The Causation of Lexical Fossilization and Its Pedagogical Implications

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Abstract. Interlanguage fossilization, an important terminology proposed by Selinker in 1972, is an intriguing phenomenon that scholars in the field of second language acquisition (SLA) have made great efforts to explore. It has impacts on four aspects of learning English as a second language (ESL), namely phonetics, vocabulary, syntax and discourse. This paper focuses primarily on lexical fossilization and its causes, which are examined using a comparison of native speakers and second language learners (SLLs). Finally, the author also provides some probable solutions that teachers can apply to their instruction. Through a well-built learning environment, proper teaching methods and learners' positive attitudes, ESL learners can definitely succeed in enhancing their efficiency of vocabulary acquisition and broadening their boundaries of learning, instead of being confined to interlanguage fossilization.

Keywords: interlanguage, lexical fossilization, pedagogical implications, FLA and SLA

1 Introduction

Vocabulary is one of the essential elements of language because it is words that constitute various texts and discourses, and people can hardly express explicit meaning without appropriate words. Therefore, vocabulary is an important criterion for measuring the level of learners in second language acquisition (SLA). Probably many learners' idea is that word acquisition is proportional to their effort to learn and memorize, and that it finally reaches the level of native speakers at a constant speed if they make the constant endeavor. But since Selinker put forward the concept of interlanguage fossilization, including the aspect of vocabulary, it is a fact that when senior second language learners (SLLs) gain vocabulary knowledge to a certain degree, they tend to be stuck in their interlanguage and cannot break through this barricade, that is to say, they cannot reach the same level as native speakers. This stagnant phenomenon of vocabulary learning is called lexical fossilization. Although scholars all over the world have done a host of researches on interlanguage fossilization, there still exist some factors that are not considered in the more narrowed field, lexical fossilization. In this paper, the author compares SLA with first language acquisition (FLA)

to analyse its causes, both internal and external ones. By analyzing these factors respectively and putting forward the pedagogical implications accordingly, the paper provides a perspective for the research of interlanguage fossilization based on the differences between the characteristics of L1 and L2 learners.

2 Lexical fossilization

Interlanguage is described by the American Linguistic Larry Selinker in 1972 as an independent language system used by SLLs. It is totally different from their mother tongue as well as the target language, but it combines the characteristics of both. As learners are increasingly improved, interlanguage takes on the form that is more similar to the target language [1]. In fact, interlanguage acts as an indispensable part of SLA because there always exist some non-target language features during the process of acquiring a new language.

Fossilization is one of the most common and unavoidable phenomena of interlanguage that 95% of SLLs suffer from, regardless of their age or the amount of knowledge about the target language they acquire [1]. It means a stagnant stage in SLA where the learners have difficulty making further progress. Later, Selinker interpreted the term further: SLLs constantly adopt the same incorrect rules, terms, and subsystems which shape their interlanguage, and thus form a vicious circle of fossilization[2]. Only with innate language talent, appropriate learning methods, and strenuous effort and practice can learners join the 5% minority capable of mastering the target language as L1 speakers.

Lexical fossilization, a specific aspect of interlanguage fossilization, not only refers to the learners' producing improper forms of words but also indicates their inaccurate usage of them. This is a phenomenon that exists rather permanently once it occurs.

The research of lexical fossilization was started by Hyltenstam in 1988. He tested the students' proficiency in using vocabulary through lexical density, lexical variation and lexical sophistication [3]. Ten years later, Laufer revealed based on his research of passive and active vocabulary that learners' vocabulary output is always accompanied by the "plateau phenomenon" [4], which means they are able to make considerable progress rapidly in the beginning, then the rate slows down to almost nothing [5].

3 The causation of lexical fossilization

Since lexical fossilization prevents learners from achieving accomplishments to a certain extent, it is of great value to find out its causation and put forward effective strategies accordingly.

In this part, the author analyses the following six aspects resulting in lexical fossilization, namely, the interference of the mother tongue, over-generalization of the target language rules, age and explicit memory system, teaching problems, communicative strategies and students' motivation.

3.1   The interference of the mother tongue

The most notable difference between L1 and L2 learners is that the former begin to acquire their L1 with an empty mind before the age of 3[6], whereas the latter have acquired a complete and mature language system, which shapes their thinking and expression. Therefore, SLLs tend to involuntarily use their first language to construct the second language system. Selinker called it "language transfer", exerting both positive and negative effects on SLA.

In vocabulary acquisition, when there are similarities between L1 and L2, it is a positive transfer. For example, "Bildungsroman" is a German word, but it is also used in English to describe a novel in which the protagonist grows up as time flies. When the learner's L1 is German, he can quickly get what it means. On the other hand, the mother tongue has a strong effect on lexical choices in the second language. SLLs tend to borrow rules from L1 or do the simple word-for-word translation, and thus they make errors, and finally, they are stuck in them which cause lexical fossilization [7]. This is a negative transfer. For instance, there are slang words in a different language. Chinese may translate "bite the bullet" into "grip the bullet with teeth" if they understand the phrase superficially. However, this slang term originated in wars. When there was no time for anesthesia, patients had to "bite the bullets" to spread their attention and pain. Therefore, it is used to describe a person who grits his teeth and endures hardship. Because of different cultural backgrounds and characteristics of language, mother tongue interferes with SLA.

3.2   Over-generalization of the target language rules

Second, there are some special word formations in English, which SLLs such as Chinese have not encountered in their own linguistic structure, leading to over-generalization. According to Ellis, over-generalization is the process of regarding a particular rule as a universal one and applying it to all cases with no exception. SLLs' continuous unconsciousness produces new forms in their own interlanguage [8].

In fact, over-generalization reveals the misunderstanding that learners take the universality of rules for granted and overlook their limits. When describing a case that happened in the past in English, the -ed suffix is used to identify the past tense. This rule can be applied to most verbs, like "planted", "picked", "looked" and "watered". Some of the verbs are slightly different, such as "dance" and "move", for there has already been a letter "e" at the end of the word. In these cases, learners should eliminate one "e". However, a small number of irregular verbs change a lot in their past tense form, like "sing, sang", "drink, drank", and "leave, left". Learners who make over-generalization errors add the -ed suffix after these special irregular verbs as well. If they keep ignoring the similar mistakes they make and form a subconscious habit, interlanguage fossilization of vocabulary usage emerges and lasts until they detect these mistakes.

3.3   Age and explicit memory system

There is still another question: why SLLs sometimes forget to add "-ed" or "-s" to indicate the tense and the third person although they are aware of the necessity of these suffixes? Meanwhile, native speakers basically do better in this regard. But why?

The first possible reason is age. It is generally admitted that the younger the Age of Acquisition (AoA) is, the better achievements learners can make. Later, the age-related factors are interpreted not only as age itself, but the initial state of SLA, i.e. the sum of existing language ability, cognitive and neurological development stage, intelligence level, motivation and so on [9]. From this perspective, it can be concluded that the SLA of adults is more efficient than that of children because adults' age-related factors are more mature and developed. But since vocabulary acquisition is a process of accumulation, younger learners can eventually perform better if received a long period of continuous learning and practice. As a result, native English speakers who begin learning at a young age have a better chance of fully mastering the lexical usage.

In addition, most learners fail to automatically acquire a new language when they get beyond a certain age, primarily because the implicit and explicit memory systems begin to dissociate from each other. Up to a certain age, children acquire language virtually unconsciously through implicit memory, leading to better internalization and automatic application. As they grow up, the implicit memory system becomes less used. They have to take advantage of declarative knowledge to further improve language learning. This is fulfilled through the explicit memory system [10] [11]. When the learners understand the rule of adding suffixes, they merely get declarative knowledge and cannot apply it automatically. Only with self-consciousness amid input and practice can they consolidate learning, fully internalize the rule and overcome such lexical fossilization.

3.4   Teaching problems

L1 learners acquire vocabulary by comprehension, simulation and application, whereas SLLs by a less solid learning process.

Most teachers fail to teach words systematically, or even ignore the importance of vocabulary education. They have a misunderstanding that students can self-learn vocabulary by rote memorization. Nonetheless, acquiring vocabulary is not accomplished through endless word lists, superficial memorization, or simply copying the definition from the dictionary. Instead, to comprehend words requires learners to relate the words with their existing knowledge and previous experience. And to equip students with a robust knowledge of vocabulary, instructors ought to intentionally provide students with manifold opportunities to encounter target words repeatedly [11]. Otherwise, SLLs can just know the definition of the words, but cannot flexibly use them in different contexts, leading to lexical fossilization in which they have difficulty in word choices.

3.5 Communicative strategies

There also exist differences between native speakers and SLLs in communication. Communicative strategies were first mentioned by Selinker[1] in 1972. It refers to a systematic strategy, including simplification, avoidance, paraphrasing, borrowing and coinage which SLLs adopt to get themselves across. This set of skills is needed on account of learners' language incapability.

For example, pidgin English is a special language system produced by people using the characteristics of communicative strategies in Shanghai. In order to become understood in an environment without a common language, people combine English with the local dialect. In pidgin English, "belong" is often considered as a linking verb. "I am sorry" becomes "my belong sorry". People at that time found this method feasible and convenient. Although they knew they made errors in the process, they did not bother to correct them. So as the SLLs who attach more importance on fluency than accuracy in communication. They tend to employ this strategy as long as their understanding is not affected. Gradually, lexical fossilization is produced.

3.6 Motivation

Motivation lies among the most effective impetuses for SLLs to be successful. Generally speaking, with appropriate motivation intensity, SLLs tend to actively memorize words and endeavor to apply them to real contexts, thus making continuous progress. On the contrary, too high or low motivation intensity has adverse effects on achieving a high level of vocabulary acquisition, mainly because it causes either pressure or tiredness in learners' minds. These emotional obstacles inevitably interfere with the normal learning progress.

In addition, once learners have accumulated a certain amount of lexical knowledge, they become satisfied with the status quo, lack the motivation to study further, then gradually slack off, and reduce or stop absorbing new things. Under such circumstances, lexical fossilization emerges.

According to Schumann's cultural migration model, the shortage of motivation results mainly from cultural differences. If SLLs are quite unfamiliar with the culture of the target language, they will be psychologically alienated from the language and reluctant to integrate themselves into the cultural background behind it. Hence, such psychological distance gives rise to fossilization [12].

Besides, there are many other factors accounting for the inappropriate motivation intensity, such as the learners' needs, personality as well as classroom atmosphere, learning materials, and educational equity. The teacher must consider the situation thoroughly and instruct students in a targeted manner.

4   The pedagogical implications of lexical fossilization

4.1   Correct treatment with L1 interference

The key to avoiding the interference of the mother tongue is to understand the similarities and differences between L1 and L2.

As for similarities, teachers should consolidate positive transfer with the help of intensive techniques from a behaviorist perspective. For example, they can repeat and emphasize salient points, and give verbal praise if students realize them.

In terms of differences, teachers can adopt the comparative teaching method. It must be remembered that most Chinese and English words are not one-to-one correspondence. In English, a "hobby" is a positive activity which people do regularly for relaxation and fun, whereas in Chinese it represents deep love for some activities, mostly negative ones. Hence, when students have accumulated enough knowledge about L2, teachers should train students to actively use English-English dictionaries to cultivate English thinking and avoid lexical fossilization to a certain extent.

4.2   Input and output

Students must have enough exposure to adequate quantity and high quality of input and generate comprehensible output that further promotes internalization.

Here are some suggestions to prevent lexical fossilization through the optimal use of input and output: teachers can make sure students repeatedly encounter the target words through a large amount of input such as wide reading and oral language in class; they can try various strategies for vocabulary enhancement like grouping words, encouraging the imagination of new words and using flash cards in a systematic manner [13]; they can make students exposed to as much authentic expression as possible; they can prepare materials whose difficulty is slightly above student level, while students can make sense through independent reading and thinking; they can stimulate students to generate comprehensible output with new vocabulary to better internalize them.

4.3   Exposure to target language culture

Language is bred in culture. Teachers must help students foster critical yet tolerant attitudes towards different cultures. Also, it is critical to integrate cultural immersion into SLA, including vocabulary teaching because some words are granted cultural meaning, such as "Waterloo". It represents, by no means, merely the name of a city. Indeed, it was the place where Napoleon failed miserably and ended his political career, symbolizing a disastrous defeat nowadays. If students want to fully master the meaning and usage of words to avoid being fossilized, they have to learn about their cultural meaning.

4.4   Timely feedback from teachers

Learners make mistakes unavoidably during SLA. It gets worse when they make the similar kind repeatedly and unconsciously because learners keep deepening the impression of errors, thus forming a dreadful habit which can be deemed to be fossilization. For one thing, mistakes are a manifestation of internalization. Students need not treat them like monsters. Instead of exerting pressure on learners to avoid errors, teachers should be glad to notice them, so that they can assess the existing level of students and adjust teaching plans accordingly. For another, teachers must respond promptly to errors with negative feedback such as recast, repetition, metalinguistic clues or simply clarification requests. This method works particularly well for over-generalization errors as SLLs are given the opportunity to detect and correct them consciously.

4.5   Encouragement

There are manifold effective measures to maintain SLLs' motivation:

First, in the initial stage of SLA, learners usually find it informative and intriguing. Teachers should take advantage of this period and stimulate as much interest in learners as possible presumably through multimedia.

Second, equity is another factor that dilutes learners' enthusiasm for studying further. Teachers must engage all the students in class regardless of their age, gender and race.

Finally, pay attention to the way and attitude in order not to hurt students' emotion and drive for SLA when giving feedback.

5   Conclusion

SLA is not a steady process of growth. The rate of acquisition by the same individual is limited by both internal and external conditions. Therefore, lexical fossilization is an unavoidable phenomenon in SLA. It cannot be eradicated for up to 95% learners, but it can be lessened through systematic and consciously fossilization-proof learning and teaching.

In this paper, the author discusses the causes of lexical fossilization based on the differences between L1 and L2 learners, as well as some potential solutions to mitigate its effects: reduction of the interference from the mother tongue, adequate quantity and high quality of input and output, knowledge of second language culture, correct feedback with errors, and inspiration from instructors.

Nevertheless, there still exist some limitations because different learners become fossilized in different stages of SLA. It would be better if the reasons were analyzed in terms of several specific cases with different language knowledge levels.

In the future, scholars in this field can continue to do researches on other probable reasons for lexical fossilization, and then teachers may implement case-by-case instruction accordingly and achieve better teaching results. In addition, other aspects of fossilization (phonological fossilization, syntactic fossilization and semantic fossiliza-

tion) are intriguing and instructive as well. It is a must for teachers and students together to prevent and overcome all kinds of interlanguage fossilization.

References

1. Selinker, L. (1972). Interlanguage. International Review of Applied Linguistics in Language Teaching, 10, 209-231.
2. Gass, S. M., & Selinker, L. (1983). Language Transfer in Language Learning. Issues in Second Language Research. Newbury House Publishers, Inc., Rowley MA 0l969. Chapter 11, Language transfer and fossilization: the "Multiple Effects Principle", 197-217.
3. Hyltenstam, K. (1988). Lexical characteristics of near-native second-language learners of Swedish. Journal of Multilingual & Multicultural Development, 9(1-2), 67-84.
4. Laufer, B., & Paribakht, T. S. (1998). The relationship between passive and active vocabularies: Effects of languagelearning context. Language learning, 48(3), 365-391.
5. Rowntree, D. (1981). A dictionary of education. Harper and Row,.
6. Avanika, S., Niroj, B., Ambalika, S., & Rajesh, K. S. (2009). Interference of first language in the acquisition of second language. International Journal of Psychology and Counselling, 1(7), 117-122.
7. Tajeddin, Z., & Tabatabaeian, M. S. (2017). Interface between linguistic noticing and fossilization of grammatical, lexical, and cohesive features among advanced EFL learners. Applied Research on English Language, 6(1), 23-42.
8. Ellis, R. (2000). The study of second language acquisition. Shanghai: Shanghai Foreign Language Education Press, 279.
9. Birdsong, D. (2018). Plasticity, variability and age in second language acquisition and bilingualism. Frontiers in psychology, 9, 81.
10. Paradis, M. (1994). Neurolinguistic aspects of implicit and explicit memory: implication for bilingualism and second language acquisition. Implicit and explicit learning of languages.
11. Paradis, M. (2009). Declarative and procedural determinants of second languages (Vol. 40). John Benjamins Publishing.
12. Zygouris-Coe, V. I. (2014). Teaching discipline-specific literacies in grades 6-12: Preparing students for college, career, and workforce demands. Routledge. Chapter5, Reading complex texts beyoud the textbook, 132-173.
13. Schumann, J. H. (1974). The implications of interlanguage, pidginization and creolization for the study of adult second language acquisition. Tesol Quarterly, 145-152.
14. Hashim, H. U., Yunus, M. M., & Hashim, H. (2018). Language Learning Strategies Used by Adult Learners of Teaching English as a Second Language (TESL). TESOL International Journal, 13(4), 39-48.