University Press. 149.
- Selinker, L (1972) Interlanguage. *International Review of Applied Linguistics* 10:209-31. cited in Swain, Merrill. (1985) Communicative Competence: some roles of comprehensible input and comprehensible output in its development. In Gass and Madden (eds): *Input in Second Language Acquisition*, Rowley, Mass., Newbury House, 235-253. cited in Mitchell, Rosamond and Myles, Florence (1998) *Second Language Learning Theories*. London: Arnord.
- . (2000) The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. edited by Lantolf, James P. *Sociocultural Theory and Second Language Learning*. London: Oxford University Press.
- Van Lier, Leo. (2000) From input to affordance: Social-interactive learning from an ecological perspective. edited by Lantolf, James P. *Sociocultural Theory and Second Language Learning*. Oxford: Oxford University Press.
- Vygotsky, Lev. (1986) *Thought and Language*. MIT Press; Revised Edition.