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Fossilization in Japanese adult advanced English learners and linked instruction as intervention

Misuzu Shimabukuro

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FOSSILIZATION IN JAPANESE ADULT ADVANCED ENGLISH LEARNERS AND LINKED INSTRUCTION AS INTERVENTION

A Project
Presented to the
Faculty of
California State University,
San Bernardino

In Partial Fulfillment
of the Requirements for the Degree
Master of Arts
in
Education:
Teaching English to Speakers of
Other Languages

by
Misuzu Shimabukuro
December 2007
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Date: Nov. 28, 2007
ABSTRACT

The phenomenon of cessation of learning before reaching a nativelike proficiency level (fossilization) has been frequently observed in adult second-language acquisition (SLA), and researchers have disputed whether adult second-language learners are doomed to fossilize. The objective of this project is to investigate the items and factors that may be prematurely stabilized in advanced adult second-language learners' interlanguage (IL), in order to propose effective instructional interventions. These interventions would provide a significant advantage for the adult learner.

In order to focus on the advanced adult second-language acquirer, the study set several criteria for choosing a subject to be studied: that is, participants needed to have achieved a high academic standing, their age of arrival (AOA) had to be older than 18 years, and their length of residence (LOR) needed to be longer than 7 years to insure that they had been exposed to an English-speaking social ambience for sufficient time.

The methodology involved two female Japanese advanced English learners who were chosen for the study. The participants were administered two kinds of interviews to
document fossilized items in their IL and the putative causal factors of fossilization. When the presence of fossilized items and putative factors were identified, instructional interventions toward defossilization were designed. The project proposes that through individualized instruction the learner can impede fossilization and enhance learning. At this point, the proposed interventions are based on a pilot study. Recommendation are included that explicitly link specific interventions to the theoretical framework. Further longitudinal research involving more subjects is needed to test the hypotheses that link the instructional interventions to the prevention of fossilization.
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CHAPTER ONE

INTRODUCTION

Background of the Project

Teaching adult English learners is one of the growing fields in education all over the world. People are learning English to meet the demands of business, life, or for many other reasons. The National Center for English as a Second Language (ESL) Literacy Education suggested the number of adult English language learner in the United States will continue to expand in the next 10 years (Van Duzer & Florez, 2003).

However, because of the rare success rate in adult second language (L2) learning, people have come to believe that very few, if any, adult second-language learners will acquire a nativelike proficiency level. It is widely accepted not only by learners, but also by instructors, that adult learners will cease developing (stabilize) at a certain level, and “fossilize” at that point. Many people think it is not important to acquire nativelike proficiency, because they believe that they will never completely acquire a target language anyway. The idea that fossilization is inevitable in adult second language
acquisition has been well accepted in the second-language acquisition field for a long time.

Definition of Terms

This project utilizes terms from linguistics and child-development theories. Each term will be defined and some will be discussed further.

Language-Acquisition Terms

**First Language (L1)/Native Language (NL).** A person’s mother tongue is called first language (L1), native language (NL), or primary language (Gass & Selinker, 2001).

**Second Language (L2)/Target Language (TL).** The general term second language is used to refer to any language learning after the L1 has been learned. The language to be acquired is also known as the target language (TL) (Gass & Selinker, 2001).

**Interlanguage (IL).** The language or language system created by a learner is composed of various elements, such as L1, L2, and elements that do not originate in L1 or TL. Interlanguage is also called the learner’s language (Gass & Selinker, 2001).

**Second Language Acquisition (SLA).** The learning of another language after the L1 has been learned is termed
second-language acquisition (SLA). This term has been used to differentiate SLA from foreign-language learning to refer to the learning of a language in the environment in which TL is spoken. However, in recent studies, the use of this term does not differentiate the learning situation (Gass & Selinker, 2001).

**Stabilization.** Often a learner reaches a plateau of language development. Supposedly, the learner's IL ceases to develop at a certain point no matter how hard he or she has tried. No matter how much input he or she has received there would be little or no change in his/her IL forms (Han, 2003).

**Fossilization.** The permanent cessation of language learning or the premature cessation of development is termed "fossilization." It is also known as "permanent stabilization." When fossilized, a learner's IL is stabilized permanently and does not change or is not influenced. It is considered that long-time stabilization leads to fossilization (Han, 2003).

**External Factors and Internal Factors.** Numerous factors pertain to stabilization or fossilization. Environmental influences, such as lack of instruction and poor quality of input, are considered external factors. On
the other hand, factors which pertain to the learner’s innate activity, such as inappropriate learning strategies, lack of talent, and socio-psychological barriers are considered internal factors (Han, 2003).

Instruction. In this study, instruction means explicit grammar instruction in the classroom provided from either the instructor or other classmates. Explicit instruction helps learners to become aware or notice their deviant TL forms (Schmidt, 1990, 1993, 1995).

Developmental Psychology Terms

Vygotskian Theory. The psychologist Vygotsky studied children’s cognitive development and found that social interaction with adults is the initiator of development. He stated that children need to be supported by adults to do a task at the first level of development. He named the necessary of warm and supporting interaction scaffolding.

According to Vygotsky, at the second stage of development, children internalize the skills that have been taught by adults and they are able to do the task without assistance. SLA researchers transfer this idea to L2 learners’ language development. Vygotskian researchers link language and social interaction, and assume that language development, like cognitive development, needs assistance
from interlocutors (native speakers or advanced learners). From the point of view of their theory, not only a novice learner, but also an advanced learner receives benefits and develops or destabilizes his or her IL (Vygotsky, 1978).

Zone of Proximal Development (ZPD). The concept of zone of proximal development in the SLA field refers to the distance between a learner’s actual developmental level (what a learner can do alone) and the potential developmental level (what a learner can possibly do with the assistance of more capable learners). The ZPD is the psychological developmental capability level in which learning takes place (Guerrero & Villamil, 2000; Ohta, 2001).

Purpose of the Project

As has been stated, the success rate of adult second-language acquisition has been believed to be very low. Selinker (1972) claimed a five percent success rate; moreover, Gregg (1996) claimed that adult learners never attain nativelike proficiency. Yet the existence of a few successful learners cannot be ignored. When there is more than one exception, the theory is unconfirmed. Therefore, the chief tenet of the fossilization theory—that
fossilization is a necessity in adult SLA--is a hypothesis that requires further discussion and research.

As the number of adult English learners increases rapidly, the demands of effective provision of instruction to them will expand. It is the researchers' obligation to study what factors may inhibit second-language acquisition and analyze how successful learners have acquired nativelike proficiency; and with this information, devise ways to deliver more effective instruction. This project has as an overarching goal to pilot the coordinated use of two questionnaires in a detailed study of learner's interlanguage.

Content of the Project

In this study, it is hypothesized that an adult L2 learner is able to reach nativelike proficiency if he or she receives appropriate instruction that meets his or her needs. This study first examines the interlanguage (IL) of two Japanese advanced English learners through 30 minutes of interview. Conversations are transcribed and are examined according to L2 language elements: progressive -ing, noun plural, copulas (is, am, are, was, and were), auxiliary be, modal auxiliaries, auxiliary do, auxiliary have, articles: a, an, and the, regular past, irregular
past, third person _s, and possessive _s. By analyzing the accuracy rate of each language element, one can determine which language elements tend to stabilize or fossilize in these learners' IL.

Secondly, learners are interviewed again using the Language Factors Questionnaire to examine what factors inhibit development of their IL. According to the result, plan is made for future instruction so that learners may destabilize or defossilize their IL, affording renewed acquisition.

Significance of the Project

The goal of this project is to help second-language instructors recognize and identify each learner's strengths and weaknesses: what he or she can and what cannot do. This way enables instructors to set more realistic goals for each learner. When instructors have research-based knowledge of the causal factors of a learner's fossilization, instructional plans can be modified accordingly. This will provide an opportunity for learners to prevent or reduce fossilization.
CHAPTER TWO
REVIEW OF THE LITERATURE

Fossilization in Adult Second-Language Acquisition

Can Adult Second-Language Learners Succeed?

An unresolved question in the field of second-language acquisition (SLA) for the past several decades is whether adult learners can reach a nativelike proficiency level in their target language (TL). As has been stated, “normal children inevitably achieve perfect mastery of the language: adult foreign language learners do not” (Bley-Vroman, 1988, p. 19).

Therefore, the concept that a young second-language (L2) learner has the potential to achieve greater proficiency than an adult L2 learner is commonly believed by many researchers. For instance, White and Genesee (1996) asserted “in general, younger learners are more likely to achieve near-native proficiency than older learners” (p. 258).

Concerning the above notion, DeKeyser (1994) posed a related question:

There is a question I have asked many audiences over the last few years, and nobody has come up
with a convincing example. . . : How many people do you know personally (not from hearsay) who, as adults, have learned a language really different from their native language (not just a different dialect or a very closely related language). . . who have attained a linguistic competence in that second language comparable to a native speaker? (p. 92)

As DeKeyser noted, compared to child L2 learners, there seem to be fewer examples of adult learners who acquire nativelike fluency in the TL. Bley-Vroman (1988) discussed ten fundamental characteristics of adult foreign language acquisition and indicated general failure in adult SLA, asserting “not only is success in adult foreign language learning not guaranteed; complete success is extremely rare, or perhaps even nonexistent” (p. 20); and “nevertheless, few adults, if any, are completely successful, and many fail miserably” (p. 25). These factors imply that the ultimate attainment in L2 of adult learners may differ from that of younger learners: “frequent lack of success in adults, uniform success in children” (Bley-Vroman, 1988, p. 20).
Success Claims for Adult Learners

As is mentioned above, adult SLA is considered to be characterized by general failure to achieve native-speaker proficiency. Other researchers also came to a general consensus on this matter; ultimate attainment of an adult learner is generally characterized by failure. For instance, Gregg (1996, p. 52) stated, “truly native-like competence in an L2 is never attained” in adult L2 acquisition. Scovel (1988) even believed that an adult learner is doomed to fail, saying that a person cannot change what nature has already determined.

There is also the five percent success rate proposed by Selinker (1972) to indicate general failure of adult L2 learner; this figure has been widely discussed. Selinker (1972, p. 33) asserted, “this absolute success in a second language affects, as we know from observation, a small percentage of learners--perhaps a mere 5 percent.” Responding to this notion, Gregg (1996) and Long (1990) claimed that even five percent is exaggerated.

However, counterevidence is also available. “More recent research has yielded a much higher range, from 15% to 60%” (Han, 2006, p. 1). It is true that there are few successful adult L2 learners, but not all learners fail to
acquire the TL; some of them successfully acquire nativelike proficiency. As Bley-Vroman (1988) asserted, there is a variation of acquisition level among adult L2 learners (inter-learner differential). In addition to this, some researchers argued that a learner who does not achieve nativelike competence is not a complete failure; even though a learner fails to attain nativelike proficiency, he/she has successfully acquired some linguistic domains (intra-learner differential).

A number of studies took a cross-learner view and studied the differences in achievement among adult L2 learners. For instance, investigating high-proficiency learners of English, White and Genesee (1996) found that some adult L2 learners were able to attain native competence. Perdue (1993) stated that adult learners "achieve very different degrees of language mastery. Few, it seems, achieve native-like proficiency. Some stop at a very elementary level. Others come between the two extremes" (p. 8). As it is cited above, there is a cross-learner variation in adult’s ultimate attainment; Bley-Vroman (1988) indicated that although this is typical in adult SLA, there is no such variation in child language development.
Many attempts had made to explain why some individuals acquire L2 more successfully than the others. For instance, Krashen (1982) proposed the Affective Filter Hypothesis and claimed that the affective filter is responsible for individual variation in second-language acquisition. According to him, inappropriate affect--such as high anxiety, lack of motivation, poor attitude, or low self-confidence--is to blame for learners' failure. If the filter is up, input is prevented from passing through, and there is no acquisition; if the filter is low, the input reaches the language-acquisition device and acquisition takes place. Other researchers have offered a variety of explanations for adults' cross-learner differential success and failure; such as variation in goals (Bley-Vroman, 1988), variation in learning strategies (Ellis, 1999), lack of talent (Ioup, Boustagui, Tigi, & Moselle, 1994), etc.

The issue of differential success and failure is not limited to a cross-learner view. Birdsong (1992) looked at intra-learner variation of an adult learner, and noted that complete mastery of some subsystems is possible; whereas with other subsystems, it is not. Other researchers, such as Lardiere (1988), also have studied intra-learner variation and found that some linguistic aspects are easier
to acquire than others. Many have attempted to account for factors of cross-learner (inter-learner) differential among adult L2 learners, as well as factors of intra-learner differential; however, it still remains an open question.

Summarizing the preceding review, adults' L2 ultimate attainment has several aspects as follows: "1) cross-learner general failure, 2) inter-learner differential success/failure, and 3) intra-learner differential success/failure" (Han, 2004, p. 7). As has been discussed by many researchers, adults generally stop learning before they master the TL; however, they are not complete failures because they have been able to achieve some domains successfully. Therefore, it is not plausible to conclude that adult's L2 ultimate attainment is always characterized by failure; rather, "success and failure co-exist" in adult L2 attainment (Han, 2004, p. 7).

Definition of Fossilization

A wide range of research also has shown another conspicuous characteristic of adult SLA, that is, fossilization: adult learners have a tendency to "get stuck" (fossilized) at certain points of acquisition, when their learning stabilizes for a while or ceases permanently.
Bley-Vroman (1988) illustrated this phenomenon clearly as follows:

It has long been noted that foreign language learners reach a certain stage of learning—a stage short of success—and that learners then permanently stabilize at this stage. Development ceases, and even serious conscious efforts to change are often fruitless. Brief changes are sometimes observed by they do not "take": the learner "backslides" to the stable state. (p. 22)

To name the phenomenon that L2 learners (especially adults) cease learning before they attain nativelike proficiency, the term "fossilization" was first introduced by Selinker (1972). Since then, this particular linguistic phenomenon has been discussed under a range of different terms; nevertheless, "fossilization" has been the most widely used.

After Selinker first coined the term fossilization, other researchers have attempted to define fossilization from their own point of view. In the following section, Selinker's definition of fossilization is first discussed, and followed by other researchers' definitions.
Before looking at the definition of fossilization, the term interlanguage (IL) needs to be delineated, because a definition of fossilization is inseparable from the idea of IL. (Selinker has described fossilization as cessation of interlanguage (IL) development.) Moreover, many other researchers have considered fossilization as a set of phenomena that occur during or at the end of interlanguage development. Then, what is interlanguage?

Interlanguage Theory

The term "interlanguage" (IL) was also introduced by Selinker to indicate a L2 learner's language system. Before Selinker gave a name to this concept, a number of terms had been used to describe it (see Gass & Selinker, 2001, p. 12): but since 1969, "interlanguage" has been the most commonly used term. Corder (1981) described interlanguage as follows:

These learners' versions of target languages were given the collective name 'interlanguage' by Selinker... The term 'interlanguage' suggests that the learner's language will show systematic features both of the target language and of other languages he may know, most obviously of his
mother tongue. In other words his system is a mixed or intermediate one. (pp. 66-67)

According to the above notion, interlanguage is the L2 learner's attempted production of TL; it is the language produced by a nonnative speaker of a language. It is sometimes called the learner's version of a TL or "learner language" (Færch, Haastrup, & Phillipson, 1984). Gass and Selinker (2001) explained that interlanguage is a language system that is created by a learner and "composed of numerous elements, not the least of which are elements from the native language (NL) and target language (TL). There also elements in the IL that do not have their origin in either the NL or the TL" (p. 12). This concept of interlanguage was illustrated in Figure 2.1, which is adapted from Corder (1981).

As is depicted in Figure 2.1, IL is the learner's language, which contains both TL and NL features and is distinguishable from the TL. In another words, IL contains both correct and incorrect language forms. Many researchers have agreed that the fossilization will occur in learner's IL: when IL stops developing, the learner's IL will fossilize. Based on this notion, researchers expanded the
definition of fossilization from their own viewpoints. Detailed definitions will follow in the next section.

Figure 2.1. Reciprocal Interposition of First Language and Second Language on Learner’s Language System: "Interlanguage"

Fossilization: Selinker’s Definition

Selinker’s early definition of fossilization is as follows:

Fossilization is a mechanism which is assumed also to exist in the latent psychological structure. Fossilizable linguistic phenomena are
linguistic items, rules, and subsystems which speakers of a particular NL will tend to keep in their IL relative to a particular TL, no matter what the age of the learner or the amount of instruction he receives in the TL. (Selinker, 1972, p. 215)

In this statement, Selinker claimed that fossilization can affect both child and adult L2 learners and is resistant from external influences. He stated that fossilizable structures can be identified in the learner’s production errors. However, this definition still seemed abstract; therefore, Selinker continued to develop a more sophisticated definition. The later study of Selinker and Lamendella (1978) defined fossilization as “a permanent cessation of learning before the learner has attained TL norms at all levels of linguistic structure and in all discourse domains” (p. 187), and they added that fossilization is also resistant to internal influences, such as “learner’s positive ability, opportunity, and motivation to learn and acculturate into target society” (p. 187). The perspective of seeing “fossilizable structures as the well-known ‘errors’” (Selinker, 1972, p. 215) was maintained in a later statement by Selinker and Lakshmanan
(1992). They described fossilization as the presence of persistent non-targetlike structures. Selinker took years to revise and improve his perspective of fossilization and summarized it in 1996 as follows:

"Fossilization is the process whereby the learner creates a cessation of interlanguage learning, thus stopping the interlanguage from developing, it is hypothesized, in a permanent way... the argument is that no adult can hope to ever speak a second language in such a way that s/he is indistinguishable from native speakers of that language. (Cited in Han, 2004, p. 15)

On this view, there are some modifications in Selinker's idea of fossilization (Han, 2004). First of all, he adjusted his own idea of "the five percent success rate" to zero percent success, claiming no adult can hope to attain nativelike competence. Second, as Han (2004) stated, he moved his perspective from the claim that fossilization occurs locally (i.e., fossilizable structures) to that fossilization occurs globally (i.e., fossilized interlanguage). In his later writing, Selinker (ex. Selinker & Lamendella, 1978, Selinker & Lakshmanan, 1992) extended the above view on the child second-language
acquisition context and indicated that fossilization is also present in child IL.

Summarizing Selinker's definition to conclude this section, there are five main aspects of fossilization: 1) it consists of deviant TL forms, which are resistant to both external and internal influences; 2) it is a process of IL development; 3) all adult learners are preconditioned to fossilize; and 4) a learner fossilizes the entire IL system (global fossilization), and 5) fossilization can occur with both adult and child learners. Other researchers' perspectives of fossilization have slightly or greatly differed from Selinker's perspective.

**Fossilization: Others' Views**

Other researchers have looked at fossilization in different ways than Selinker and claimed alternative definitions. Ellis (1985), for example, suggested "fossilization can be realized as errors or as correct target language forms" (p. 48). The idea that fossilization occurs in both correct and incorrect forms was also proposed by Vigil and Oller (1976). They argued that "it is not only the fossilization of so-called "errors" that must be explained, but also the fossilization of correct forms that conform to the target language norms" (p. 283).
However, it is widely accepted that fossilization is "the L2 learner’s IL that deviates from the native speaker norm" (Hyltenstam, 1988, p. 68).

Selinker’s view that fossilization represents resistance to internal and external influence has been adopted by many researchers. For instance, Bley-Vroman (1989) mentioned that any learner’s effort would be effective. He indicated,

It has been noted that foreign language learners reach a certain stage of learning—a stage short of success—and that learners then permanently stabilize at this stage. Development ceases, and even serious conscious efforts to change are often fruitless. Brief changes are sometimes observed, but they do not ‘take.’ The learner backslides to the stable state. (pp. 47-49)

In addition to this, Lightbown (1985) also reported that despite of "dozen or even hundreds of times" [of practice], "correct forms disappeared from the learner’s language and were replaced by simpler or developmentally ‘earlier’ forms" (p. 102). Bussman (1996) also stated that fossilization may occur despite pedagogic efforts such as corrective feedback.
Some researchers have argued with Selinker's notion that fossilization occurs during a process of IL development. For instance, the Random House Unabridged Dictionary (1993) defined fossilization as a product and defined fossilization as permanent established deviant forms in the learner's TL production. Bussman (1996) also regarded fossilization as a product, the permanent retention of a learner's particular habits.

The Longman Dictionary of Language Teaching and Applied Linguistics (1992) defined fossilization as a process just as Selinker (1996) did; however, unlike Selinker's perspective, it stated that it is possible for a learner to avoid fossilizing his/her IL:

Fossilization is a process (in a second and foreign language learning) which sometimes occurs in which incorrect linguistic features become a permanent part of the way a person speaks or writes a language. Aspects of pronunciation, vocabulary usage, and grammar may become fixed or fossilized in second or foreign language learning. (p. 145)

As it is noted above, Richards et al. did not see fossilization as invariable; rather, it occurs occasionally.
They stated that a learner can avoid fossilizing his/her IL by fixing incorrect linguistic features before they fossilize.

As it is seen in the previous review, whether fossilization is a product or process is still one of the controversial issues in fossilization research. Some think it is a product, others think it is a process, and still others think it is both (Han, 2004). In addition to this, Nakuma (2006) rejected the above views and insisted that fossilization is neither product nor process, but just a hypothesis of researchers because of the differing descriptions of fossilization.

As Jung (2002) implied, it is difficult to establish fossilization as a product; because this "would require the researcher analyzing the learner’s performance over sufficient length of time, ideally from the moment of observation of a fossilized item until the learner’s death, to be sure that no destabilization had occurred" (p. 16). Therefore, as Han (2004) asserted, "It would be empirically impossible to establish fossilization as a product" (p. 22) and "it would seem necessary (and plausible) to conceptualize fossilization as a process, a process whereby learning manifests a strong tendency toward cessation in
spite of repeated practice and exposure to the target language” (p. 23).

Fossilization: Han’s Definition

As it has been seen in the preceding definitions, researchers have attempted to identify fossilization from various points of view. Consequently, the term fossilization has encompassed too broad a meaning and has “resulted more in conceptual diversity than uniformity” (Han, 2004, p. 21). Han (2004) reviewed a number of studies and tried to define fossilization more carefully, suggesting a “two-tiered definition” to explain “both the innateness and the external manifestation of the phenomenon” (p. 20).

According to Han (2004), fossilization has two interrelated levels: that is, a cognitive level, which involves cognitive processes or underlying mechanisms; and an empirical level, which involves permanently stabilized IL forms. She proposed a cause-effect relationship between these two levels:

The two levels are also tied respectively to fossilization as a process and as a product; that is, the cognitive level pertains to fossilization as process whereas the empirical level speaks to
its product dimension. The two imply a cause-effect relationship in that is the cognitive level of fossilization (i.e., fossilization as a process) that gives rise to the empirical level (i.e., fossilization as a product). (p. 20)

In the above notion, Han explained that cognitive fossilization occurs first, and empirical fossilization occurs as a result of cognitive fossilization, noting that "the cognitive level of fossilization gives rise to the empirical level" (p. 20). This explanation gives a better understanding of fossilization phenomena.

In addition to the above "process vs. product" issue, Han (2004) presented another extensive dispute in fossilization field: that is, whether fossilization is global or local. Some think fossilization occurs globally (the entire IL system will fossilize); whereas others think fossilization occurs locally (only part of IL will fossilize). In the latter view, a learner has both fossilized and non-fossilized TL norms in her/his IL. On the other hand, the former view considers that a learner who does not have the ability to change her/his IL would fossilize the entire IL system. For instance, Washburn (1994) distinguished two types of learners: fossilized
learners and non-fossilized learners. According to him, the fossilized learner’s IL is stabilized or ceases at the short point because of the learner’s inability to revise errors. However, in contrast, the non-fossilized learner’s IL is flexible, and the learner is capable of shifting towards correct TL forms.

Nevertheless, the evidence of global fossilization remains a contentious issue because as the above notion of Jung (2002) implies, it is quite impossible to determine whether or not a learner is fossilized perpetually. Furthermore, as Selinker and Lamendella (1978) showed, even a fossilized learner does not fossilize his/her entire IL, but acquires some linguistic features successfully. Han (2004) also asserted “fossilization only hits certain linguistic features in certain subsystems of the interlanguage of individual learners while other linguistic features in the same subsystems are successfully acquired or continue to evolve” (p. 22). Therefore, Han (2004) insisted “global fossilization remains entirely impressionistic” (p. 21) and it is natural to think that “fossilization occurs locally rather than globally” (p. 23).

As the preceding review supposes, fossilization has widely divergent definitions, and there is a lack of
uniformity in the general understanding of the notion despite researchers’ efforts. As it is discussed above, Han (2004) attempted to define fossilization at both cognitive and empirical levels and to make the definition of fossilization more understandable. Nevertheless, Han admitted “the definition still leaves considerable room for interpretation” (p. 20) because

At the cognitive level, it is still not clear what processes make up the mechanisms(s), and presuming we do know what they are, the questions that ensue are how and when they are activated. At the empirical level, though fossilization is associated with stabilization over time, both the length of the stabilization and its manner remain to be determined. (p. 20)

As Han (2004) stated above, more challenges remain for second-language researchers with respect to the phenomenon of fossilization. This is difficult, because “fossilization is no longer a monolithic concept as it was in its initial postulation, but rather a complex construct intricately tied up with a myriad of manifestations of failure” (Han, 2004, p. 26).
However, in spite of those miscellaneous conceptions, two incontrovertible positions can be identified. According to Han (2004, p. 23), these are as follows:

1. Fossilization involves premature cessation of development in defiance of optimal learning conditions;

2. Fossilizable structures are persistent over time, against any environmental influences, including consistent natural exposure to the target language and pedagogic interventions. (p. 23)

However, as Long (2003) pointed out, various definitions of fossilization raise several methodological difficulties, such as testability, scope, learner age, unit of analysis, and deviance. For instance, Long claimed that “something in a person’s make-up is “permanent”—is unfalsifiable during her or his lifetime—yet permanence is the only quality distinguishing fossilization from stabilization” (p. 490). Jung similarly advocated that it is impossible to test a learner over his/her lifetime; therefore, fossilization remains untestable and only poor empirical records are attainable.

However, as Long (2003) stated, it is incontrovertible among researchers that “stabilization is the first sign of
(putative) fossilization, and if the only difference between stabilization and fossilization is permanence" (p. 489). Hence, "understanding the causes of stabilization (and destabilization) would seem to promise as much for SLA theory as work on fossilization" (p. 490).

Taking the above notions into consideration, researchers have expanded their studies to seek explanations for fossilization. In order to organize those various explanatory accounts, Han (2004) made a taxonomy and categorized those according to their origins (see also Han, 2003). A close scrutiny of fossilization factors will be given in the following section.

Myriad Explanations for Fossilization Factors

The previous section shows how the definition of fossilization is intricate and has developed haphazardly over an extended period. This intricacy makes even more complicated and varied the explanation of how certain factors contribute to fossilization. To address this complexity, Han (2003, 2004) attempted to classify those factors according to their origin: basically, into two categories, external factors and internal factors (see Appendix A).
As we have seen in Appendix A, researchers have suggested numerous explanations for fossilization according to their particular standpoints. Some factors have been more salient in contemporary research than others as convincing explanations for the phenomenon of fossilization. In the following section, detailed explanation of factors—those that can be considered as convincing—are chosen from each category and used to provide sample explanations.

Types of Fossilization Analysis

Before looking at factors of fossilization, it is necessary to explain that according to Han (2004) there are generally two levels of systematic analysis of fossilization: macroscopic analysis and microscopic analysis. The previous section shows that researchers have analyzed fossilization from their particular points of view. Each of them has focused on different aspects of fossilization, resulting in either a macroscopic or a microscopic analysis. Macroscopic analysis examines general failure in adult SLA; in contrast, microscopic analysis investigates inter- and intra-learner failure. Han (2004) illustrated those differential standpoints of each analysis (see Figure 2.2).
On the macroscopic level, researchers have investigated adults' general failure in L2 learning, questioning why many adult L2 learners "fail miserably" (Bley-Vroman, 1988, p. 25) and remain non-nativelike even though they have received instruction or are exposed to an input-rich environment. On the microscopic level, researchers have focused on inter- or intra-learner differences; "Why does a given individual fossilize in some aspects of the TL while successfully meeting the target in others?" (Han, 2004, p. 9). Both macro- and microscopic analyses have resulted in a number of explanations for
fossilization pertaining to both external and internal factors, which are discussed as follows.

**External Factors**

Some researchers have suggested external contributions to fossilization. Those external factors mostly originate from a learner's environmental situation, including instruction, input, and language complexity. A close look at each factor follows.

**Instruction and Input.** Second-language instruction does not always facilitate learning but sometimes becomes a hindrance to acquisition. Vigil and Oller (1976), for instance, indicated that teacher instruction may sometimes enhance fossilization if teachers ignore the learner's errors. They argued that lack of corrective feedback allows a learner to fossilize his/her faulty hypotheses.

Furthermore, lack of input could be a serious cause of fossilization. Some researchers insist that there is a huge impact of input on SLA. For instance, Krashen (1982) asserted that there has to be a sufficient quantity of appropriate input for learners to acquire a language. However, for an adult language learner, especially in foreign-language settings, the quality and quantity of input are limited.
For instance, Gass and Selinker (2001) noted that most of the time, input available to learners who are learning an L2 as a foreign language (FL) is limited because this input come from only three sources—other learners, the teacher, or materials; and yet this input is not sufficient for learners. One reason is that the input from other classmates is full of errors because of classmates’ restricted language abilities. When learners are talking to each other, they often ignore each other’s errors (Swain & Lapkin, 1988).

In addition to this, teacher input could be also inappropriate input for a learner. Even though the teacher’s utterances are more accurate than those of the peers, the quantity of input may not be sufficient because a teacher often uses “foreigner talk.” This register is distinguishable from native-speaker talk by “slow speech rate, loud speech, long pauses, simple vocabulary, repetitions and elaborations, and paucity of slang” (Gass & Selinker, 2001, p. 261).

Furthermore, Gass and Lakshmanan (1991) studied the interaction of a native speaker (NS) with Alberto, a native speaker of Spanish who was learning English as his L2. They reported that the NS often ignored the correctness of the
syntax to simplify the sentences, and gave the learner false input by initiating or exacting repetition of ill-formed utterances that were produced by the learner. An example of inappropriate input from NS is given from their data.

NS: Ahm, Is a boy.
A : Is a boy.
NS: Yeah, is that a good sentence or bad sentence?
A : Good.
NS: Good, O.K., ahm, ahm, Is a dog.
A : Is a dog? Good.
NS: Good. Ahm, this apple.
(Gass & Lakshmanan, 1991, pp. 192-193)

According to Gass and Lakshmanan, after receiving this kind of incorrect input, Alberto confirmed a faulty hypothesis and output grammatically incorrect sentences continuously.

As it has discussed in above, learners are often surrounded by insufficient and inaccurate input. Han and Selinker (1999) asserted, “Inaccurate input conveys false notions of the target language” (p. 267). In this way, researchers presumed that low quality of input and instruction may allow a learner to build wrong hypotheses about the target language system, which contributes to fossilization.
**Language Complexity.** In addition to input and instruction contributions, researchers realized that the language complexity itself could be an external factor in fossilization. For instance, Lightbown (2000) stated “the learner’s task is enormous because language is enormously complex” (p. 432) and tied language complexity to fossilization. She claimed that when a language feature is complicated and difficult to learn, a learner may avoid learning it and would fossilize at that point.

As it has been discussed above, three main factors, instruction, input, and language complexity, are believed to be the main contribution from external factors. Yet most researchers consider learners’ innate activities have much more impact on learners’ IL as fossilization factors. In the following section, contributions from internal factors are presented and explained in detail.

**Internal Factors**

In addition to external factors of fossilization, researchers assumed that learner’s internal factors also causes fossilization. According to Han (2003, 2004), there are three main categories of internal factors that pertain to fossilization: cognitive, neuro-biological, and social-affective factors. Han further subdivided cognitive factors
into three categories: knowledge representation, knowledge processing, and psychological. Each of these categories will be analyzed and addressed in turn.

**Cognitive: Knowledge Representation Factors.** Knowledge representation factors can branch off to three categories, L1 influence, UG availability, and prior knowledge. One of the most salient explanations for fossilization among contemporary research is related to one of the knowledge representation factors—L1 transfer (e.g. Selinker & Lakshmanan, 1992; Zobl, 1980). Selinker and Lakshmanan proposed the Multiple Effects Principle (MEP) and stated, "when two or more SLA factors work in tandem, there is a greater chance of stabilization of interlanguage forms leading to possible fossilization" (p. 198), and they strongly argued that "language transfer is either a necessary, or at the very least, a privileged co-factor in cases of fossilization (emphases original, p. 211). Even though it is still controversial how the L1 influences SLA, it is generally accepted that the L1 creates some impact on SLA either as facilitation or interference.

As Lightbown (2000) noted, the learner creates a systematic interlanguage that often appears to be based on the learner's own native language. Many other researchers
also believe that a learner’s mature cognitive system, especially L1, could be a huge impediment to L2 acquisition. Eubank and Gregg (1999, p. 92), for example, noted that “the price we pay for successful L1 acquisition is the inability to acquire an L2.” Similarly, Yeni-Komshian, Flege, and Liu (1999) studied child L2 acquisition of phonology, and concluded that children may be able to attain nativelike pronunciation only at the expense of their L1.

However, researchers do not say that L1 always impedes L2 acquisition. As a prevailing opinion, there are two types of language transfer: positive transfer and negative transfer. When the L1 facilitates the learning of L2, it is called positive transfer.

In contrast, when the L1 becomes a hindrance to learning, it is called negative transfer; this is considered one of the major sources of fossilization. Negative transfer involves both conscious transfer of the L1 surface linguistic features and unconscious transfer, a phenomenon known as “transfer of thinking-for-speaking.” Slobin (1996) insisted that thought and language are inseparable and proposed the “transfer of thinking-for-speaking” as a way to describe “a special kind of thinking
that is intimately tied to language—namely, the thinking that is carried out, on-line, in the process of speaking” (Slobin, 1996, p. 75).

He argued that “in acquiring a native language, the child learns particular ways of thinking for speaking (p. 76). He continued:

Each native language has trained its speakers to pay different kinds of attention to events and experiences when talking about them. This training is carried out in childhood and is exceptionally resistant to restructuring in adult second-language acquisition. (p. 89)

In this view, learners who have grown up in a different language community had been influenced and trained to have a distinct world view from other language communities. He asserted that this language-specific pattern of thinking-for-speaking can hinder the L2 learning when it is different from the thinking underlying the L2. And once the thinking-for-speaking is established, “it would be difficult to undo completely” (Han, 2004, p. 76). Similarly, von Humboldt (1836, p. 60) indicated this notion decades ago:
To learn a foreign language should ... be to acquire a new standpoint in the world-view hitherto possessed; and, in fact, to a certain extent this is so, since every language contains the whole conceptual fabric and mode of presentation of a portion of mankind. But because we always carry over, more or less, our own world-view, and even our own language-view, this outcome is not purely and completely experienced. (von Humboldt, 1836, reprinted in 1999)

From the preceding view, many researchers argue that a learner, who has prior knowledge about his/her L1, is a preprogrammed learner who is likely to develop fossilization because of the persistent influence of the L1 on the L2.

**Cognitive: Knowledge Processing Factors.** Knowledge processing factors can also be classified into three categories: lack of attention and sensibility to language data, inappropriate processing approach, and learning strategy. When learners receive language data, they usually take it into the processing stages to output. As Gass (1997) mentioned, “the initial step in grammar change is the learner’s noticing a mismatch between the input and his
or her own organization of the TL” (p. 28). However, if learners have lack of attention and sensibility to the language data, they may not notice the accurate rules of language and construct false hypotheses about the L2, which pertain to fossilization.

In addition to this, a learner’s inappropriate processing system could be one co-factor of fossilization. Hulstijn (1989) pointed out the absence of controlled processing leads a learner to automatize non-target forms; therefore, he insisted that a learner needs to be more careful and pay attention to the correct target from. Similarly, Klein (1986) observed some learners who do not have a proper processing system also cease learning despite awareness they may have of the fossilized deviance in their interlanguage or in their utterances. Analysis of learners’ attention to language data and instruction will be discussed in the next section.

**Cognitive: Psychological Factors.** Many researchers have admitted that the learner’s psychological factors have a huge impact on SLA. Avoidance is also considered one of the factors of fossilization. As Nakuma (1998) stated, not all L2 learners are eager to acquire nativelike competence but adult L2 learners often make a choice to avoid, or not
acquire a given L2 form. Liano and Fukuya (2004) identified avoidance as "a strategy that L2 learners might resort to when, with the knowledge of a target language word or structure, they perceived that it was difficult to produce" (pp. 194-195). In a similar way, Klein and Perdue (1993) adduced "reluctance to take the risk of restructuring" as a fossilization factor.

Furthermore, researchers noticed that learners tend to simplify language rules and make errors even when their L1 and L2 have a lot of similarities. Odlin, Alonso, and Alonso-Vazquez (2006) asserted "when a structure in the interlanguage is compatible with a structure in the native language, simplification and transfer actually work in tandem" (p. 85). They asserted, "even where a similarity could lead to positive transfer, there are other factors that might impede learners taking advantage of the similarity" (p. 87). As was discussed previously, a number of cognitive factors are intricately interrelated with fossilization. In the next section, other aspects of internal factors will be discussed.


In addition to the L1 transfer hypothesis, the Critical Period Hypothesis (CPH) pertaining to neuro-biological
factors is one of the most convincing explanations for fossilization. According to this hypothesis, “there is an age-related point beyond which it becomes difficult or impossible to learn a second language to the same degree as native speakers of that language” (Gass & Selinker, 2001, p. 335). This age-related time limitation for language learning is called the “critical period” (Lenneberg, 1967) or the “sensitive period” (Long, 1990).

The first researchers to consider the neurological constraints on language learning were Penfield and Roberts (1959). Inspired by them, Lenneberg (1967) developed this notion and asserted that there is a “critical period” to language learning. This period varies according to researchers, but many consider it extends approximately from infancy to puberty.

Even though there is no absolute conclusion when the critical period takes place, almost all researchers similarly concluded that language-learning ability declines after the critical period passes (e.g., Oyama, 1976; Johnson & Newport, 1989). Some researchers explain this from a neurobiological perspective. Scovel (1988), for instance, claimed that “biological factors are not just useful subsidiary variables but are indeed the determinants
of success" (p. 48). He continued that "practice cannot make perfect what nature has already made permanent" (p. 159) and insisted that ability to learn language declines, making it almost impossible for a learner to use or to learn a new language once past a certain period.

In recent studies, researchers use the term "sensitive" rather than "critical" to refer to this phenomenon because adult L2 learners are not total failures—rather, success and failure co-exist in their IL. Therefore, Patkowski (1980) clearly distinguished the term "sensitive period" from "critical period" as follows:

The term 'critical period' refers to the notion that the age limitation is absolute in the case of first language acquisition. ... because it is held that absolutely no linguistic proficiency in L1 is possible past the critical point (despite possible development of nonlinguistic system of communication), while the term 'sensitive period' is used in the case of second language acquisition because the limitation is on the ability to acquire complete nativelike proficiency in L2. (p. 449)
The preceding review shows that it would be difficult for an adult L2 learner to attain nativelike proficiency after the critical period has passed. Nevertheless, as Patkowski (1980) noted, the age limitation on L2 acquisition is not absolute in the same sense as L1 acquisition; it is still possible for an adult to learn some linguistic domains. Scovel (1988) also mentioned that there is "no evidence for a critical period for vocabulary or syntax" (p. 185). Therefore, most researchers agree with the appropriateness of using the term "sensitive period" rather than "critical period" in the SLA field.

The above review has noted that a learner successfully acquires some linguistic domains even when s/he passes the sensitive period, but fails in others. Accordingly, the researchers' focus naturally shifts toward an investigation of which linguistic domains are likely to trouble a learner. Hence, many researchers find that there seems to be huge age-related influence on L2 learning, especially in the phonological system. Oyama (1976) tested adult learners according to the age of arrival (AOA) and length of residence (LOR) in the TL society and found that "a sensitive period exists for the acquisition of a nonnative phonological system" (p. 261). Scovel (1988) also stated
that "adults will never learn to pass themselves off as native speakers phonologically" (p. 185).

Another study by Moyer (1999) also advocated the idea that adult learners' abilities are limited when learning phonological items. He examined the phonology of graduate students who were highly motivated and proficient learners of German. The results show that their accents still remained non-nativelike despite their motivation to improve it. Interestingly, some researchers indicated that CPH affects not only adult L2 learners but also child L2 learners on articulation of the TL. Fledge, Yeni-Komshian, and Liu (1999) showed that even a child L2 learner's pronunciation is distinguishable from that of native speakers and indicated "a decline of ability to acquire nativelike articulatory competency, beginning at age five" (MacWhinney, 2006, p. 138).

As it is discussed above, a number of studies have been conducted to address age-related issues. These studies found a strong relationship between age and fossilization and concluded that adult learners have little hope to reach nativelike fluency because their ability to acquire language declines with age; therefore they are preconditioned to fossilize.
Socio-Affective Factors. In addition to the above notion, researchers noticed that L2 learners are influenced in a major way by social contextual factors, “such as the social group membership of the learner and the learner’s interlocutors” (Tarone, 2006, p. 159) and those factors “must surely have an increasingly complex and cumulatively negative impact on the language learning process” (p. 158).

Some researchers have tied fossilization to socio-affective factors, mainly in a learner’s attitudes toward the target culture. Socio-affective factors include such aspects as “satisfaction of communicative needs,” “will to maintain identity,” and “lack of acculturation.” For instance, Corder (1978, 1983) stated that learners’ interlanguage grammar would fossilize when they became satisfied that their communicative needs were met. Likewise, Kowal and Swain (1993) mentioned, “once the students are able to communicate their intended meaning to one another, there is little impetus for them to be more accurate in the form of the language they are using to convey their message” (p. 284).

Addition to the above notion, Bley-Vroman (1988) noted some learners refuse to become nativelike because they “seem proud of their foreignness” (p. 21). Preston (1989)
called this phenomenon the learner’s “will to maintain identity.” He explained that there are some learners who willingly give up reaching nativelike proficiency in the TL, choosing to fossilize their IL in order to keep their L1.

Usually, those learners are fossilized not only linguistically but also socially. He distinguished these two types of fossilization and uses different terms to describe those: sociolinguistic fossilization and social fossilization. He claimed that social fossilization would cause sociolinguistic fossilization because when learners want to keep their L1 identity, they tend to cease learning the TL.

In Preston’s view, social fossilization occurs when a learner socializes primarily with the people who share the same L1 or the L1 community and keep a distance from the L2 environment. A good example of this is given by Schumann (1986). He studied a 33-year-old Costa Rican man named Alberto who moved to the TL community at this age. Schumann tested Alberto’s knowledge of the TL after ten months of exposure of the TL in the TL environment. Being given ten months of exposure, some learners would greatly develop their TL; however, Alberto showed little progress. Schumann’s study suggested that Alberto’s lack of
acculturation (in another words, will to maintain L1 identity) may have impeded his learning in spite of his will to learn the TL. Tarone (2006) reviewed these factors and stated that a set of social and socio-psychological barriers “prevents L2 from affecting cognitive processes that might alter the structure of the IL” (p. 159), which causes fossilization of the IL.

As has been previously discussed, various factors contribute to fossilization. However, none of those factors causes fossilization by itself. Several factors are linked and affect the learner’s acquisition. At present, L1 influences and age are considered the major convincing factors leading to fossilization. In addition to this, many researchers, such as Scovel (1988), believe adults are doomed to fossilize because some factors that contribute to fossilization, especially the neuro-biological factors, cannot be changed by instruction or practice. Nevertheless, not all SLA researchers believe in these hypotheses because there have been some adult learners who achieved nativelike competence in the L2 (see White & Genesee, 1996, MacWhinney, 2006).

Accordingly, the following questions arise among SLA researchers: How are those successful learners able to
acquire the L2? How can instruction influence their learning success? Recent studies have attempted to establish a causal relationship between environmental factors (instruction and input from others) and learning. In the following section, the focus of discussion will shift to how instruction affects adult L2 acquisition and fossilization.

Instructional Issues in Fossilization

The preceding discussion and review of literature presents the prevailing opinion that most adult L2 learners’ interlanguage (IL) fossilizes before they attain nativelike abilities. For example, as it was discussed, Selinker (1972) claimed a five percent success rate for adult L2 learners; furthermore, researchers who believe in the critical-period hypothesis (CPH) have argued that no adult L2 learner will successfully learn L2 (e.g. see Scovel, 1988; Johnson & Newport, 1989).

Many researchers conclude that fossilization represents “resistance” from both external and internal influences. In other words, second-language teaching or learning will not help learners to reach a nativelike fluency because a learner cannot change “what nature has
already made permanent” (Scovel, 1988, p. 159). Then, is there no way to prevent an adult learner from fossilizing? Is it impossible to de-fossilize learners’ linguistic features and move them to the next stage of learning? From the CPH researcher’s perspective, the answer to these questions would be “no.”

However, thus would be a hasty conclusion. Some researchers such as MacWhinney (2006) argued against the dominance of CPH in the field of SLA without further definition and analysis. MacWhinney (2006) framed the issue, stating that “language involves control of a diverse set of systems for articulation, audition, lexicon, grammar, and meaning. It is difficult to imagine how a single biological mechanism could have a uniform impact across all of these systems” (p. 136). Furthermore, he maintained that adult L2 learners have the ability to learn language through his observing a 65-year-old L2 learner of English whose IL had continued to develop until his death at age 76 without any evidence of fossilization.

In addition to this, there are still researchers who indicate that some adult learners have successfully attained near-native or nativelike proficiency (e.g. Hill, 1970; White & Genesee, 1996). Hill (1970) studied adults in
the Northwest Amazon and Highland New Guinea and noted that they are able to learn other languages with nativelike fluency. According to her, in the Northwest Amazon spouses must come from different ethnic groups, so they have to learn a new language. Therefore, when they get married, they have a higher motivation to learn their spouse’s language and that enables them to acquire an L2.

However, her studies are only based on self-report by native speakers; therefore, it cannot be proven exactly how nativelike these adult learners truly are, or how those adults attained L2 proficiency. However, these findings are still interesting and give an indication that there is a way for adult L2 learners to acquire nativelike proficiency.

A study by Gass (1997) also suggested a way to prevent learners’ IL from fossilizing. Gass (1997) attempted to model learner’s language processing system in moving from exposure to second-language input to the production stage of output (see also Gass & Sélinker, 2001). Then, she proposed five stages to explain the conversion of input to output: 1) apperceived input, (2) comprehended input, (3) intake, (4) integration, and (5) output.

According to Gass, fossilization occurs in the process of intake. She claimed the following:
**Intake** is the process of assimilating linguistic material; it refers to the mental activity that mediates input and grammars...That is, it is where information is matched against prior knowledge and where, in general, processing takes place against the backdrop of the existing internalized grammatical rules. It is where generalizations are likely to occur, it is where memory traces are formed, and finally, it is the component from which fossilization stems. (Gass, 1997, p. 5, emphasis added)

This implies, in other words, fossilization could be prevented if a learner would be able to reconstruct or modify his/her deviant language forms before s/he generalizes it in his/her IL.

A related study has been done by VanPatten and Cadierno (1993). They compared two instructional models: traditional instruction and processing instruction. In traditional instruction, the teacher presents input and offers a focused practice after the learner has developed an internal system (see Figure 2.3).
In contrast, processing instruction attempts to influence the way that input is processed and presents focused practice before a learner develops the internalized system (see Figure 2.4).

Figure 2.3. Traditional Instruction in Foreign Language Teaching

Figure 2.4. Processing Instruction in Foreign Language Teaching
Research results showed that learners who received processing instruction performed better than those who received traditional instruction. This suggests the importance of noticing in language learning; if a learner is aware of deviant forms before they become generalized in their IL, they can modify those closer to the TL norm. Gass (1997) also asserted that the "initial step in grammar change is the learner's noticing a mismatch between the input and his or her own organization of the TL" (p. 28).

As noted above, recent researchers have begun to emphasize the importance of conscious learning (noticing) in L2 acquisition. The importance of attention and awareness for L2 learning was first discussed by Schmidt (1990); he is the pioneer of claiming the crucial relationship between consciousness and L2 learning. He especially focused on adult SLA and insisted that adult L2 learners need explicit instruction, arguing that "paying attention is probably facilitative, and may be necessary if adult learners are to acquire redundant grammatical features" (p. 129).

Many other researchers, such as Ericsson and Simon (1984) also discussed the need for conscious learning and claimed that "adult humans do not learn without awareness."
However, Schmidt (1995) stated that consciousness is often equated with awareness; therefore, he distinguishes three crucial levels of awareness (consciousness): perception, noticing, and understanding.

Perception implies mental organization and the ability to create internal representations of external events, though it is not necessarily conscious—and subliminal perception is possible. Noticing is the basic sense in which it is commonly said that a person is aware of something; it refers to a subjective experience. Schmidt asserted that having noticed some aspects of the environment, a person can analyze and attempt to comprehend them and seek to experience the third level of awareness: understanding (Schmidt, 1990, pp. 132-133).

Among those three levels of awareness, noticing most facilitates L2 learning. Schmidt (1990) clearly asserted the role of noticing as follows:

Noticing is the necessary and sufficient condition for converting input to intake (p. 129) ... and conscious processing is a necessary condition for one step in the language learning process and is facilitative for other aspects of learning. (p. 131)
This notion brought heated discussion among second-language researchers, because, for past few decades, most people have believed that grammar instruction is unnecessary for second-language acquisition. For example, Krashen (1982) argued that implicit learning (incidental learning) is the only way to acquire a second language, and grammar instruction is unnecessary if a learner is exposed to an input-rich environment.

Krashen (1982) was the first in the SLA field to differentiate explicit and implicit knowledge. He insisted that conscious learning should be distinguished from acquisition, claiming that knowledge learned through explicit or conscious learning cannot be internalized as is knowledge learned through implicit learning (acquisition). As the above view shows, Krashen insisted that there is no interface between explicit and implicit learning.

The Canadian French-immersion program followed Krashen’s theory and exposed students to an input-rich environment without grammar lessons, which Trahey and White (1993, p. 187) called “input flood of materials.” If Krashen’s theory were correct, those students who were surrounded by an input-rich environment would have been able to acquire nativelike skills. However, in spite of
this pro-acquisition environment, studies show that they fail to acquire nativelike skills.

For instance, Swain (1985) investigated 69 French immersion students who "have been in a program for almost 7 years, in which they were taught entirely in French in kindergarten and grade 1, about 80 percent in French in grades 2 through 4, about 60 percent in French in grade 5, and about 50 percent in French in grade 6--the year they were tested" (p. 238). After the careful examination, she found that immersion students are still distinguishable from native speakers in grammatical and lexical ways even though they are exposed to full comprehensible input long enough.

Therefore, Swain (1985) concluded that "the role of input in SLA is that although comprehensive input (Krashen, 1982) may be essential to the acquisition of a second language, it is not enough to ensure that outcome will be native-like performance" (p. 236). She continued, "the hypothesis that comprehensible input is the only causal variable in second language acquisition seems to me to be called into question by the immersion data just presented in that immersion students do receive considerable comprehensible input" (p. 245).
Echoing this, many researchers began to reconsider the benefits of explicit learning from several points of view. For instance, Sharwood Smith (1988) claimed that "explicit knowledge can come to affect implicit knowledge" and "explicit knowledge may aid acquisition via practice" (p. 58) because "it is quite clear and uncontroversial to say that most spontaneous performance is attained by dint of practice" (p. 57). Bley-Vroman (1988) also stated that "practice is well known to have an important function in adult skill acquisition, where it is held to be the mechanism whereby controlled processing becomes automatized" (pp. 21-22). As it has been stated above, both researchers asserted that conscious learning (explicit learning) may shift to unconscious learning (implicit learning: acquisition) through practice.

In recent studies, researchers admitted that learners' attention, especially on grammar (though it is not sufficient in itself), is necessary for at least the acquisition of some features of the TL. Moreover, some of them have indicated that explicit grammar instruction may have some impact not only on accelerating language learning but also on preventing learners from fossilization. Ellis (1988), for instance, asserted,
Learners may need form-focused instruction to make them aware of grammatical features that have little communicative importance yet constitute target language norms. In other words, formal instruction serves to prevent fossilization. (1988, p. 4, emphasis added)

In this view, Ellis claimed that grammar instruction aids acquisition by promoting learner's awareness of the grammatical features of the TL, and may prevent fossilization. Other researchers such as Higgs and Clifford (1982) also argued for the necessity of grammar instruction. They asserted that fossilization would occur if there were no grammar instruction.

Basically, grammar instruction provides knowledge of a TL to learners. Knowledge of language rules is very important for L2 learners because "second language learning primary involves the acquisition of a new set of realization of rules" (Richards, 1975, p. 116); and because "without rules, language would be unpredictable, and speakers would have no common ground of agreement" (Diaz-Rico, 2004, p. 257). Therefore, explicit instruction is essential because it can draw L2 learners' attention to the features and rules of the TL. Consequently, it would
promote a learner’s noticing of deviant forms in the IL and facilitate learning, and in that way, grammar instruction would prevent a learner from fossilizing.

If grammar instruction facilitates L2 learning and prevents fossilization, what kind of explicit instruction is the most effective for adult learners? As Bley-Vroman (1988) mentioned, “not all instruction is expected to be equally successful: some may actually impede success” (p. 23). Responding to this question, Gass (1997, p. 143) advocated “adults must have negative evidence (i.e., that it is a necessary condition) in order to accomplish the goal of learning a second language.”

According to Gass and Selinker (2001), negative evidence (also called corrective feedback) is “information provided to a learner concerning the incorrectness of a form”; it includes direct correction (e.g. “That’s not right”) and indirect correction (e.g. “What did you say?”). Gass insisted that “the only way to change one’s grammar is through negative evidence” (1997, p. 100).

Many other researchers also supported the above-cited notion of Gass. For instance, Trahey and White (1993) studied 54 5th-grade children in an intensive English program in Quebec who were exposed to a 2-week input flood
of English materials. They gave only positive evidence to those students, compared with the other students who received both positive and negative evidence. They claimed "positive L2 input did have positive effects on the IL of L2 learners. However, this input was not sufficient" (p. 201); and concluded that positive feedback alone is not sufficient for learners to notice ungrammatical use of the TL. Additionally, Vigil and Oller (1976) mentioned

As long as some non-excessive corrective feedback is available to prod the learner to continue to modify attempts to express himself in the TL, it is predictable that the learner's grammatical system will continue to develop. If corrective feedback drops below some minimal level or disappears altogether, the grammar, or the rules no longer attended by corrective feedback, will tend to fossilize. (p. 285, emphasis added)

Along the same line, Gass and Lakshmanan (1991) stated that correction (i.e., negative feedback) of the ungrammatical sentences produced by a learner helps him/her to determine which structures are not permitted in the language being learned. Additionally, Gass and Selinker (2001) claimed, "through negotiation and through feedback,
learners can be made aware of the hypotheses that they are entertaining as they produce language" (p. 279).

As it has been suggested above, by receiving negative feedback, a learner is able to notice deviant language forms that he/she is using; and by noticing those deviant forms, a learner tries to reconstruct those forms in order to communicate by starting to search if there is an additional input available. Gass (1997) illustrated this innate activity of a learner in reconstructing a faulty hypothesis when receiving negative feedback. (See Figure 2.5).

As is shown in Figure 2.5, Gass clarified how negative evidence promotes learners' noticing their own errors or hypotheses. As well as the negative evidence, Gass also maintained the necessity of additional input for learners to modify their errors and hypotheses. She claimed unless there is additional input available, learners do not have an opportunity to obtain confirmatory or disconfirmatory evidence to integrate or modify their knowledge. Hence, receiving appropriate additional input is as important as receiving negative feedback for a learner to acquire a TL norm. Additionally, Washburn (1994) insisted that a learner
who does not use the available input would become fossilized.

Negative Evidence

Negotiation  Other types of correction

Notice Error

Search Input

Input Available  Input not Available

(Confirmatory/Disconfirmatory)

Figure 2.5. The Function of Negative Evidence

The preceding review shows the effectiveness of explicit instruction, especially the influence of negative feedback on L2 acquisition. However, it is an open question among SLA researchers whether explicit instruction influences an advanced learner's IL in the same way as it does a beginner learner's. Reviewing his earlier studies,
Long (1983) claimed that the benefits of instruction are the strongest at the beginning level and in acquisition-poor environments.

MacWhinney (2001) also reported that the errors of an advanced learner are resistant to external influences. He studied a highly proficient non-native English speaker of German who had lived in the United States for thirty years, had an American wife, and was highly educated. Nevertheless, MacWhinney found that the subject still continued to produce errors pertaining to the German L1.

Similarly, Patkowski (1980) reported the “Conrad phenomenon,” named after the famous English novelist, Joseph Conrad, who learned English as his third language at the age of 18. Patkowski notes that Conrad’s use of English was still distinguishable from a native speaker of English and was influenced by his native language. Addition to this, Moyer (1999) also reported the ineffectiveness of explicit instruction to adult advanced German learners.

Those cases show that the interlanguage of an advanced learner remains non-nativelike even after he or she has been surrounded by an input-rich environment or has received explicit instruction for a long period. Therefore, some researchers have concluded that advanced adult L2
learners’ ILs are impervious to external influences, and there may be a limitation of L2 acquisition for an adult learner. However, this conclusion seems implausible. Some researchers tried to explain the phenomena by saying that it is because adult advanced learners usually do not receive as frequent negative feedback as does a beginner learner. One reason is that advanced learners tend to make minor errors that do not cause severe communicative breakdown.

Those minor errors, which sometimes called "covert errors" (Corder, 1967), are often ignored. Gass and Selinker (2001) asserted that comprehensibility of an utterance depends on the selectivity of the vocabulary and on pronunciation rather than on grammatical correctness. Therefore, those “covert errors” are hardly detected and corrected by the NS.

Additionally, investigating the French immersion program, Chaudron (1986) found that advanced learners did not receive enough negative feedback even in the classroom. He remarked that teachers preferred to correct students’ content errors rather than their morphological errors. As asking teachers about their priority of correction, Chaudron also realized that teachers consciously avoided
correction in order not to distract students from the progress of the lesson. Furthermore, he noticed that teachers failed to detect and correct several errors that would not be evident during a one-time-through listening.

As the above studies showed, an advanced learner receives little or no feedback from others on grammatical errors compared to a beginning learner because those errors usually do not cause serious miscomprehensions. Consequently, as it has been discussed in an earlier section, learners will integrate those covert errors into their internalized system because their IL hypotheses are confirmed when they do not receive corrective feedback, and those errors stabilize or fossilize in the learner’s IL at that point (e.g., Gass, 1997; Gass & Selinker, 2001). Therefore, Gass insisted that advanced adult learners are not incapable of correcting their own errors, but they need to receive explicit instruction or feedback as frequently as do beginner learners to promote noticing, because “the only way to change one’s grammar is through negative evidence” (Gass, 1997, p. 100).

In addition to this, some researchers realized that advanced learners may notice their own errors and be aware of correct language features but still remain non-
nativelike. Klein (1986) gave an example of a German English learner’s [ð] sound as in English “that.” He asserted that “it is very likely that a German learner of English will realize that the sound is unusual; but he or she might be unable to produce it and consequently, replace it by a sound from German” (p. 26). Swain (1985) also noted that an immersion student said, “I can hear in my head how I should sound when I talk, but it never comes out that way” (p. 248). These examples show the possibility that although advanced learners may already notice their deviant TL forms and have appropriate knowledge of the TL, they may still be unable to use it correctly.

Then, how will they be able to activate the appropriate hypotheses that they already know? Gass (1997) stated, “When the information contained in the input is already a part of one’s knowledge base, the additional input might be used for rule strengthening or hypothesis reconfirmation” (p. 6).

Along the same line, Swain (1993) stated “feedback can lead learners to modify or ‘reprocess’ their output” (p. 160), and the best way to receive negative feedback is to output language. Studying Canadian French immersion students, Swain (1985) formulated the “output hypothesis”
stating that producing TL is important because it "may force the learner to move from semantic processing to syntactic processing" (p. 249). She concluded that second-language learners would not be able to demonstrate nativelike competence "not because their comprehensible input is limited, but because comprehensive output is limited" (p. 249).

Similarly, other researchers also asserted the importance of output. For instance, Gass and Selinker (2001) provided four possible ways that output fosters second-language acquisition. According to them, through producing output, a learner is able to 1) test a hypothesis, 2) receive feedback, 3) develop automaticity, and 4) shift from meaning-based mode to a syntactic mode. They asserted that "through negotiating and through feedback, learners can be made aware of the hypothesis" and "the activity of using language helps create a degree of analyticity that allows learners to think about language" (p. 279). As it has been discussed above, producing language is necessary for L2 learners to receive feedback on errors, so they can reconstruct faulty hypotheses or activate their integrated knowledge.
Therefore, questions arise as the result of the above notion; that is, how will an L2 instructor be able to incorporate those theories into the L2 classroom? What kind of teaching methods will give learners more opportunities to output their IL and to receive sufficient feedback? Are negotiating and receiving negative feedback really the best way to facilitate L2 development?

In following section, first I will dispute the view that negative feedback is a necessary and sufficient condition for SLA. Second, I will introduce Vygotsky’s approach to learners as an alternative way to facilitate learner’s SLA.

Socio-Cultural Approaches to Fossilization

As it has been discussed previously, researchers have stated that there is a direct relationship between the learner’s output and feedback from others. Whenever a learner has opportunities to receive feedback from an interlocutor, he or she has a chance to modify his/her IL, and hence facilitate TL acquisition. In other words, a learner needs to interact with others to develop TL competence. Watson-Gegeo and Nielsen (2003) considered L2 acquisition as a cognitive process used to acquire new
knowledge, and they asserted "cognition originates in social interaction" (p. 156). Schwartz (1980) remarked, "it is difficult to isolate one person's utterance from interaction with others" (p. 138).

As is stated, dyadic interaction between a learner and an interlocutor is a necessary condition for language learning. Therefore, Vygotsky's view of seeing a language as a result of social interaction seems to be true (see Vygotsky, 1978), because "the view of language goes beyond single, isolated and idealized utterance to focus on discourse practice. Language is seen as integrated into sociocultural behavior, and both the result and creator of context and structure" (Watson-Gegeo & Nielsen, 2003, p. 163). That is to say, language and social interaction are inextricably linked because the purpose of language use is to communicate and express one's thoughts and feelings to others.

Given the importance of contextualized communicative interaction, SLA researchers' interests have sifted toward researching the relationship between L2 acquisition and social interaction. For instance, Tarone (2006) indicated, "What second language learners notice is influenced in a major way by social contextual factors, factors such as the
social group membership of the learner and the learner’s interlocutors” (p. 159). Watson-Gegeo and Nielsen (2003) also proposed that L2 learning is more complex than merely mechanistic input-output theory, and remarked that the cognitive process in language learning is constructed through practice and interaction with an interlocutor in specific historical, political, and sociocultural contexts. They suggested “researchers should conduct rigorous studies clearly demonstrating how the social shapes the cognitive in L2 language learning” (p. 170).

As discussed above, social interaction seems to have great impact on SLA. For the past several decades, researchers had thought negotiation of meaning (NfM) was the most effective approach to providing communicative interaction in L2 learning context and it is “necessary and sufficient condition” for L2 acquisition (Donato, 1994, p. 34). However, researchers found there were many learners who were impervious to NfM interaction. Therefore, researchers tried to originate diverse kind of interactions to develop learners’ IL and prevent them from stabilizing or fossilizing their IL.
In the next section, by examining the nature of NfM on social interaction, we make a transition from interaction-based theory to socio-cultural theory.

Negotiation for Meaning: Definition

As it has been discussed earlier, many researchers believed that "comprehensive input gained through interactional adjustments, such as negotiating meaning and modifying output are central to second language acquisition" (Foster & Ohta, 2005, p. 402). According to Pica (1992), negotiating for meaning (NfM) is "an activity which occurs when a listener signals to the speaker that the speaker’s message is not clear and the speaker and the listener work linguistically to resolve this impasse" (p. 200). Similarly, Gass and Selinker (2001) defined that NfM means "instances in conversations when participants need to interrupt the flow of the conversation in order for both parties to understand what the conversation is about" (p. 209).

In sum, researchers claimed that learners can modify and develop their IL, lexically, phonologically, and morphosyntactically, when they are requested to correct their utterance by an interlocutor through NfM. In other words, it is when communication breakdown occurs, and
learners are informed about their errors in face-to-face conversation to facilitate L2 acquisition. Detailed description of NfM characteristics will be presented in the next section.

Central Characteristics of Negotiation for Meaning

Long (1980) looked at the nature of NfM carefully and realized that the NfM comprises three kinds of forms and functions in interaction, called the 3Cs: comprehension checks, confirmation checks, and clarification checks. Detailed explanations of 3Cs, which are cited in Foster & Ohta (2005), follow.

Comprehension Checks. According to Long (1980), comprehension check is any expression by an NS designed to establish whether that speaker's preceding utterance(s) had been understood by the interlocutor. These are typically formed by tag questions, by repetitions of all or part of the same speaker's preceding utterance(s) uttered with rising question intonation, or by utterances like *Do you understand?* (Long, 1989, p. 82, cited in Foster and Ohta, 2005, p. 410)

Confirmation Checks. A confirmation check is
any expression by the NS immediately following an utterance by the interlocutor which was designed to elicit confirmation that the utterance had been correctly understood or correctly heard by the speaker. Confirmation checks are always formed by rising intonation questions...they always involve repetition of all or part of the interlocutor’s preceding utterance. (Long, 1989, pp. 81-82, cited in Foster and Ohta, 2005, p. 410)

Clarification Requests. A clarification request is any expression by an NS designed to elicit clarification of the interlocutor’s preceding utterance(s). Clarification requests are mostly formed by questions, but may consist of wh- or yes/no questions as well as uninverted intonation and tag questions. While questions are the most frequent form of clarification request; they are also effected by statements like I don’t understand, or Try again.

(Long, 1989, pp. 82-83, cited in Foster and Ohta, 2005, p. 410)

The 3Cs have been used commonly by many researchers as definitions of NfM, or else are closely based on them. To summarize the definition, there are three salient features
in NfM approaches; first, NfM is face-to-face interaction, and an interlocutor focuses on learners' errors and momentary corrects them during the conversation. Second, a learner needs to modify his/her IL deviant norms immediately when they receive NfM. Third, it occurs only when there is a communication breakdown.

Four Major Issues with Negotiation for Meaning

For past decades, researchers asserted that negotiating meaning using the 3Cs provides "the necessary and sufficient conditions for acquisition and mastery of a second language" (Donato, 1994, p. 34). However, some researchers have begun to raise concerns about L2 instructors' total dedication to the concept of NfM. Foster and Ohta (2005) reexamined the nature of NfM and identified four major problems, discussed in the next section.

Face Threatening. As has been seen previously, NfM is a face-to-face interaction that may give negative feedback to a learner's deviant forms of the TL. According to Foster and Ohta (2005), "NfM is potentially demotivating because it emphasizes a lack of success in using the target language" (p. 407). Similarly, Selinker (2006) stated, "frustration and anxiety often occur when one cannot adjust to how prior linguistic knowledge and skills make current
performance not very targetlike, especially when you are
told over and over... but you seem to be unable to stop
doing it” (p. 208). As is stated by Selinker, learners tend
to lose confidence and are demotivated when they are often
notified their failures. Hence, Foster and Ohta added that
too much NfM interaction can “invite frustration and
embarrassment, two feelings which probably do not
facilitate SLA” (p. 408).

Addition to the above notion, Foster and Ohta remarked
that learners often hesitate to use NfM even though they
are not sure about the meaning of the conversation because
they fear “appearing to be pushy or a fool,” or “avoid
interrupting conversation to request clarification or
repetition of things that are not entirely clear” (Foster &
Ohta, 2005, p. 407). Therefore, the NfM interaction is more
likely characterized by hierarchical interaction between a
NS and a learner rather than a dyadic interaction, because
the NS has more power to control the interaction than a
learner. Thus, in other words, learners are always bearing
the brunt of an interlocutor’s “picking flaws” interaction.

As is discussed above, this kind of face-threatening
feature of NfM could be a social or socio-psychological
barrier for L2 learners leading to avoidance of using the
TL. As Tarone (2006) remarked that fossilization may occur “as a result of social and socio-psychological forces that affect cognitive processing and so impede acquisition” (p. 158). He stated that “these forces result in a socio-psychological barrier that prevents L2 input from affecting cognitive processes that might alter the structure of the interlanguage” (p. 159); consequently, as many researchers have agreed, lack of input leads to stabilization of the IL, and then fossilization may occur.

Failure to Treat Morphosyntax Mistakes. As is mentioned above, NfM occurs when there is communication breakdown; however, as Gaskill (1980) noticed, “other speakers do not commonly interrupt a speaker to do a correction” (p. 126). Studies such as Pica (1992) showed that “communication breakdowns are more likely to be due to problems with lexis than with morphosyntax” (Foster & Ohta, 2005, p. 408). For example, Gaskill listed 12 NfM exchanges between NNS and NS in his study. Among those NfM cases, only one was due to phonological problems; others pertain to lexical problems. Furthermore, as it is seen below, one of the cases indicated that the NS neglected the learner’s morphosyntax errors as is shown below.
Jane (NS): Um, how long have you been in this country?
Hassan (NNS): hhh. I has been here for two months.
Jane: I see.
Hassan: two month and half.
(Gaskill, 1980, p. 132. emphasis added)

In addition to this, Sato (1986) examined the relationship between discourse processes and the emergence of IL morphosyntactic structures: past-time reference (PTR). Her study showed similar findings to Gaskill’s: that NfM helps learners to identify lexical items rather than morphological. Therefore, she stated, “Learner’s interlocutors may aid in the discovery of lexical but not morphological markers of pastness” (p. 43).

Moreover, Pica’s study showed similar results. Pica (1992) reviewed 569 negotiations, and none of them referred to morphological items. In accord with those studies, Foster and Ohta (2005) stated that “NfM is something which seems to miss the mark in SLA as far as morphosyntax is concerned” (p. 408). As is seen, some researchers showed that NfM interactions have fewer efficacies for correcting learners’ morphological errors; thus, deviant language errors remain in their IL.

Ambiguous Structures of Negotiation for Meaning. To examine the relationship between NfM and learner’s
interactional adjustment correctly, a researcher is required to identify exact NfM moves, where learners receive NfM and modify their utterances to repair communication breakdown. However, those surface structures are often ambiguous, because some utterances look like they function as NfM, but they may imply other functions. The following conversation shows how it is difficult to determine the NfM move.

C1: What do you like in London?
D2: London? Ah, there are a lot of things to do here.
C3: A lot?
D4: There are a lot of things to do in your free time. A lot of shops, and you can go bowling, skating, there are cinemas, Where I live, no. (Foster & Ohta, 2005, p. 413, emphasis added)

Foster and Ohta pointed out that the utterances above, "London?" Or "A lot?" seem to functioning as NfM: to confirm or to clarify. However, they indicated that "In D2, the speaker provides an item which constitutes a turn, but functions to allow her time to begin mentally to formulate her answer," and in C3, "Comprehension of "A lot?" does not seem to be at issue. Rather, the speaker is inviting her interlocutor to continue speaking" (p. 413). They asserted, A rising intonation and verbatim repetition of a utterance may signal understanding and interest
in further information just as easily as it may signal understanding and interest in further information just as easily as it may signal a lack of understanding and desire of clarification. (Foster & Ohta, 2005, p. 408)

As is seen, some researchers may have misconceived the interactions which are similar in appearance to NfM; in fact they may not be NfM, and thus credibility of the NfM studies is called into question.

Inaccurate Depiction of Negotiation for Meaning Task Value. Typical NfM experimental methods simply quantify instances of NfM to prove NfM facilitates language acquisition. However, Foster and Ohta (2005) pointed out that "When NfM is used as a measure of a task, the quantitative analysis may not present an accurate depiction of a task's value in terms of providing opportunities for SLA" (p. 408). Ellis (1985) also claimed that it may be inaccurate to understand the process of input by simply counting conversational adjustments.

Additionally, Donato (1994) alerted "The development of L2 skills in the social context is far more complex than the present approach to the topic acknowledges" (p. 35). He asserted that "Changes in linguistic systems are brought
about in ways that go beyond mere input crunching by the individual learner"; therefore, "Focusing on the conversational adjustments of language learners will inevitably obscure the functional significance of collaborative dialogic events" (p. 52). Thus, as is pointed out, simply focusing on a learner's adjustments during the interaction and quantifying instances of NfM may not provide an accurate depiction of the value of a task, because the language acquisition is "more complex model than merely input-output mechanistic theories advanced in much of the SLA literature" (Watson-Gegeo & Nielsen, 2003, p. 162).

As described above, researchers have begun to reconsider the nature of NfM interaction. Additionally, Foster and Ohta (2005) argued the efficiency of the NfM and stated,

While NfM has been prioritized as a key locus of SLA, our data show that when NfM is absent, there is much occurring which should promote language acquisition and that the learners we studied pool their resources to promote each other's language development...
The classic three Cs are not the norm in our data, but are a subset of a larger variety of conversational moves learners make in the process of talking with one another and assisting one another with the interactive task at hand. (p. 424)

In accordance, there may be other kind of interaction to facilitate L2 learning other than NfM. Donato suggested that SLA researchers need to “provide a complete picture of the effects of social interaction on individual L2 development requires abandoning the barren notion” (p. 38). Researchers have reexamined prior studies, and have conducted a variety of studies to investigate the interaction pattern of the successful learners. Then, they found that the interaction pattern that leads to successful learning was very similar to child’s cognitive development activity assisted by an adult, which was proposed by Vygotsky (1978). In this way, researchers draw their attentions to Vygotsky’s approach as an alternative way to assessing the impact of social interaction on SLA.

Vygotskian Approaches to Second Language Acquisition

Vygotsky’s approach was first used for explaining a child’s cognitive development and has evolved through the involvement of researchers. According to Vygotsky, social
interaction is the key to individual development. Vygotsky (1978) explained, “Every function in the child’s cultural development appears twice, on two levels. First, on the social, and later on the psychological level; first, between people as an interpsychological category, and then inside the child, as an intrapsychological category” (p. 86). In turn, a learner needs interaction with others in the process of cognitive development.

Likewise, Donato claimed that “Language acquisition and concept formation occur as the result of interaction. In other words, their development is social, not individual, and is the result of joint problem-solving activities” (Donato, p. 123). As Vygotsky proposed, researchers have reconsidered the impact of environmental contribution factors: social interaction (assistance from others) on SLA. To understand Vygotsky’s approach, two key concepts will be described as follows: the zone of proximal development (ZPD) and scaffolding.

Zone of Proximal Development

Vygotsky’s original definition of ZPD is “The distance between the actual developmental level as determined independent problem solving and the level of potential development as determined through problem solving under
adult guidance or in collaboration with peers” (Vygotsky, 1978, p. 86).

Since Vygotsky proposed the ZPD, many researchers have tried to explain the ZPD in plain words from various perspectives. For instance, Foster and Ohta (2005) stated, “The ZPD is used to understand how assistance is related to language development” (p. 414). Schinke-Llano (1993) stated, “ZPD is the area in which learning takes place” (p. 123). Guerrero and Villamil (2000) gave a more transparent explanation of the Vygotsky’s ZPD definition. They stated that the actual developmental level is determined by what a learner can do alone, and the potential development can be established by what a learner can possibly do with the assistance of adult or more capable peer.

Ohta (2001) applied this notion to L2 development and defined ZPD as “The distance between the actual developmental level as determined by individual linguistic production, and the level of potential development as determined through language produced collaboratively with a teacher or peer” (p. 9).

In addition to this, Ohta stated that learners can get assistance not only from their interlocutors, but also from other sources, such as books, magazines, on-line resources,
TV, etc. Figure 2.6 illustrates the concept of ZPD. Foster and Ohta described, "What is within the zone of proximal development is within the learner's reach, but not yet fully incorporated into the learner's linguistic system. Language development might occur as this gap between individual and joint performance is filled," (p. 414) and "ZPDs are evident wherever one learner is enabled to do something by the assistance of another that he or she would not have been able to do otherwise" (p. 414).

The Potential Level of Development

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Assistance from other sources -> Zone of Proximal Development (ZPD) <- Assistance from other people
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The Actual Level of Development

Figure 2.6. The Concept of Zone of Proximal Development
In accordance, as Foster and Ohta remarked, by being assisted through social interaction, a novice learner internalizes the advanced learner’s (or NS’s) process/ability of L2; and thereby second-language acquisition takes place.

Similarly, Donato (1994) stated, “In the presence of a more capable participant, the novice is drawn into, and operates within, the space of the expert’s strategic processes for problem solving,” (p. 37) and this is “a way for the novice to extend current competence” (p. 37).

To summarize, the ZPD presents a learner’s possible developmental dimension that can be enhanced by a peer; through assistance and interaction with the peer, the learner will be able to internalize the peer’s knowledge, strategies, and skills into his or her own cognitive system; this cognitive activity is called internalization (Vygotsky, 1978). In other words, ZPD shows how a learner will be able to develop more advanced ability through internalizing a peer’s skills.

As Donato stated, the concept of internalization shows “the importance of attributing a more dynamic role to the social context than has yet been achieved in the literature on interaction and L2 acquisition” (pp. 37-38). Then, what
kind of interaction context will provide the best help to learners to internalize the L2 system into their IL? Vygotsky (1978) suggested "scaffolding" as an approach to activate learner's ZPD and facilitate language acquisition. The association of ZPD and scaffolding was discussed and developed by many researchers, and it still causes controversy among them. In following section, the features of scaffolding are discussed in detail.

What is Scaffolding?

The concept of scaffolding derives from cognitive psychology and L1 acquisition research on children, which was first used by Vygotsky in the child cognitive development field (see Guerrero & Villamil, 2000). In Vygotsky's theory, "the child is viewed as a building, actively constructing him-herself. The social environment is the necessary scaffold, or support system, that allows the child to move forward and continue to build new competencies" (Berk & Winsler, 1995, p. 26).

In the above view, Vygotsky sees children as unskilled personnel who need help from others, such as parents or teachers to support their cognitive processing skill. Moreover, Berk and Winsler noted that "a component of scaffolding is joint problem solving; the first component
of scaffolding is engagement of children in an interesting and culturally meaningful, collaborative problem solving activity" (Berk & Winsler, 1995, p. 27). Thereby, Berk and Winsler continued, it is important that "children interact with someone while the two are jointly trying to reach a goal" because people learn best when they are working with others while actively engaged in problem-solving" (p. 27).

According to Wood, Bruner, and Ross (1976), successful scaffolding is characterized by six features: 1) recruiting interest in the task, 2) simplifying the task, 3) maintaining pursuit of the goal, 4) marking critical features and discrepancies between what has been produced and the ideal solution, 5) controlling frustration, and 6) demonstrating an idealized version of the act to be performed (see Donato, 1994; Guerrero & Villamil, 2000).

To summarize, the concept of scaffolding in simple words, it is a warm and supportive collaborative activity between a novice learner and an expert learner or a NS that assists the novice learner to acquire new skills. SLA researchers have attempted to tie Vygotsky’s theory (ZPD and scaffolding) to SLA classroom interaction and further refine the perspectives of scaffolding.
Many researchers have begun to consider that scaffolding might be effective to facilitate L2 learning in many ways. Researchers have attempted to demonstrate the relevancy between scaffolded help and the ZPD within a L2 learning situation. For instance, Guerrero and Villamil (2000) indicated, "Scaffolding in the L2 would thus consist of those supportive behaviors, adopted by the more expert partner in collaboration with the L2 learner, that might facilitate the learner's progress to a higher level of language development" (p. 53).

Looking at successful collaborative scaffolding in tasks between novice learners and expert learners, researchers found L2 learning scaffolding has similar characteristics between L1 learning scaffolding that was discussed by Wood et al. (1976). In addition to this, many researchers found the effect of scaffolding learning on SLA is, in fact, very similar to that of group work. Long (1985)'s five pedagogical arguments of the functional use of group work will be renamed and discussed in the following section.
Scaffolding Increases Language Practice Opportunity. Researchers insist that a L2 learner needs to receive scaffolded assistance mainly from other learners through collaborative learning in SLA classroom rather than receiving only from a NS teacher. As Long (1985) indicated, in a traditional teacher-centered adult SLA classroom (a class of 15 students meeting three hours a day), students receive only a limited amount of practice. Long asserted, “Each student will have a total of only about one and half hours of individual practice during a six week program” (p. 208). As is clear, it is impossible for learners to improve their L2 if they are not given enough time to output.

However, Long (1985) supposed that if even half the time of lesson is available for group work, the total individual practice time will increase dramatically compared to that available in a traditional teacher-centered classroom. Hence, through providing scaffolding assistance through collaborating tasks, learners have more opportunities to output; in this way, a learner can practice L2, leading to acquisition.

Scaffolding Improves the Quality of Students’ Talk. Researchers such as Gass & Selinker (2001) insisted that only limited input is available and the quality of input is
low in peer-assisted tasks. However, others argued with this notion, saying that learners could offer one another more effective scaffolding help than a NS peer because they are "sensitive to the difficulties their partners were experiencing and proactively offered a variety of conversationally-based assistance" (Foster & Ohta, p. 421). Donato (1994) also stated,

Second language learners appear quite capable and skillful at providing the type of scaffolded help that is associated in the developmental literature with only the most noticeable forms of expert-novice interaction, such as parent and child, teacher and student, NS and NNS, or master and apprentice. (p. 52)

Therefore, Donato (1994) insisted that "collaborative work among language learners provides the same opportunity for scaffolded help as in expert-novice relationships in the everyday setting" (p. 41). Hence, "It appears to be useful to consider the learners themselves as a source of knowledge in a social context" (p. 52). Kohonen (1992) also asserted,

There is evidence to suggest that good language learners can use a variety of strategies to assist in
gaining command over the new language skills. This implies that less competent learners might benefit from the training on strategies evidenced among more successful language learners. (pp. 24-25)

As is stated above, despite the concerns of low quality of the input from other learners, researchers indicated that they are useful and valuable for L2 learning.

However, it is true that learners sometimes exchange incorrect knowledge; yet, they are “at all times creatively co-constructing their own system of making meaning through words in an L2” (Guerrero & Villamil, 2000, p. 65). In addition to this, Long (1985) stated that learners’ face-to-face communication in group work is a natural setting for interaction; therefore, learners can receive good quality of input which involves various contexts. Hence, a learner who engages in cohesive sequences of utterances develops not only grammar, but also a variety of skills that are needed in L2 communicative competence.

Scaffolding Helps to Individualize Instruction. As Kohonen (1992) stated, “In classroom learning situations, there appears to be great difference in ability of L2 learners: some learn languages quite easily and rapidly, while others need more time, and some seem to have little
ability even if they make a serious effort" (p. 20). Not only variability in L2 abilities, but other kinds of individual differences are often ignored in the L2 language classroom; such as, "student’s age, cognitive and developmental stage, sex, attitude, motivation, aptitude, personality, interests, cognitive style, cultural background, native language, prior language learning experience, and target language needs” (Long, 1985, p. 210).

Though it is difficult to address all of these differences during collaborative tasks, a learner receives more attention to those in a scaffolded activity than in a traditional classroom. For example, Mohan and Smith (1992) studied four Chinese learners with different backgrounds and language skills, and had them work together on a task. Results showed that all learners were able to receive meticulous instruction from peers and succeed despite the individual differences. As it is stated above, in peer-assisted learning, a novice learner receives focused attention and assistances when it is needed; thus, he/she is motivated to focus on tasks and acquire a new competence.

Scaffolding Promotes a Positive Affective Climate. As Long (1985) stated, “Many students, especially the shy or linguistically insecure, experience considerable stress
when called upon in the public arena" of the traditional classroom. "This stress is increased by the knowledge that they must respond accurately and above all quickly" (p. 211). He continued,

Research has shown that if students pause longer than about one second before beginning to respond or while making a response, or (worse) appear not to know the answer, or make an error, teachers will tend to interrupt, repeat, or rephrase the question, ask a different one, "correct," and/or switch or another student. Not all teachers do these things, of course, but most teachers do so more than they realize or would want to admit. (Long, 1985, p. 211)

Compared to those stressful language environments, peer-assisted work "provides a relatively intimate setting and usually, a more supportive environment" (Long, p. 211). Donato (1994) also stated that "during problem solving, an experienced individual is often observed to guide, support, and shape actions of the novice, who, in turn, internalizes the expert's strategic processes" (p. 37). Barnes (1973) also wrote of small group settings,
An intimate group allows us to be relatively inexplicit and incoherent, to change direction in the middle of sentence, to be uncertain and self contradictory. What we say may not amount to much, but our confidence in our friends allows us to take the first groping steps towards sorting out our thoughts and feelings by putting them into words. (p. 19)

As identified above, one of the advantages of the small-group setting is “to stem from the fact that the more intimate setting provides students with the opportunity to negotiate the language they hear, free from the stress and rapid pace of the teacher-fronted classroom” (Rulon & McCreary, 1986, p. 182).

In summary, as was discussed above, the positive affective climate that is created by supportive assistance in scaffolded activity facilitates a learner’s utterance, and hence promotes second-language acquisition.

**Scaffolding Motivates Learners.** As it was discussed earlier, some features of scaffolding, such as “maintaining pursuit of the goal” and “controlling frustration during problem solving” motivate learners to complete their task. Unlike NfM or other negative feedback approaches,
scaffolding assistance does not "stop the flow of conversation" (Gass & Selinker, 2001, p. 270) to correct learner’s errors, but provides a supportive environment which encourages a learner to go on. In simple terms, an interlocutor does not act as an accuser, but as a mediator in scaffolded learning.

For instance, Guerrero and Villamil (2000) looked at their data and found that some of the behaviors of the expert learner included affective factors to keep a novice learner motivated. Those factors are as follows:

1) intentionality (willingness to influence a partner’s actions, to keep the interaction going, and to accomplish goals)

2) task regulation (efforts at making the task manageable for both and inducing solution to textual problems)

3) meaning (promoting understanding by focusing on what was not clear or discrepant and eliciting clarification or correction)

4) contingent responsivity (ability to read a partner’s cues--especially affective--and respond accordingly (Guerrero & Villamil, 2000, p. 64)
As it is stated above, scaffolded assistance provided by peers will help motivate a learner, thus promote L2 learning.

To summarize the concepts of scaffolding assistance, scaffolding is not a mere output-input interaction, which only focuses on the linguistic domain to correct learners’ errors in their output, but rather its main focus is on a task that integrates various contexts. It is very similar to Selinker’s focus-on-non-core-form hypothesis. Selinker (2006) stated, “it seems to me that when attention is on practicing non-core structures and units, it is core linguistic form (tense aspect, agreement...) that is in fact being consolidated in memory” (p. 208).

In the process of completing a task, a learner experiences many activities. Zuckerman (2003) considered learning is a side effect of any activity, and stated, “Learning is an inevitable part of any activity: whatever one does or experiences, he or she inevitable acquires new impressions and attitudes, intentions and meanings, information and vocabulary skills and abilities, pieces of wisdom and mental schemes” (p. 178). As Zuckerman (2003) remarked, a principal goal of activity is learning; although it seems that a learner is not focusing on the
grammatical item, a learner will be able to acquire new competence through his/her experiences in the scaffolding activities.

Additionally, and the most important, well-designed scaffolding of a learner is supportive and encouraging. It never interrupts the flow of the conversation to correct a learner’s errors or inflicts modification of errors on a learner, as NfM does. In this way, scaffolding assistance reduces pressure for a learner to output the TL, and creates an intimate and positive environment to facilitate learning. As is been discussed above, in current studies, researchers have regarded scaffolding as the key to effective social interaction, which promotes learning in L2 learning situations.

Treatment of First Language and the Learner’s Errors

As it has seen above, the central characteristic of the Vygotskian approach is providing an intimate environment and encouraging learners to focus on the task. Therefore, this involves a unique treatment of the learner’s first language (L1) in L2 learning. As many language instructors recognize, L2 learners often use their L1 to complete tasks when they have the same L1 context. As was discussed earlier, some researchers considered L1 to
have a negative impact on SLA, and therefore instructors treated L1 as a hindrance to SLA and forbade the use of L1 in traditional L2 classrooms. Yet, Vygotskians do not consider L1 as a hindrance to acquisition, but see the L1 as one of the mechanisms that facilitate interaction.

For example, as Guerrero and Villamil (2000) commented, L1 is "a linguistic resource that facilitated communication and achievement of the task goal" (p. 56). They studied the interaction of learners who speak the same L1, and asserted "the use of the L1 to talk about the task was considered valuable to the extent that it did not inhibit but instead promoted achievement of the goal and stimulated reflection, reconsideration, and restructuring of the L2" (p. 64).

Furthermore, some researchers, such as Foster and Ohta (2005), regarded learners' L1 use as a sign of success. Hence, in Vygotskian approach, there is no limitation of L1 use and "no attempt was made to coerce the use of L2" (Donato, p. 39) while learners are working on the task; therefore, learners feel free to interact and to focus on the task.

Vygotskians' treatment of errors should also be explained here. In the Vygotskians' view, "Errors need not be viewed as flawed learning or even as approximations of
the target language, but rather as the result of a learner’s trying to gain control of a task” (Schinke-Lliano, 1993, p. 126). Similarly, Dunn and Lantolf (1998) noted, “(un)grammaticality, and pragmatic and lexical failures are not just flaws or signs of imperfect learning but ways in which learners attempt to establish new identities and gain self-regulation through linguistic means” (p. 427).

In summary, for the past several decades, the use of L1 and presence of errors have been considered as a hindrance of learning by researchers; however, applying the Vygotskian’s view, attitudes towards learner’s L1 and errors have been changing, and there are now seen as tools to facilitate learning.

Moves toward Acquisition

As has been discussed above, issues of the relevance of the ZPD and scaffolding, and how they promote L2 learning, have caused heated interchanges among SLA researchers. Yet many came to the same conclusion: “peer scaffolding results in linguistic development within the individual” (Donato, 1994, p. 52). By looking at the data, researchers noticed that learners change their interaction processes during peer scaffolding task and move towards acquisition; they move from other-regulated learner to
self-regulated learner (Donato, 1994), or in other words, from other-correction to self-correction (Foster & Ohta, 2005).

Foster and Ohta defined that “other-correction (other-regulation) involves a peer correcting his or her partner,” and self-correction (self-regulation) is “self-initiated, self-repaired, and occurs when learner corrects his or her own utterance without being promoted to do so by another person” (p. 420). That is to say, learners need to receive assistance from others to notice their deviant forms and modify those for the first increment of the time; however they will gradually become independent learners once the rules are internalized into learners’ IL systems. They will be able to correct and make changes by themselves without assistance, and acquire the particular rules.

For example, Donato (1994) studied the interactions of students who studied French in collaborative planning tasks that featured a corrective scaffolding activity, and examined their IL development. In the one-hour session of the activity, there were 32 scaffolded assistances that occurred to facilitate the correct use of grammar in their interactions. Then, Donato found out, in the activity which took place during the next class, all but eight of the
scaffolded utterances were correctly used by learners. Donato stated, "The contents of 24 scaffolded help sequences were observed at a later time in the independent performance of the students when help was no longer available" (p. 51).

Similarly, Guerrero and Villamil (2000) studied a corrective scaffolding task in writing and stated, "Episode by episode, we observed the writer's gradual assumption of responsibility ... we witnessed the emergence of the writer's self-regulation and his growth as a more independent writer and reviser" (p. 65). Hence, they concluded, mediated assistance may activate a learner's ZPD potentially, and he/she moves away from other-regulated to self-regulated learning to become a more successful learner.

As has been claimed, scaffolding facilitates the growth of a novice learner's IL. However, is this approach also effective for a more capable learner? Donato (1994) stated that during scaffolded interaction, "The speakers are at the same time individually novices and collectively experts, sources of new orientations for each other, and guides through this complex linguistic problem solving" (p. 46).
Similarly, Guerrero and Villamil (2000) asserted that learners are “not only able to offer each other scaffolded help but were also able to grow linguistically beyond their own independent performance” (p. 54). They also stated that a corrective scaffolded task allows both novice and expert learners “to consolidate and recognize the knowledge of the L2 in structural and rhetorical aspects and to make this knowledge explicit for each other’s benefit” (p. 65). Selinker (2006) also indicated that attending the other grammatical items “can automatize grammaticized core form and either delay or avoid possible fossilization” (p. 208). This implies that through assisting novice learners’ problem L2 features, a scaffolded task may help advanced learners to become aware of their own fossilized IL structures and give them the chance to overcome them by assistance from a peer.

As Swain (1985) described, fossilized learners may notice deviant forms of their utterance by having appropriate knowledge of the TL, but they may still not be able to use it correctly. However, while working on a corrective scaffolded task, both novice and advanced learners are inevitably led to focusing on forms and being aware of their errors. Therefore, they will “pay more
attention to TL language forms in their own output and that of their interlocutor, and not only at rare moments of communication breakdown but also at moments when learners offer help and encouragement" (Foster & Ohta, 2000, p. 425).

In this way, scaffolded tasks encourage advanced learners to keep focusing on their own and an interlocutor's TL forms; therefore, they need to activate and modify their IL systems constantly. To put it differently, a corrective scaffolding task will not "let their IL fossilize comfortably" (Foster & Ohta, 2000, p. 425); which is to say, it can prevent learners from possible fossilization and help to destabilize their IL.

As has been discussed, scaffolding provides learners a purposeful learning situation and real-life interaction among learners. Selinker (2006) stated,

A learner who creates connections between structure-dependent interlanguage units or forms with real-life ordinary scenes, storing and retrieving them in working memory, both auditory and visual memory must then be attached to scenes and the hypothesis is that the effect is more TL-like behavior. (p. 205)
As is noted, the goal of scaffolding is not merely correcting the deviant language forms: rather, a learner will be able to do self-correction; in other words, to be a more independent learner who can monitor his/her learning when there is no assistance available. According to Zuckerman (2003), a good learner can examine the situation and act. She stated,

What really distinguishes an authentic learner is not profound and extensive knowledge nor brilliant display of what one has learned. It is the ability and incentive to seek and find knowledge independently, to transcend the limits of one’s own erudition and of established, stereotyped beliefs. (p. 195, emphasis added)

Furthermore, Zuckerman (2003) asserted, it is a teacher’s obligation to structure conditions to facilitate independent learning and change the condition for their action to seek new ways of acting.

As Zuckerman (2003) stated, an instructor needs to provide effective assistance (scaffolding) to learners to be more independent learners. In addition, Berk and Winsler (1995) interestingly stated that “what makes effective 'scaffolding' varies from culture to culture; its
characteristics can only be understood in terms of the values and requirements of the child's (a learner's) society as a whole" (p. 34); furthermore, learners have various differences as Kohonen (1992) and Long (1985) stated in earlier section.

In conclusion, in the earlier part of this chapter has discussed the phenomenon of fossilization and its various possible causal factors, and the latter part has discussed how instruction prevents stabilization or fossilization and what kind of instruction is effective. An instructor needs to consider learners' various factors that may cause difficulties in L2 learning and lead to stabilization. An instructor needs to plan classroom activities in order to correspond with each student's needs and give just-enough assistance. In this way, a second-language classroom provides effective learning situations and helps learners to be more independent and show initiative in his or her learning. Thus, as is stated, when instruction can help learners to destabilize their IL, they will be able to avoid fossilization and there will be a great possibility for learners to reach nativelike proficiency in the TL.
CHAPTER THREE
RESEARCH METHODOLOGY

Procedure

Research Questions

One of the main tasks of this study is to interview Japanese advanced English learners to ascertain their fossilization factors. The study examines the accuracy rate of their IL by quantitatively investigating the frequency of learners' errors in order to examine what elements appear to be stabilized or fossilized. The second task of the study is to recommend teaching interventions based on these factors. Then, three lines of inquiry are pursued by these analyses:

1. If an adult second-language learner has not reached nativelike proficiency level, what language elements have fossilized?

2. What aspects of IL do Japanese advanced English learners have in common; or are they different from each other, and unique?

3. What are the causal factors of Japanese advanced learners' fossilization? Is there any way to control these factors?
Participants

The study set several criteria for choosing a person to be studied. The first criterion was that a person needed to be an advanced learner of English whose length of residence (LOR) in the United States is more than five years. This suggests that the participant has been sufficiently exposed to English to develop his or her IL. Secondly, a person’s age of arrival (AOA) to the United States should be older than eighteen years in order to focus the issue on the adult second-language acquirer. Thirdly, a person needs to have achieved a high academic standing in the U.S in order to be claimed as an advanced English learner. There were two Japanese females who met all of those criteria and participated in this study. A detailed description of each participant follows.

Yukiko. A 26-year-old Japanese advanced English learner, Yukiko’s AOA is nineteen years old. Her LOR is seven years. Prior to arrival, she had received six years of teacher-centered English instruction in junior and senior high school in Japan. Before she came to the U. S, she had never been exposed to an English-language society. After receiving three months of English as a second-language (ESL) instruction, she majored in biology at La Sierra University and graduated in three years magna cum laude. After she received the Bachelor of Science,
she went to medical school at Loma Linda University and graduated in 2007. Currently, she is working as a pediatric intern at the Loma Linda University Medical Center.

Katsura. A 29-year-old Japanese advanced English learner, Katsura’s AOA is nineteen years old, and her LOR is eleven years. She had also received six years of teacher-centered English instruction in Japan. After attending an ESL course at Pacific Union College for three months, she studied biology at the same college. After she earned a BS in biology, she received a MS in marine biology in Loma Linda University. She has worked as a product engineer at a software company for 3 years.

Methodology

Two semi-structured interviews were administrated to enable participants to respond at length. The first interview was adapted from Long (1997) to examine the learners’ IL. The learners’ interviews were recorded and transcribed. All of their spontaneous speech was parsed into single sentences, and 12 morphemes were analyzed in order to determine the stabilized or fossilized items. Those 12 morphemes are progressive -ing, noun plural, copulas (is, am, are, was, and were), auxiliary be, modal auxiliaries, auxiliary do, auxiliary have, articles (a, an, and the), regular past, irregular past, third person -s, and possessive -s.
In the second interview, participants were administrated the Language Factors Questionnaire (LFQ), which was based on Han's taxonomy, revised in order to fit this study (see following section for details). By analyzing learners' interviews, the study investigates what factors are possibly inhibiting them from learning English.

Instruments

Long (1997)'s Longitudinal Study

Long (1997) had studied the interlanguage of a 75-years-old Japanese female, Ayako, for 16 years. She was a fossilized English learner who came to the United States when she was 22 years old and had lived in an English society for 37 years when the study began in 1985. In his study, a battery of six oral production tasks was administrated to elicit a varied sample of the discourse of the learner. One of the tasks was a semi-structured interview, involving open-ended questions as follows:

1. In as much detail as possible, would you please tell me about your childhood?
2. Can you please tell me about a person who has had a great influence on your life, and why?
3. What do you like to do in your free time?
4. How important is English is your life?

5. What differences do you think there are between Japan and America and between Japanese and Americans?

(Long, 2003, p. 508)

In this study, questions one and two were adapted as an instrument to collect participants' interlanguage data. The interview lasted 20 to 30 minutes. The Oral Proficiency Interview (OPI) is designed by American Council on the Teaching of Foreign Language (ACTFL) also lasts 30 minutes or less, so it could be said that the length of the interview in this study was enough to determine the learner's English proficiency and interlanguage errors.

Revised Version of Han's Taxonomy

As it has been discussed earlier, in the original version of Han's taxonomy (Appendix A), several factors overlapped and were ambiguously classified. To make it more understandable, new categories were added to the taxonomy, and some factors were renamed and reclassified in the revised version of Han's taxonomy (Table 3.1). For instance, in the "External" category, the factor Language Complexity of L1 and L2 was moved from the "Environmental" category because Language Complexity itself is not environmental. In the "Environmental" category, factors
originated from “Instruction” and “Input/Output” were separated because their origins are different.

Furthermore, within the “Internal” section, the “Cognitive” factors were more finely divided. Three categories were added under the category “Knowledge presentation”: that is, L1 Influence, UG Availability, and Prior Knowledge. Another three categories were added under the “Knowledge Processing” factors as well; that is, Lack of Attention and Sensibility to Language, Inappropriate Processing, and Inappropriate Learning Strategy. Each factor was reconsidered according to its origin one by one and reclassified if necessary; or, in some cases, the overlapping factors were eliminated or renamed. By revising the taxonomy, it becomes easier to grasp the origins of causal factors of fossilization.

The Language Factors Questionnaire

In order to investigate which factors impede the learner’s developing IL, a questionnaire, comprised of 34 questions that were based on revised Han’s taxonomy (Table 3.1), was created for this study. Some of the factors refer to causal origin beyond learner’s control; for example, Lack of Access to UG, or Changes in the Neural Structure of the Brain can not be assessed in a questionnaire format.
However, most of the putative causal factors were shifted into the questions and used to examine the reasons why the learner has fossilized. There was no time limitation when in administering the Language Factors Questionnaire, so that the participant could have sufficient time to think and compose the answer. Some of those questions are open-ended, and participants’ L1 (Japanese) was allowed when they answered the questions to get more information about the factors. The Language Factors Questionnaire appears as Appendix B.
Table 3.1 Revised Version of Han’s Taxonomy of Putative Causal Factors of Fossilization

<table>
<thead>
<tr>
<th>External Environmental</th>
<th>Instruction</th>
<th>Type/quality of instruction</th>
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<tr>
<td></td>
<td></td>
<td>Absence of corrective feedback</td>
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<td></td>
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<td>Reinforcement from linguistic environment</td>
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<td>Lack of communicative relevance</td>
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<td>Input/output</td>
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<td>Quality of input</td>
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<td>Lack of oral/written input</td>
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<td></td>
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<td>Lack of opportunity to use the target language</td>
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<th>Language complexity of a L1 and a L2</th>
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<tr>
<th>Internal Cognitive</th>
<th>Knowledge representation</th>
<th>L1 influence</th>
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<td>L1 influence conspiring with other factors</td>
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<td>Representational deficits of the language faculty</td>
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<td></td>
<td>UG availability</td>
<td>Lack of access to UG</td>
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<td>Failure of parameter resetting</td>
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<td>Non-operation of UG learning principles</td>
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<td></td>
<td>Prior knowledge</td>
<td>Possession of a mature cognitive system</td>
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<td>Learning inhibiting learning</td>
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<tr>
<th>Knowledge processing (receptive/productive)</th>
<th>Lack of attention and sensibility</th>
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<td></td>
<td>Lack of attention</td>
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<td>Lack of understanding</td>
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<td>Inability to notice/analyze input-output discrepancies</td>
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<td>End or lack of sensibility to language data</td>
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<td>Failure to detect and resolve the inherent variation in the IL</td>
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<td>Internal (con’t.)</td>
<td>Cognitive (con’t.)</td>
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Table 3.1 Revised Version of Han’s Taxonomy.
CHAPTER FOUR

ANALYSIS OF THE DATA

Fossilization Profiles

Fossilized Items

According to the research procedure presented in Chapter Three, the grammatical accuracy rate in a Japanese advanced English learner’s IL was analyzed to address the following research questions: What language elements have fossilized in their IL? What aspects of IL do they have in common, or are they different from each other, and unique? The third hypothesis is addressed later. The learners’ simplified IL data are presented as Tables 4.1 and 4.2 respectively, and the raw data for each participant are presented in Appendices C and D. The data in Tables 4.1 and 4.2 are separated into two classes: near nativelike are forms for which the learner has attained over ninety percent masterly, whereas stabilized/fossilized are forms for which the learner has attained less than ninety percent mastery. A detailed discussion of the learners’ IL follows.

Analysis of Yukiko’s Interlanguage. As is shown in Table 4.1, Yukiko has acquired some of the morphemes at near-native level, such as irregular past, progressive -ing, and auxiliary do; however, she has stabilized most of the grammatical items
before she has reached a **nativelike** proficiency level.

Especially, the accuracy rate of auxiliary **have** was the lowest accuracy rate and was far short of nativelike (71 percent): she could not distinguish between use of the past perfect and the present perfect tenses. Similarly, she could not use the past tense of the certain modal auxiliaries (could, would) at various times. Additionally, she repeatedly missed the mark of noun plural **-s** (*a lot of moms are perfectionist_*), regular past **-ed** (*my mom just clap_ her hand), and third person **-s** (*how he look_*). With copula items, she often use present tense **is** or **are** instead of past tense **was** or **were** when it was needed.

Table 4.1 Putative Fossilized Items in Yukiko’s Interlanguage

<table>
<thead>
<tr>
<th>Near-native</th>
<th>% Attained</th>
<th>Stabilized / Fossilized</th>
<th>% Attained</th>
</tr>
</thead>
<tbody>
<tr>
<td>irregular past</td>
<td>95</td>
<td>copulas</td>
<td>86</td>
</tr>
<tr>
<td>progressive <strong>-ing</strong></td>
<td>93</td>
<td>third person <strong>-s</strong></td>
<td>83</td>
</tr>
<tr>
<td>auxiliary <strong>be</strong></td>
<td>93</td>
<td>regular past</td>
<td>81</td>
</tr>
<tr>
<td>auxiliary <strong>do</strong></td>
<td>90</td>
<td>noun plural</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>modal auxiliaries</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td></td>
<td>articles</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td></td>
<td>auxiliary <strong>have</strong></td>
<td>71</td>
</tr>
</tbody>
</table>

\(^1\) In linguistic notion, an asterisk (*) is uses to denote a phrase or sentence that is inaccurate or ungrammatical.
Additionally, two typical errors were distinguished in the use of articles in Yukiko's IL. One was overusing the article the when it was not needed. Notably, she tended to put the in front of the name of place (*the Scotland, *the Portugal, *the Kentucky). Her second typical error was misplacing the when a or an is needed (*we took the airplane, *we go to the church); however, interestingly, she never used a when the was required. She often made those kinds of errors after motion verbs, such as go to or get to (*we went to the British, *get to the Portugal). In addition to those two types of errors, she sometimes missed the articles (* we went to _ church).

Analysis of Katsura's Interlanguage. Table 4.2 shows what has been acquired and what tends to have fossilized in Katsura's IL. Compared to Yukiko, she has acquired many morphemes at near-native or nativelike level. For example, auxiliary do, auxiliary have, and possessive -s have reached a 100 percent accuracy, and other items such as auxiliary be, modal auxiliaries, and noun plural also got high accuracy rates (over 90 percent). Yet she could not avoid the signs of fossilization in some structures. Stabilization in particular items was still seen in her IL. For example, like Yukiko, she often missed the third person -s and regular past -ed.
However, the types of error in articles were quite different from those in Yukiko's IL. For example, she repeatedly made the same pattern of error: using a with plural noun (*a fresh vegetables, *a fireworks) which was not seen in Yukiko's IL. Furthermore, 66 percent of the article errors were focused on missing articles (*not _ music teacher) which comprised only 26 percent of Yukiko's article errors.

Table 4.2 Putative Fossilized Items in Katsura's Interlanguage

<table>
<thead>
<tr>
<th>Near-native</th>
<th>% Attained</th>
<th>Stabilized / Fossilized</th>
<th>% Attained</th>
</tr>
</thead>
<tbody>
<tr>
<td>auxiliary do</td>
<td>100</td>
<td>irregular past</td>
<td>85</td>
</tr>
<tr>
<td>auxiliary have</td>
<td>100</td>
<td>articles</td>
<td>76</td>
</tr>
<tr>
<td>possessive -s</td>
<td>100</td>
<td>regular past</td>
<td>67</td>
</tr>
<tr>
<td>auxiliary be</td>
<td>97</td>
<td>third person -s</td>
<td>56</td>
</tr>
<tr>
<td>copula</td>
<td>95</td>
<td></td>
<td></td>
</tr>
<tr>
<td>modal auxiliaries</td>
<td>94</td>
<td></td>
<td></td>
</tr>
<tr>
<td>progressive -ing</td>
<td>92</td>
<td></td>
<td></td>
</tr>
<tr>
<td>noun plural</td>
<td>91</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

To summarize, analysis indicates that the stabilized items and near-native items were coexistent in these Japanese advanced English learners' IL. There were three common stabilization items in their IL: that is, regular past, third person -s, and articles. The error patterns of third person -s and regular past
were similar to each other; however, errors in articles were unique and had individual error patterns as it is stated above. Therefore, in conclusion, these learners had common stabilized items as was stated above and unique tendencies to fossilize other items at the same time.

Fossilization Factors

The learners' fossilized language elements were identified in the above section; however, this still does not inform us about the reasons why the learners have fossilized their IL. To investigate the causal factors of fossilization, results of the Language Factors Questionnaire (LFQ) are analyzed in this section. The data corresponding to these results are presented in Appendices E and F.

As has been stated, both of the participants are considered successful English learners; however, as is shown in Tables 4.1 and 4.2, Yukiko has fossilized more language elements than Katsura has although she has accomplished higher academic achievement than Katsura. Why did this happen? What factors have helped or impeded their second-language acquisition? The results of the LFQ show interesting possible causes.

Common Factors. As successful learners, both subjects have some common factors that helped their second-language acquisition. For example, both of them have had sufficient
opportunities to output English: they stated that they have been speaking or writing in English about 10 hours a day. Furthermore they mentioned that high quality of input has been available to them outside the classroom (for example, friends, working environment, TV, books, etc.) since they have arrived at the United States.

The learning strategies used were also similar across learners. They stated that they have practiced all language skills (listening, writing, reading, and speaking) when they had a chance to do so. Especially, both of them stated that they have tried to socialize with American friends as much as they can to practice speaking in English because they have the intention to reach nativelike proficiency levels. That is to say, they did not have many socio-psychological barriers to American culture. Furthermore, the learners stated that they are still paying attention to their utterances consistently so as not to make grammatical mistakes although they are considered advanced English learners.

However, in spite of the learners’ intention and the time they have spent to reach nativelike proficiency, they have fossilized some language elements. The LFQ results indicate that some factors similarly affected both Yukiko and Katsura. One of the noticeable factors is L1 Influence. Learners stated that
they have realized that their L1, Japanese, influences their speaking English in many ways, such as pronunciation and syntax. They both indicated that missing some L2 elements in L1, such as articles, make these elements in L2 harder to learn.

These L1 influences occurred not only in the output but also in their thinking. They stated transfer-of-thinking or difference of values between the U. S. and Japan had impeded learning. For example, Yukiko stated, "Speaking out our own ideas to elder persons or in front of many people is not practiced in Japanese culture. A modest person is preferred and speaking out too much is considered as intrusive. Therefore, it was hard for me to speak out and share my own ideas in a classroom." However, both of them stated those differences do not matter since they have become more fluent in English. Yukiko stated, "I can switch to an English mode from my Japanese mode more easily than before." Therefore, it could be said that L1 influence affects a beginning learner more than an advanced learner.

A second factor originates in lack of understanding English grammar. The learners indicated that they are not sure about some language rules. Apparently, the LFQ result shows that the factor Lack of Understanding leads to avoidance or simplification of language elements. For example, Katsura stated, "I'm not sure how to use the relative clause, so I consciously
and consistently avoid using the structure.” Similarly Yukiko stated, “I would not use structures I’ve never heard of. I just use the structures that I know are right.” In addition to avoidance, both of them mentioned that simplification occurs in their IL; “I try to simplify English so that I can make sure that I make fewer mistakes.” Furthermore, both of them mentioned that they are not sure of the usage of the English articles (a, an, and the) on which they got low accuracy rates in the previous data. That is to say, the learners’ lack of understanding of English grammar may be one of the biggest factors causing fossilization.

Addition to those factors, false automatization is one of the noticeable factors of fossilization. As was stated earlier, the learners have developed certain error patterns in their ILs. For example, the error pattern “a with plural noun” in Katsura’s IL (*a strict decisions) or the pattern “the after the verb of motion go” in Yukiko’s IL (* I gotta go to the Kentucky) were recognized. In those cases, it could be assumed that learners have developed the factor False Automatization in their IL unintentionally. Those error patterns seem more likely to be fossilized in the future.

As has been discussed, the learners have several common factors that may have lead to fossilization. However, as is shown
in Tables 4.1 and 4.2, Katsura has reached a higher proficiency level compared to Yukiko; therefore it is predictable that Yukiko may have some causal factors of fossilization that Katsura may not have. In the following section, the difference of factors will be analyzed and discussed.

**Differences in the Factors.** One of the differences between Yukiko and Katsura is their motivation level in learning English. Yukiko stated that she has lost most of the passion for learning English compared to before, because her current proficiency level satisfies her communicative needs right now. She stated that she has not tried anything to improve her English recently even though she realizes that her English is not perfect, because she believes that there is only limited space left in her brain to learn language as she gets old. She also believes that she is not talented in learning language.

However, in contrast, Katsura is still highly motivated to learn English and has tried hard to reach higher proficiency. She realizes that her weakness in English is speaking; therefore, she attends Toastmasters Club, an organization focused on improving public-speaking skills. She meets weekly for an hour or two with other members and practices speaking to improve her communication skills. She stated, "The necessity of English in my job compels my learning." Furthermore, she believes in
herself, stating she is a talented language learner and she is eager to learn another language (Spanish) because it is needed in her job. She mentioned she is doing better in learning English as she gets older because she has a mature cognitive system and learns better in her current environment. Therefore, it is assumed that the decline of development in Yukiko’s IL did not originate in age-related factors or neuro-biological factors, but rather, psychological factors: her lack of motivation to learn English and her lack of confidence are related.

In addition to this, the amount of corrective feedback that Yukiko has received is much less than Katsura’s. Yukiko stated, “I’ve never received corrective feedback from others, even from my ESL teachers.” In contrast, Katsura stated, “I have consistently received corrective feedback from others.” She stated that she has received corrective feedback from co-workers or fellow Toastmasters members. When she does a presentation in a Toastmasters meeting, a member who has a role of a grammarian checks her grammar mistakes, and notifies her of her errors.

In this way, by receiving much corrective feedback, Katsura was able to state precisely the problems in her IL when was asked in the LFQ; yet Yukiko realizes only few of her own errors. Moreover, Yukiko stated, “I notice that I make fewer mistakes and I don’t have to pay as much attention now.”
Therefore, it is assumed that lack of feedback leads to lack of noticing and learners lose chances to reconstruct their errors. This leads to fossilization.

Instructional Interventions

As was stated above, three main origins of fossilization factors are distinguished; that is, lack of understanding grammar, lack of motivation to improve IL, and lack of feedback on errors. To defossilize learners' errors, instructional intervention needs to overcome those three factors. First, it needs to provide explicit instruction of grammar on elements about which a learner has poor understanding.

For example, both Yukiko and Katsura mentioned that they lacked understanding about the usage of articles. In addition to this, each learner has same issues in understanding grammar; for instance, Katsura stated she has been confused about the rules for relative clauses. On the other hand, Yukiko described the difficulties in distinguishing the pronouns she and he in her spontaneous speech. Therefore, grammar instruction needs to focus on each learner's weakness and distinctness and provide appropriate knowledge of the grammar points that a learner has fossilized.

Secondly, instruction needs to motivate a learner to reach a higher goal. Advanced learners like Yukiko have often been
satisfied with their communicative skills and do not put any effort into developing their IL. This is because a learner often does not realize on which language elements he or she needs to focus to improve his or her IL. For example, Yukiko answered in the LFQ that she realizes that her utterances are quite different from those of an English native speaker; however she doesn’t detect exactly what language elements are wrong.

Therefore, instruction needs to promote learners’ noticing what elements need to be fixed. The role of instruction is not only to promote learners’ noticing, but also to guide learners to overcome those stabilized errors by providing effective activities. When learners know the problems in their IL and the way to improve them, they can see their path and goal; hence, that motivates them and enables them to work on improving their IL. In fact, if a learner is able to get assistance from others, he or she can improve his or her IL without attending regular grammar classes. The detailed instruction intervention plan is presented in Figure 4.1 and discussion follows.

First, an instructor needs to investigate a learner’s IL is presented in this study; then, the instructor needs to inform a learner what the problems are in his or her IL to promote noticing. On the second stage of instruction, the instructor and the learner discuss what language elements they need to focus
on in order to improve his or her IL (collaborative planning) based on a learner's language data.

Figure 4.1. Instructional Intervention: A Step to Destabilization/Defossilization
By doing collaborative planning, a learner will be motivated because he or she can see the clear goal of achievement. After deciding what elements they will work on, the instructor needs to provide explicit grammar instruction in order to avoid the learner’s lack of understanding of elements in the third stage of instructional intervention.

For example, if they have decided to focus on correct use of articles, the instructor teaches about articles using a handout so that a learner can always go back to the instruction and use it as assistance when he or she needs help. Instead of giving them a handout, as an instructional resource, an instructor can use a grammar book or an Internet resource that teaches TL grammar. Those self-instruction materials help a learner to go over the rules of the language as many times as they want, drawing upon assistance from the material source, because a learner often hesitates to ask simple grammar rules after all these years he or she has spent for learning English. Therefore, this strategy creates a positive learning environment and offers better learning opportunities for a learner.

However, the assistance from material sources is not enough for a learner to improve his or her IL, because language is a tool of communication, as was stated in Chapter Two. A learner needs to communicate with others to improve his or her
IL. Therefore, a learner also needs a cooperative partner who can facilitate his or her learning the TL (assistance from other people).

In fact, a learner needs to ask a person who is close to him or her to be a learning partner, and ask for evaluation of his or her spontaneous speech or e-mail writing (because e-mail writing is considered more spontaneous than formal document writing) and giving feedback using a feedback sheet (Table 4.3) to see whether his or her target forms are improving or not. A partner can provide sufficient feedback and encouragement in order to maintain the learner’s motivation. Under this situation, a learner is able to learn without undo pressure or embarrassment.

In conclusion, by receiving feedback from material sources and other people and allotting sufficient time for practice, a learner will be able to internalize the rules and become an independent learner at the final stage of acquisition. A learner reaches the goal when he or she does not need any more assistance and destabilizes the errors. In this kind of instruction, a learner takes the initiative to learn rather than relying on an instructor. Therefore, a learner can create as many learning opportunities he or she wants, in order to learn in a supportive environment. By doing so, a learner will be trained to be an
independent learner, in control of his or her learning. In this way, a learner will be able to manage his or her IL and avoid fossilization.

Table 4.3 Feedback Sheet on Focused Items

<table>
<thead>
<tr>
<th>Feedback Sheet (Ex. articles)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Instance of Errors on Focused Item</td>
<td>Number of Errors</td>
</tr>
<tr>
<td>Instance of Errors on Other items</td>
<td>Number of Errors</td>
</tr>
</tbody>
</table>

Comments and advice:
CHAPTER FIVE

SUMMARY

Conceptual Framework

This study was conducted to recommend instructional intervention based on research about Japanese advanced learners of English, to assist them to reach a higher proficiency level. The ILs of two Japanese advanced English learners were investigated in order to examine whether they as adult second-language learners have reached a nativelike proficiency level; or if not, what aspects of IL they have fossilized, and what factors caused this fossilization.

In the first task of the study, the thirty-minute interview with questions adapted from the study of Long (1997) was administered to participants Yukiko and Katsura, Japanese advanced English learners who arrived in the U. S. at the age of nineteen. Yukiko is a pediatric doctor whose LOR is 7 years. Katsura is a product engineer whose LOR is 11 years. The learners' discourse was tape-recorded and transcribed to investigate the frequency of errors in 12 morphemes (progressive -ing, noun plural, copula (is, am, are, was, and were), auxiliary be, modal auxiliary, auxiliary do, auxiliary have, articles (a, an, and the),
regular past, irregular past, third person _s, and possessive _s to analyze what possible fossilized items exist in their IL. In the second task, the learners were interviewed with the Language Factors Questionnaire (LFQ) comprised of thirty-four questions based on a revised version of Han’s Taxonomy (see Chapter Three) in order to investigate putative causal factors.

The Results of Data Analysis

The results indicated that there were successes and failures coexistent in the Japanese advanced learners’ IL. Both of them have reached near-native accuracy in some elements; on the other hand, they have fossilized some elements at the same time. By analyzing their IL, the study found some similarities in the learners’ IL. For example, both of them have acquired nativelike proficiencies in progressive -ing, auxiliary do, and auxiliary be; and also they have fossilized the items irregular past, third person _s, and articles (a, an, and the).

However, when the learners’ IL errors were finely categorized and analyzed, the study found that the learners have individual error patterns in their IL: for instance, Yukiko always put the after motional verb go to or get to
(*get to the Portugal), and Katsura has an "a + plurals" error pattern (* a fireworks). Therefore, the study concluded that although there are some similarities in the Japanese advanced English learners' IL errors, other errors were individual and unique.

Similarly, results of the LFQ found that learners have similarities and differences in the putative causal factors of their fossilization. The LFQ indicated that there are a few factors in common that have helped the learners' second-language acquisition: that is, sufficient opportunities to output English and their learning strategies.

The study also indicated that there are a few similarities in causal factors of fossilization. For example, both learners have stated that L1 has influenced their abilities in English in many ways; however, as they stated, the frequency of L1 intervention has been gradually reduced as they have improved their English, because they can switch easily to and fro between English and Japanese modes. Therefore, it is assumed, L1 influence has more impact on a beginner learner's IL than on an advanced learner's.
Lack of understanding English grammar is also seen as one of the common causal factors of fossilization that may cause avoidance, simplification, and false automatization in both learners' IL. The learners have stated that they do not understand the rules of articles about which they got a low accuracy rate. In addition to these common factors, the result of Yukiko's LFQ implied that lack of corrective feedback on her errors and her low motivation for reaching a higher level are the main reasons why she has reached a lower accuracy rate than Katsura. It was assumed that lack of corrective feedback leads to lack of noticing deviant forms in the learner's IL; therefore the learner loses interest to improve his or her IL because of satisfaction with the current communicative skills.

Many people have believed that age is one of the main factors of fossilization; however, the results of the LFQ show that age limitation has not affected one of the second-language learners. For instance, Katsura never felt an age limitation in learning language because she realizes that she is learning better in her current environment by receiving extensive feedback provided in the Toastmasters meeting. She stated the instruction really helps her learning.
Therefore, it could be assumed that age is not the origin of the plateaus of development; but as the data indicated, the putative fossilization factors are more related to instruction than other factors. In other words, learners cease developing (stabilize) their IL because they cease learning to improve it. Moreover, there is no instruction available for them to motivate learning, or to give sufficient information or knowledge about their IL to improve their IL.

Conclusions and Recommendations

Based on the research data, the instructional interventions were designed in order to defossilize learner’s errors and lead them to nativelike acquisition. The study hypothesizes that adult second-language learners can reach nativelike proficiency levels if they receive proper instruction that provides a supportive environment and motivates them to reach a higher level of learning by informing them of their weaknesses and ways to overcome them.

However, this study is just a pilot study involving only few participants and short-term research with the goal of designing an appropriate instructional intervention.
research hypothesis has not as yet been fully substantiated by the evidence. Therefore, a longitudinal research that involves more participants is required to further explore the hypothesis.

In addition to this, further research needs to test the hypothesis whether the instructional intervention model which is presented in this study can destabilize learner’s errors and prevent fossilization. As was stated earlier, the number of adult second-language learners will expand rapidly. The demand for effective instruction will be greater. It is the obligation of second-language researchers to investigate adult second-language learners’ ILs and pursue effective instruction that can lead them to reach nativelike proficiency levels.
APPENDIX A

A TAXONOMY OF PUTATIVE CAUSAL FACTORS
OF FOSSILIZATION
# A Taxonomy of Putative Causal Factors of Fossilization

<table>
<thead>
<tr>
<th>External</th>
<th>Environmental</th>
<th>Internal</th>
<th>Cognitive</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Absence of corrective feedback</td>
<td>Lack of attention</td>
<td>Lack of attention</td>
</tr>
<tr>
<td></td>
<td>Lack of input</td>
<td>Inability to notice input-output discrepancies</td>
<td>Inability to notice input-output discrepancies</td>
</tr>
<tr>
<td></td>
<td>Reinforcement from linguistic environment</td>
<td>False automatization</td>
<td>False automatization</td>
</tr>
<tr>
<td></td>
<td>Lack of instruction</td>
<td>Automatization of the first language system</td>
<td>Automatization of the first language system</td>
</tr>
<tr>
<td></td>
<td>Lack of communicative relevance</td>
<td>Using top-down processes in comprehension</td>
<td>Using top-down processes in comprehension</td>
</tr>
<tr>
<td></td>
<td>Lack of written input</td>
<td>Lack of understanding</td>
<td>Lack of understanding</td>
</tr>
<tr>
<td></td>
<td>Language complexity</td>
<td>Use of domain general problem-solving strategies</td>
<td>Use of domain general problem-solving strategies</td>
</tr>
<tr>
<td></td>
<td>Quality of input</td>
<td>End of sensibility to language data language</td>
<td>End of sensibility to language data language</td>
</tr>
<tr>
<td></td>
<td>Instruction</td>
<td>The speed with which, and extent to which</td>
<td>The speed with which, and extent to which</td>
</tr>
<tr>
<td></td>
<td></td>
<td>automatization has taken place</td>
<td>automatization has taken place</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Processing constrains</td>
<td>Processing constrains</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failure to detect errors</td>
<td>Failure to detect errors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Failure to resolve the inherent variation in the</td>
<td>Failure to resolve the inherent variation in the</td>
</tr>
<tr>
<td></td>
<td></td>
<td>interlanguage</td>
<td>interlanguage</td>
</tr>
</tbody>
</table>

- 139
| Internal (con’t) | Cognitive (con’t) | Knowledge processing (receptive productive) (con’t) | Reduction in the computation capacity of the language faculty
Lack of verbal analytical skills
Lack of sensibility to input

| Psychological | Inappropriate learning strategy
Change in the emotional state
Reluctance to take the risk of restructuring
Simplification
Natural tendency to focus on content, not on form
Avoidance
Transfer of training

| Neuro-biological | Changes in the neural structure of the brain
Maturational constrains
Age
Decrease of cerebral plasticity of implicit acquisition
Neural entrenchment
Lack of talent

| Socio-affective | Satisfaction of communicative needs
Lack of acculturation
Will to maintain identity
Socio-psychological barriers

APPENDIX B

THE LANGUAGE FACTORS QUESTIONNAIRE
Language Factors Questionnaire

Instruction

1. Can you describe the type of instruction that you have received as you have learned English? For how long?
   a. teacher-centered ( ) years and ( ) months
   b. student-centered ( ) years and ( ) months
   c. self-instructed ( ) years and ( ) months

2. Have you received corrective feedback on your utterances while you were learning English?
   1. almost none
   2. sometimes
   3. often
   4. consistently

   Please describe:

3. Was there reinforcement of what you were learning from your surrounding linguistic environment, such as home, school, office, supermarket, bank, etc?
   1. almost none
   2. sometimes
   3. often
   4. consistently

   Please describe:

4. Have you had chances to connect the English you have learned in the classroom to real-life communicative situations?
   1. almost none
   2. sometimes
   3. often
   4. consistently

   Please describe:
Input/Output

5. What has been the main source of your input as you have learned English? Choose from following:

1. teacher input
2. peer input in the classroom
3. input outside the classroom
4. TV, Internet, books, etc.

6. What is your opinion about the quality of input that you have received? 1=very poor, 2=poor, 3=good, and 4=excellent

1. teacher input ( )
2. peer input in the classroom ( )
3. input outside the classroom ( )
4. TV, Internet, books, etc. ( )

7. Are opportunities to use (output) English available to you? Can you describe how?

1. almost none
2. sometimes
3. often
4. consistently

Language Complexity of L1 and L2

8. Do you think English is too complicated to acquire?

1. almost never
2. sometimes
3. often
4. consistently

L1 Influence

9. Do you feel that your native language interference with your learning English? Can you describe?

1. almost never
2. sometimes
3. often
4. consistently
10. Do you have difficulty learning English, because your native language does not have some language elements which English has? (for example, English articles) Please give me an example.

1. almost none
2. sometimes
3. often
4. consistently

Prior Knowledge

11. Do you think that your prior knowledge, such as your own cultural practices or learning methods, inhibit or demotivate your learning English?

1. almost never
2. sometimes
3. often
4. consistently

Can you describe how? If they motivates you, how?

Lack of Attention and Sensibility to Language Data

12. Do you pay more attention not to make grammatical mistakes when you speak or write in English?

1. almost never
2. sometimes
3. often
4. consistently

Can you describe?

13. Do you notice when your English production does not sound just the way a native speaker would say it?

1. almost never
2. sometimes
3. often
4. consistently
14. Do you think or feel that you are less open to leaning other languages because of the time you have spent learning English? If so, can you tell me why?

1. almost never
2. sometimes
3. often
4. consistently

15. What would you say are the greatest problems of your English acquisition? Please describe.

16. Do you sometimes feel like English is exhausting your brain? Please describe.

1. almost never
2. sometimes
3. often
4. consistently

17. How well do you understand the rules of English grammar?

1. poorly
2. some
3. mostly
4. completely

Processing

18. Do you feel that English rules come automatically to you when you output them? If so, when?

1. almost never
2. sometimes
3. often
4. consistently

19. To understand spoken English, do you start with understanding one word at a time or do you try to achieve general sense of what’s being said?
20. To understand written English, do you start with translating one word at a time or do you try first to achieve general meaning?

21. When you are tired or too busy, does this affect your ability to speak or understand English? Can you describe?

   1. almost never
   2. sometimes
   3. often
   4. consistently

22. Do you work at learning English? or do you work at improving your Japanese? Can you describe how?

   1. almost never
   2. sometimes
   3. often
   4. consistently

Learning Strategy

23. What kind of learning strategy have you been using to learn English or other languages?

Latent Psychological Behaviors (Mental Devices)

24. Do you think you are losing your passion to learn English?

   1. I have lost it completely.
   2. I have lost most of it.
   3. Compared to before, I think I’m losing some.
   4. I have the same passion as before.

25. When people speak to you in English, do you tend to use the same type of sentence and vocabulary to answer back?

   1. almost never
   2. sometimes
   3. often
   4. consistently

   Please describe.
26. When you talk with others using English, do you pay more attention to the meaning, or the form of what they say? Please describe.

1. meaning mainly
2. more likely, meaning
3. more likely, form
4. form mainly

27. Do you think you avoid using some English structures?

1. almost never
2. sometimes
3. often
4. consistently

Please give me an example.

28. Do you try to simplify English when you speak?

1. almost never
2. sometimes
3. often
4. consistently

Please give me an example.

Neuro-biological

29. Have you gotten better in learning new words as you have gotten older?

30. Do you believe that you have or had a special talent for second-language acquisition?
Socio-affective

31. Do you think your English ability satisfies your communicative needs?

1. not at all
2. somehow
3. mostly
4. entirely satisfied

32. Do you think you have acculturated into American culture?

1. not at all
2. somehow
3. mostly
4. completely

Please give me an example.

33. Do you think that you need to retain your national identity when you speak English? (for example, accent, the way you speak, etc.)

1. definitely not
2. rather not
3. better to retain
4. must retain

Can you tell me why do you think so?

34. Have you ever been offended by the ways of Americans? Do you sometimes think that you don’t want to totally belong to American culture? Does this affect to your learning English?

1. not often
2. sometimes
3. often
4. consistently

Please give me an example.
APPENDIX C

ANALYSIS OF YUKIKO'S INTERLANGUAGE
### Analysis of Yukiko's Interlanguage: The Accuracy Rate of Each Grammatical Item

<table>
<thead>
<tr>
<th>Grammatical Item</th>
<th>Instances</th>
<th>Total</th>
<th>Correct</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>progressive -ing</td>
<td>*I was been potty-training</td>
<td>13</td>
<td>14</td>
<td>93</td>
</tr>
<tr>
<td>noun plural</td>
<td>*a lot of moms are perfectionist</td>
<td>39</td>
<td>49</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>*my mom just clap her hand</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*that trip took us five and half day</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>copula</td>
<td>*there is not a big thing</td>
<td>72</td>
<td>84</td>
<td>86</td>
</tr>
<tr>
<td></td>
<td>*It's green.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>auxiliary be</td>
<td>*we are having meeting</td>
<td>13</td>
<td>14</td>
<td>93</td>
</tr>
<tr>
<td>modal auxiliaries</td>
<td>*I will never hold hands</td>
<td>12</td>
<td>15</td>
<td>80</td>
</tr>
<tr>
<td></td>
<td>*we can't take showers</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>auxiliary do</td>
<td>*we don't go to the good restaurants.</td>
<td>27</td>
<td>30</td>
<td>90</td>
</tr>
<tr>
<td></td>
<td>*I don't like him at all when I was a kid.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>auxiliary have</td>
<td>*I've never been to Europe before that</td>
<td>5</td>
<td>7</td>
<td>71</td>
</tr>
<tr>
<td></td>
<td>*he was one of the doctors that I have met in the hospital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>articles</td>
<td>*we saw the Scotland</td>
<td>119</td>
<td>152</td>
<td>78</td>
</tr>
<tr>
<td></td>
<td>*get to the Portugal</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*gotta go to the Kentucky</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>*After the crossing the north sea.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>*we go to the church</td>
<td></td>
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<tr>
<td></td>
<td>*we took the airplane</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>articles (con't.)</td>
<td>*we took <strong>the</strong> hotel room</td>
<td></td>
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<td>------------------</td>
<td>-----------------------------</td>
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<tr>
<td></td>
<td>*we went to ____ church</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*it didn't look like a</td>
<td></td>
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<tr>
<td></td>
<td>hair at all.</td>
<td></td>
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<tr>
<td></td>
<td>132</td>
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<td></td>
<td>153</td>
<td></td>
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<tr>
<td></td>
<td>86</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>regular past</td>
<td>*my mom just clap____ her</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>hand</td>
<td></td>
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<tr>
<td></td>
<td>*we sail____ to one port.</td>
<td></td>
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<tr>
<td></td>
<td>21</td>
<td></td>
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<td>26</td>
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<td></td>
<td>81</td>
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<tr>
<td>irregular past</td>
<td>*we just go along the</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>shore side</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>*We go to a supermarket</td>
<td></td>
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<tr>
<td></td>
<td>and get things</td>
<td></td>
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<tr>
<td></td>
<td>62</td>
<td></td>
<td></td>
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<td>65</td>
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<tr>
<td></td>
<td>95</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>third person</td>
<td>*how he look__</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>s</td>
<td>*it depends on what's</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>there</td>
<td></td>
<td></td>
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<td></td>
<td>10</td>
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<tr>
<td></td>
<td>12</td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>83</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>possessive s</td>
<td>No instance occurred.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>0</td>
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</tbody>
</table>
APPENDIX D

ANALYSIS OF KATSURA’S INTERLANGUAGE
Analysis of Katsura's Interlanguage:
The Accuracy Rate of Each Grammatical Item

<table>
<thead>
<tr>
<th>Grammatical Item</th>
<th>Instances</th>
<th>Total</th>
<th>Correct</th>
<th>Correct%</th>
</tr>
</thead>
<tbody>
<tr>
<td>progressive</td>
<td>*How people were import the stuff</td>
<td>23</td>
<td>25</td>
<td>92</td>
</tr>
<tr>
<td>-ing</td>
<td>*the company growing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>noun plural</td>
<td>*by digging old pot</td>
<td>42</td>
<td>46</td>
<td>91</td>
</tr>
<tr>
<td></td>
<td>*three big technology</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>copula</td>
<td>*Teachers are like my friend.</td>
<td>73</td>
<td>77</td>
<td>95</td>
</tr>
<tr>
<td></td>
<td>*My grandma is pretty crazy.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>auxiliary</td>
<td>*my father's father is passed away</td>
<td>33</td>
<td>35</td>
<td>97</td>
</tr>
<tr>
<td>be</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>modal auxiliaries</td>
<td>*how many times we can do</td>
<td>17</td>
<td>18</td>
<td>94</td>
</tr>
<tr>
<td>auxiliary do</td>
<td>No instance occurred</td>
<td>16</td>
<td>16</td>
<td>100</td>
</tr>
<tr>
<td>auxiliary have</td>
<td>No instance occurred</td>
<td>2</td>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>articles</td>
<td>*we did a fireworks</td>
<td>93</td>
<td>122</td>
<td>76</td>
</tr>
<tr>
<td></td>
<td>*buy a fresh vegetables</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*a maps</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*a strict decisions</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*think outside ___ box</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*he took me as ___ intern</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*he's ___ American</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>regular past</td>
<td>*I just like ___ to sleep</td>
<td>22</td>
<td>33</td>
<td>67</td>
</tr>
<tr>
<td></td>
<td>*I step ___ on her hair</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>*whole class try ___ Nawatobi.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>irregular past</strong></td>
<td><em>we have to swim</em>&lt;br&gt;<em>took the data and you can create the map</em>&lt;br&gt;<em>she has asthma</em></td>
<td>44</td>
<td>52</td>
<td>85</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>-----</td>
<td>-----</td>
<td>-----</td>
</tr>
<tr>
<td>**Third person **&lt;br&gt;<em>-s</em></td>
<td><em>children needs to hear</em>&lt;br&gt;<em>the maps solves everything</em>&lt;br&gt;<em>she understand ten</em></td>
<td>5</td>
<td>9</td>
<td>56</td>
</tr>
<tr>
<td>**possessive **&lt;br&gt;<em>-s</em></td>
<td>No instance occurred</td>
<td>4</td>
<td>4</td>
<td>100</td>
</tr>
</tbody>
</table>
APPENDIX E

YUKIKO’S FEEDBACK ON THE LANGUAGE FACTORS

QUESTIONNAIRE
Yukiko’s Feedback on the Language Factors Questionnaire

1. a. teacher-centered: 6 years and 3 months  
   b. student-centered: none  
   c. self-instructed: 7 years  

   Since I came to the U. S, I have learned English by reading textbooks, talking to friends, etc. Classes (including English or others) were not helpful at all for learning English.

2. Almost none. I’ve never received corrective feedback from others, even from ESL teachers, friends, or other instructors. They have never corrected my utterances since I have arrived in the U. S. Even though I wasn’t good at speaking English, none of them corrected my utterances. However, paper assignments were often corrected.


4. Sometimes. Same as the former question. I use English when I talk to my friends.

5. Input outside the classroom

6. a. teacher input (2)  
   b. peer-input in the classroom (2)  
   c. input outside the classroom (4)  
   d. TV, internet, books, etc (3)

7. Consistently. I always communicate with friends in English when I was in the school. Currently, I use English at work. I need to do a lot of presentations in English too. I think I usually have used English for 10 hours a day since I was
in the school.

8. No, not at all. It is quite easy.

9. Often. For example, Japanese grammar, pronunciation, transfer-of-thinking, etc. However, I can switch to an English mode from Japanese mode more easily than before.


11. Consistently. Especially the difference of sense of values inhibits learning. Speaking out our own ideas to elder persons or in front of many people is not practiced in Japanese culture. A modest person is preferred and speaking out too much is considered as intrusive. Therefore, it was hard for me to speak out and share my own ideas in a classroom. However, I think my prior knowledge of English grammar helped learning English. My established learning methods also helped me learning in the class.

12. Consistently. I definitely pay attention on my English and try not to make any mistakes. I pay attention to what I say all the time and often correct myself when I make grammatical mistakes. I notice that I make fewer mistakes and I don’t have to pay as much attention now, as I stay longer in the States and use more English at work.

13. Consistently.


15. Vocabulary, lack of fluency, pronoun (she/he). I think I don’t notice other problems.
16. Almost none. But speaking English whole day makes me more
tired than speaking Japanese.

17. Mostly. I’m not sure how to use articles.

18. Consistently.

19. General sense of what’s being said.

20. Sometimes. I have to translate word to word when I’m reading
an article with unfamiliar topics. But usually, I try to
achieve general meaning.

21. Often. When I had poor sleep, before menstruation starts,
I can’t speak English well.

22. Almost none. I haven’t tried anymore.

23. I read aloud the books. I talked with friends. I did online
chatting with my friends in English. I tried to use English
as many chances as I could.

24. I lost most of them.

25. Consistently. Always same structure.

26. Content only. But when a person who has very bad grammar
use, it draws my attention to his or her forms (for example,
black English). But usually, I don’t pay attention on form.

27. Often. I think I do it without my intention? I don’t know.
I just imitate what native speakers are using. I would not
use structures I’ve never heard of. I just use the structures
that I know are right.
28. Often. I try to simplify English so that I can make sure that I make fewer mistakes.

29. NO!! Definitely not!!

30. No. Not at all. I don’t think I have a talent.

31. Somehow.

32. Somehow. I still prefer to read in Japanese, prefer to watch Japanese TV, go to Japanese church, I like to be surrounded by Japanese friends.

33. Rather not. I want to speak in the way others can understand easily.

34. Often. The way people are rude to each other. Unkind, short temper, etc. Sometimes, I think that I don’t want to be like them, or to be exposed to American culture. But I don’t know, many people told me that I’m so Americanized!!
APPENDIX F

KATSURA’S FEEDBACK ON THE LANGUAGE FACTORS

QUESTIONNAIRE
Katsura’s Feedback on the Language Factors Questionnaire

1. a. teacher-centered: 7 years
   b. student-centered: 11 months
   c. self-instructed: 10 years

2. I have consistently received corrective feedback from others, especially on my mistakes during e-mail communication. And in the public speaking class, I have always received the feedback.

3. Consistently. In the public speaking class, there is always theme of the day, for example, a hug day, Indian summer, etc.

4. Consistently. As I stated before, the words I learned in the public speaking class is useful in the real life activity.

5. Input outside the classroom

6. a. teacher input (1)
   b. peer-input in the classroom (2)
   c. input outside the classroom (3)
   d. TV, internet, books, etc (4)

7. Consistently. When I was in the school I use English whole day, and currently at the job, I use English at least 8 hours a day, mostly, communicating by e-mail.

8. Sometimes only.

9. Before, it consistently affected my pronunciation, transfer-of-thinking, the grammar syntax, the way of saying,
etc. there were big differences between Japanese and English. But these days, not so much invasion.

10. Consistently. The articles, spelling, etc. I’m always confused.

11. Sometimes. But I feel more comfortable being in American way. The Japanese style is too formal for me. I’m more motivated learning English. In Japan, I wasn’t sure if I’m doing good at the work or not, because nobody says anything, no encouragement, no comments at all, but here, in the U.S, my boss always encourage me. So, that motivates me a lot. Because I know how the Japanese culture is, and I know I can fit in, so, that makes me motivate learning English.

12. Consistently. Especially when I’m writing e-mail at the work, I read through several times not to make mistakes.

13. Often.

14. Almost none. I want to learn Spanish because I can use at work.


16. Often. When I’m attending the long meeting, especially, the topic was not so familiar with me. I have to think a lot, so makes me tired.

17. Mostly. But the use of the articles is not sure.

18. Consistently. However, when the topic is not familiar, I need to think word to word to speak.
19. General sense.

20. General meaning. Because I’m lazy to open the dictionary. But most of the time I can figure out the meaning without understanding the meaning of each word.

21. Sometimes, but usually, there is a necessity to speak English, so I’m doing my best to speak good English. But I think the ability goes down a little bit.

22. Consistently. I’m attending the Toastmasters speech meeting every Friday morning for an hour or two to improve my public speaking ability. It helps improving my listening skill, and vocabulary, and thinking in English.

23. Writing, reading, listening (watching a lot of movies) and speaking (talking with friends).

24. I have same passion as before. I need to study hard to meet the needs at work. I can’t perform good at work if I don’t speak better English. The necessity of English in my job compels my learning.

25. Consistently. I’ve never tried or even thought if using new structures.

26. Rather say, content. But when I talk to Chinese or Korean, I often realize their mistakes.

27. Consistently. I’m not sure how to use the relative clause, so I consciously, and consistently avoid using the structure. I’ve never used this structure because I’m not sure how to use.
28. Consistently. I don’t use the long sentences. Because I might have mistakes.

29. Yes. The public speaking class helps me learning more. I think I know how to learn better now because I’m more matured.

30. Yes. I think I have good listening skill. A lot of people told me that I have it. Somebody told me that learning English is like listening to music, so if you have good listening skill, you will be a better English learner.

31. Somehow. But not yet. I need to improve more!! The necessity of English in my job compels my learning.

32. Somehow. I like the working environment here than Japan. But, I will never understand American’s sense of humor and taste. It’s been a mystery.

33. Rather not. For me, it is better not to have Japanese accent for good communication. However, it is O.K for other people not to lose their identity.

34. Sometimes. The way Americans are mean to each other (at restaurant, bank, etc). I hate the traffic here, I don’t like the TV program, such as court TV. It’s so sleazy. But when I visited other states, I liked here, I thought this is the beautiful country for the first time. So may be it is the problem in CA? But even I’m often offended by Americans, it hasn’t affected my motivation of learning English.
REFERENCES


Slobin, D. (1996). From 'thought and language' to 'thinking for speaking.' In J. Gumperz & S. Levinson (Eds.), Rethinking linguistic relativity (pp. 70-96). Cambridge: Cambridge University Press.


