

Fossilization in Second Language Performance: The Concern of Ultimate Attainment

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DOI: <https://dx.doi.org/10.47772/IJRISS.2023.70845>

Received: 07 July 2023; Revised: 21 July 2023; Accepted: 25 July 2023; Published: 21 August 2023

ABSTRACT

The issue of fossilization has been a concern for researchers, in the area of second language acquisition, many of whom have investigated its possible causes, in what form they appear, and at what age. However, it is evident that second language learners fail to reach native-like competence in the target language. Consequently, this study examines the issues of fossilization in relation to ultimate attainment. It compares two main hypotheses, pointing out their underlying focus. The methodology used in this study is documentary derived from extensive reading of extant literatures in the area of second language acquisition. The findings, here, point to the fact that the crux of the discussion on fossilization is ultimate attainment drawing from the UG theory. Finally, the study concludes, aligning with Han's position, that fossilization is inevitable, and also that it has great significance on second language acquisition.

Key Words: fossilization, interlanguage, target language, ultimate attainment.

INTRODUCTION

Since 1972, the issue of fossilization has attracted the attention of researchers and has raised certain questions regarding when and how to treat the potentially fossilizable linguistic features in second language classroom; this has been the concern of second language acquisition researchers. The concept of fossilization was first introduced by Selinker (1972) when he pointed out that 95% of second language learners fail to reach the same level of first language competence. He described this phenomenon as 'fossilization'.

This paper examines the issue of fossilization in second language performance in line with ultimate attainment. It discusses the definition of fossilization and brings to light two hypotheses deemed relevant and important for the purpose of this study. Other sections of the paper pay attention to classification, causes and control of fossilization, and finally, the issue of ultimate attainment.

DEFINITION OF FOSSILIZATION

There have been definitions and redefinitions of fossilization by various scholars. For instance, Selinker (1972) explains that fossilization is a mechanism that underlies surface linguistic material which speakers will tend to keep in the IL (interlanguage) productive performance, no matter the age of the learner or the amount of instruction he receives in the TL (target language). Selinker and Lamendella (1978) re-redefined fossilization, maintaining that it is a permanent cessation of IL learning before the learner has attained TL norms at all levels of linguistic structure and in all discourse domains in spite of the learner's positive ability, opportunity, and motivation to learn and acculturate into target society. Selinker's definition implies that this obstruction to learning is a permanent feature in the performance of the learner in the target

language. Han (2004) sees fossilization as when learning ceases prematurely even though the learner exhibits adequate motivation to learn, is exposed to abundant amounts of input, and has plentiful opportunities for practice. Han (2013) also posits that fossilization is an interlanguage-unique phenomenon in which a semi-developed linguistic form or construction shows permanent resistance to environmental influence and thus fails to progress towards the target. Han's opinion, here, suggests that fossilization defies the learner's efforts to reach native-like competence in the target language. Ying (2023) posits that fossilization is a form of stagnation, either in speech or writing that a learner experiences in the process of learning a language. Drawing from Jiang's definition is the fact that fossilization can manifest both in speech and writing.

The notion of fossilization has been interpreted differently by different scholars since it was proposed. For instance, there are some terms like backslidings, stabilized errors, learning plateau, typical error, persistent non-target-like performance, de-acceleration of the learning process, ingrained errors, systematic use of erroneous forms, cessation of learning, structural persistence, long-lasting free variation, persistent difficulty, and inability to fully master target language features describing the similar meaning, which lead to confusion for quite a long time (Wei, 2009; Han, 2003).

Furthermore, there are some commonly accepted notions about fossilization. They include:

1. It may appear at different language levels
2. It may occur at different learning stages among age groups
3. It may be either structure fossilization or competence fossilization
4. It is usually manifested as the deviant forms from the target language norms
5. There are soft and hard degrees of fossilization

From all that has been said above, there is an alignment with the position of Schachter (1990) that learners often fail to reach target-level attainment, and the outcome of second language learning for many is incomplete and fragmentary when compared with that of first language acquisition. However, Combs (2009) opines that fossilization is not a global, system-wide cessation of learning, but is centered on specific linguistic targets.

There have been speculations that learners with strong motivation, adequate exposure to rich second language input, and much opportunities for output will likely acquire a second language, however, it is not often the same in post-pubertal second language acquisition. Thus, Long (1997) maintains that even in situations where plenty of motivation and opportunities for practice are available, most language learners do not reach target-like proficiency, and their interlanguage is prone to fossilization, which means that learners are unable to acquire certain features in target-like norms.

Some scholars have made hypotheses on the issue of fossilization. Examining such hypotheses can give further enlightenment on the issues of fossilization. This study examines the following hypotheses based on their relevance to its purpose:

Hans (2009) Selective Fossilization Hypothesis.

This hypothesis posits that it is the interaction of first language (L1) markedness and second language (L2) input robustness taking place in the learner's mind that determines how acquirable or fossilizable a certain linguistic feature will be. Han further maintains that the (L1) serves as the source language that provides the initial building materials to be gradually blended with materials taken from the target language, and it is this interaction that subsequently results in the selective restructuring of the L2 grammar. Also, during the process of conceptual restructuring from the L1 to the L2, L2 input is likely to be adjusted by L1 interference or influence through the L1-based semantic and conceptual system.

Selinker's (1972) Fossilization Hypothesis.

The underlying tenet, here is that second language acquisition inevitably falls short of complete attainment, with certain deviances from the target language norms remaining permanent on the second language system (inter language). That is, the Hypothesis points to linguistic features- items, rules and subsystems, that speakers of a particular native language will tend to keep in their interlanguage relative to a particular target language; this is a feature that manifests regardless of the age of the learner or amount of explanation and instruction he receives in the target language. The hypothesis, in its form, takes fossilization in not only phonological but also epistemological terms. That is, as both a physical entity and a cognitive mechanism. Thus, the mechanism exists in a Latent Psychological Structure (LPS), which in turn, is genetically determined in the brain (Selinker 1972). Selinker opines that the LPS comprises five central processes. They include: Language transfer, transfer of training, learning strategies, communication strategies, and overgeneralization.

Selinker goes on to state:

I would like to hypothesize that these five processes are processes which are central to second language learning, and that each process forces fossilizable material upon surface (interlanguage) utterances controlling to a very large extent the surface structures of these utterances (p.217).

Furthermore, he points out that combinations of these processes produce what might be termed **entirely fossilized competence**. This implies that, when the five processes interact, their impact will be stronger on interlanguage than would be that of a single underlying process, and may result in fossilized competence. When there is fossilized competence, the entire interlanguage system shows little syntactic growth, as vocabulary continues to expand.

Selinker opines that the fossilization mechanism is set in motion whenever the learner attempts to express his own meaning in the second language.

Another position of the hypothesis is that fossilization is not only to be expected in individual learners but also in whole groups of individuals, given long-term interaction in an Interlingua context, resulting in the emergence of a new dialect. More so, Selinker posits that the linguistic units of fossilization should involve parallel data in the three systems- native language (NL), interlanguage (IL) and target language (TL), and should therefore be Interlingua. This implies that the underlying linguistic units of fossilization is an interaction between the NL, the IL, and the TL.

Generally, the fossilization Hypothesis treats fossilization both in an abstract sense, as an explanation for an overall lack of ultimate attainment of L2 learning, and in a more concrete sense, as a neuro-cognitive mechanism and a behavioral artifact. Han's hypothesis emphasizes L1, on the one hand, as a source of material from which L2 draws and on the other hand, its interaction with the L2 causes an interference on L2 acquisition. Additionally, the hypothesis suggests a selective restructuring of L2 grammar.

Selinker's hypothesis, on its part emphasizes deviation from target language norms, which leads to a system he terms *interlanguage*. Moving further from Han's emphasis on L1 interference, Selinker's hypothesis considers other issues such as transfer of training, learning strategies, communication strategies, and overgeneralization.

Fossilization has been classified into various categories which will be briefly discussed below.

CLASSIFICATION OF FOSSILIZATION

Individual Fossilization and Group Fossilization.

As noted above, Selinker classifies fossilization into individual and group fossilization. Individual

fossilization is seen as the persistence of individual learner's interlanguage development, while the group fossilization is the plateaus in the diachronic development of a community language. Commenting on individual fossilization, Wei (2009) posits that it is of two types: error reappearance, and language competence fossilization. Error reappearance refers to the inappropriate interlanguage structures that are thought to have been corrected but continue to appear regularly. It can be found in interlanguage of beginners or learners with low proficiency.

Language competence fossilization refers to the plateau in the development of second language learner's phonological, grammatical, lexical and pragmatic competence; it is found in second language learners who have been learning a target language for a long period of time. Notably, repeated errors are often the demonstrations of competence fossilization. If fossilized language competence becomes pervasive in a community, it results in group fossilization, thus, leading to a new dialect.

Temporary Fossilization and Permanent Fossilization.

Temporary fossilization, also known as stabilization, shows that fossilized interlanguage consists of learning plateaus, where development of given target language features is simply arrested or inhibited for shorter or longer periods of time (Sims, 1989). On the other hand, permanent fossilization takes place as a result of social, psychological and interactive variables. Temporarily arrested interlanguage can be susceptible to defossilization, what Sims (1989) refers to as *soft fossilization or jellification*.

Wei observes the following kinds of fossilization:

Phonological fossilization.

Phonological fossilization refers to the repetition of phonological errors which result from the incorrect acquisition of pronunciation of second language, usually affected by first language (L1). When such phonological errors are repeatedly made and eventually stay stable in the incorrect manner, it results in phonological fossilization.

Morphological Fossilization.

According to Wei (2009), in a study conducted on Chinese students, it is observed that the most common problem they had are in two aspects – inflectional morpheme and article. For instance, the third-person singular -s is a facet of syntactic agreement and is suffixed to lexical verbs and auxiliaries such as *has*'. Other markers for third-person singular exist. Because such linguistic phenomenon does not exist in Chinese, it often leads students to the transformation or to misuse the form. Wei also points out that 'articles' are also a big problem for Chinese students because there are no corresponding words or expressions in Chinese. When and where to put which articles stays as a mystery for certain amount of learners even those with higher proficiency.

Syntactic fossilization.

Since languages have their own syntactic rules, Wei's study observes that the most typical manifestation of syntactic fossilization among Chinese students is presented in tense. According to the study, Chinese does not have obvious tense differentiation, whereas English has present tense and past tense in general that can be further divided into sixteen categories. Not to mention complicated marker system for past tense and past participle tense, it often takes time for Chinese students to decide the right kind of tense. In the situation that they cannot make clear distinction, they have to turn to their instinct for help from time to time and thus fossilization occurs.

Semantic fossilization.

This refers to the use of forms that exist in target language (TL) but do not represent the meanings second

language (L2) learners intend to express in the context.

Pragmatic fossilization.

Due to the close relationship between pragmatics and semantics, fossilization in the two aspects is interrelated and overlapping (Wei, 2009). Thomas (1983) refers to pragmatic deviance as “pragmatic failure”. She maintains that pragmatic failure takes place in the cross-cultural communication and refers to the inability to understand what is meant by what is said.

According to Ellis (2000), Selinker maintains that the most interesting phenomena in interlanguage (IL) performance are those items, rules and subsystems which are fossilized in terms of the five processes: language transfer, transfer of training, strategies of second language learning, strategies of second language communication, and overgeneralization. Thus, we shall treat the causal factors of fossilization in line with the above.

CAUSES OF FOSSILIZATION

Language Transfer

Selinker is of the opinion that some language rules in the learner’s interlanguage are transferred from his/her first language. The errors in the use of second language result mainly from first language (L1), and the difference between L1 and the L2 is the reason for the occurrence of errors. Consequently, the transfer of L1 rules can lead to fossilization. However, the transfer of L1 can be positive or negative. Positive transfer refers to the similarities shared by the L1 and L2 and helps second language acquisition. On the other hand, negative transfer refers to the differences between L1 and L2 that interfere with second language acquisition. The negative transfer of L1 is what the behaviorists believe to be proactive inhibition; that is to say, the influence of what has been previously learned appears in the context and interrupts what is learned afterwards.

Training transfer

According to Graham (1981), one of the major causes of fossilization is the lack of formal instruction in English. Graham argues that learning simply by contact has led many students to devise interlanguage or idiosyncratic language with rules often far different from those of Standard English. Valette (1991) also has a similar position. She made a distinction between street learners and school learners. In her observation, she claimed that fossilization often occurs among street learners who have had extensive opportunity to communicate successfully, though with inaccurate lexical and syntactic patterns. Consequently, their errors have become systematized and are almost impossible to eradicate. Hence the street learners are never corrected, nor do they correct themselves. Higgs and Clifford quoted in Sims (1989), share Valette’s view. They pointed out that learners at Government Language Schools are hopelessly stranded on various sorts of developmental plateau. They refer to those learners as terminal cases, explaining that these learners have been affected by prior language experience of some informal nature such as street learning in the target culture, which then inhibits their progress in formal classroom instruction. They also point to the fact that contemporary approaches to second language teaching place a premium on communication, often at the expense of accuracy. Consequently, under such methodologies, learners will tend to fossilization at relatively low levels, because systematic errors in their interlanguage will usually go unrepaired (Sims, 1989). They conclude that, in the absence of formal instruction, some areas of second language learner’s interlanguage appear to be at least stagnant if not necessarily fossilized. Furthermore, particular second language structures can be prone to fossilization, while others are not. Incorrect teaching method can prevent successful second language learning in the sense that the use of inadequate teaching methodologies has also been suggested as an explanation for the occurrence of fossilization.

Learning Strategy.

Fossilization caused by the incorrect application of learning strategies is the most common in the process of learning a second language (Wei, 2009). Sims (1989) maintains that someplace along the interlanguage continuum, inappropriate or misapplied learning strategies could lead to fossilization of some features-phonological, morphological, syntactic, lexical, psycholinguistic, or socio-cultural. It should be noted that learning strategies do not only refer to the overall strategies but also to the explicit methods the learner adopts in the process of second language learning, and can cause fossilization of language competence. However, the appropriate application of learning strategies helps to process the target language input and therefore improves second language learning quality; but some learners may turn to learning strategies as far as over generalization, simplification, incomplete rule application and inadequate declarative knowledge (Wei, 2009).

Communication strategy.

Ellis (2000) posits that the cognitive component of procedural knowledge is made up of the mental process involved in both internalizing and automatizing new second language knowledge and using the knowledge together with other knowledge sources to communicate in the second language. Hence these processes involve second language learning and using, where the former concerns learning strategies and the latter communication strategy. Communication strategy can, therefore be seen a systematic skill that a speaker relies on while having difficulties in expression, resorts to it in real communication, in order to keep the communication going. However, sometimes, such use of communication strategies prevent acquisition. Ellis, commenting on the use of communication strategy, said that the learner may be so skillful in making up for lack of linguistic knowledge by the use of various communication strategies such as avoidance or paraphrase. Furthermore, learners incline to these strategies to simplify the target language, especially, the grammatical rules, for instance, the use of the articles, plural forms and the use of tenses. Wei (2009) argues that this inclination and simplification reflects the unsatisfactory effect of communicative teaching methods, maintaining that if the learner pays too much attention to the fluency but neglects the accuracy, some language errors can easily be fossilized. If the learner only stresses the cultivation of communicative competence but neglects the language competence, his/her language competence can also be easily fossilized.

Overgeneralization.

Ellis (2000) argues that overgeneralization involves the use of existing knowledge of second language by extending it to new interlanguage forms. This happens when people apply a grammatical rule across all members of a grammatical class without making the appropriate exceptions.

He also noted that language over generalization always indicates the ignorance of rule restrictions, including semantic restrictions of lexis or other linguistic items. Overgeneralization always occurs unconsciously, and if there is no timely instruction and correction, the errors will stay for as long as they can.

The causal factors discussed above can be as a result of the following factors: environmental, cognitive, neurobiological, and socio-affective. In turn, all of these causal factors can be classified into: external factors and internal factors (Han, 2003).

CONTROLLING FOSSILIZATION

Some measures have been proposed to help in reducing fossilization. The following measures are proposed:

Adoption of proper learning strategies.

It is believed that successful learners appear to use strategies more frequently and in various ways than

learners who are less successful (Wei, 2009). Since successful language learning involves attention to both form and meaning, Wei argues that good language learners are able to switch the focus of their attention while performing any task. They also try to treat language as a system by making effective cross-lingual comparisons, analyzing the target language, and using reference books. For instance, dictionaries are used in vocabulary testing. It is observed that different kinds of learning strategies may contribute to different aspects of second language proficiency. Consequently, strategies at the beginning should be the right way to reduce fossilization. Multimedia instrument are highly recommended because these materials not only contain standard pronunciation, but also reflect target culture. Furthermore, textbooks with original passages by foreign authors should be adopted since its way of thinking and expression can help second language learners better understand and master the language (Wei, 2009).

Improving the quality and quantity of L2 input.

Ying, et al. (2023) posit that since language learning is done through language input, the quality of language input should be ensured in the process of second language acquisition. They also observed that implementing CBI teaching methods in English classrooms enhances the quality of language input, avoid language transfer and transfer of learning and also prevent language rigidity to a reasonable extent.

Focus on the training of learning strategies.

A positive attitude and good use of training strategies can improve language learning, while a wrong application of training strategies can lead to fossilization. Ying, et al. (2023) maintain that teachers, in the language classroom should focus on training students to use learning strategies correctly as it helps them to understand the line of learning, improve the efficiency of learning, and develop their ability to learn independently.

FINDINGS

Drawing from our discussions above, it is observed that the crux of the matter in fossilization is hinged on ultimate attainment. Second language learners aspire to reach native-like competence, by association, immersion, or acculturation. In spite of the effort exerted by learners in language learning process, there still seems not be ultimate attainment in the target language. This is in consonance with Birdsong's (2008) view that ultimate attainment should not be construed as native likeness. He, rather, sees it as the end point of second language acquisition, irrespective of the degree of approximation to the native grammar. His assertion presupposes that there is no absolute finality in learning.

Some scholars such as (Johnson, et al., 1996; Flege, et al., 1999; Flege, 1999) have opined that certain number of years of immersion in the target language community can result in ultimate attainment. On the contrary, in a more strict sense, others like (Cook, 1997 and Grosjean, 1998) uphold that a second language learner cannot become a native speaker. This contrary opinion is in line with Selinker's (1996) view that fossilization is a psychological mechanism in the interlanguage that cannot be removed or prevented; it is a process. Hence, no second language learner can be competent in a target language as in the native language. More so, drawing from UG theory, it is observed that this assertion is true, mostly of adult learners who do not have full access to UG, thereby resulting in incomplete second language ultimate attainment.

CONCLUSION

From the discussions in this paper, we can say, in the words of Han (2013), that fossilization is fundamentally the result of interaction between exogenous and endogenous factors, and just as factor complexes can differ between learners, so can the extent of fossilization. It is also worthy of note that both past and current researches alike have not come to the conclusion that fossilization occurs more extensively in adult than in child learners. However, fossilization can be viewed as an inevitable state in, and has significance on second language acquisition.

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