

# On Fossilization of Non-English Majors' Speaking Ability in Multimedia-Assisted English Class

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**Abstract.** Based on research carried out on non-English majors, this paper aims to investigate what factors contribute to fossilization of students' speaking ability in multimedia-assisted English class and how to solve the problem. Through distributing questionnaires, analyzing the data collected from them and teaching practice, the study arrives at the following conclusions: first, both internal and external factors may attribute to fossilization, one of which deserves special attention that improper use of multimedia also can impede students' spoken-English learning; second, in order to improve students' speaking ability, teachers should not use multimedia excessively, and they need to offer more opportunities for spoken-English practice as well as a timely corrective feedback.

**Keywords:** fossilization; speaking ability; multimedia; factors; application

## 1. Introduction

Spoken English, as a vital communicative means, has been attached a great importance to in English teaching. But many scholars and teachers (Selinker, 1972; Preston, 1989; Han, 2008 etc.) have found that when students reached a certain stage of development, their oral competence seems to be fixed in spite of continuous exposure to input and adequate motivation to learn. This phenomenon is referred to as fossilization by Selinker (1972). The scholars have concentrated their attention on this problem and their studies are mainly concerning the definitions, causal factors of fossilization and solutions to the problem, which have greatly enlightened English teaching and learning.

However, with the application of multimedia technology, a reform has been carried out in the field of English teaching and learning. Thus, despite their abundant theories, their studies cannot necessarily solve the problem under new circumstances in that most of their studies were made in traditional English class. With the new technology, has fossilization of students' speaking ability been eradicated? If not, what are the causal factors and possible solutions? Therefore, this study centers chiefly on the major factors leading to fossilization of non-English majors' speaking ability in multimedia-assisted English class, attempts to offer some suggestions for the problem and figures out how to make the best use of multimedia in speaking class. Hopefully this paper can shed some light on teaching and learning of spoken English in multimedia-assisted class.

## 2. Theoretical background

As is shown in the above, the scholars have noted that vast majority of learners fail to reach target language competence. On the basis of this observation, Selinker introduced the term "fossilization" to the field of SLA (Second Language Acquisition) in 1972. After coining the term "fossilization", Selinker defined fossilization as "Fossilizable linguistic phenomena are linguistic items, rules, and subsystems which speakers of a particular L1 tend to keep in their IL relative to a particular TL, no matter what the age of the

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learner or amount of explanation and instruction he receives in the TL.....(215)".<sup>a</sup> Besides Selinker, other scholars also give their own definitions. Some scholars see fossilization as a process, while others as a product. Some researchers contribute fossilization to cognitive mechanism, while others to linguistic application. Some scholars extend the definitions proposed by Selinker, while others narrow Selinker's interpretations. Preston (1989), for example, takes fossilization as the "persistence of an incorrect form in the emerging interlanguage (245)". Sharwood Smith (1994) identifies fossilization with "a process whereby repeated practice and exposure to the language does not lead to any further development (37)". Zhaohong Han (2008) analyzes fossilization from both macroscopic and microscopic perspectives: Han views fossilization as a process, not a product, which mainly happens at a certain point in interlanguage development.

Researchers interpret the term fossilization from different perspectives. However, they hold similar views on the essence of fossilization. And in this paper, we cast no doubt on the general agreement that fossilization refers to the phenomenon that continuous exposure to input and repeated practice cannot lead to further development in learners' language learning. Actually it is during a certain period or at a certain stage that fossilization occurs, and no evidence can prove that the fossilizable structures are persistent over one's life, or there will be no development or progress in foreign language teaching and learning. The scholars agree that fossilization is inevitable in foreign language learning, but with the learners' fine efforts, instruction may salvage learners from fossilization. Given the causal factors, Han (2008) provided a sketch of different views by scholars, which are 49 in all, including both external and internal factors. Multimedia classroom, as an external factor, plays a key role in students' spoken English learning, but few studies focus on it, so this paper is aimed at offering an insight into fossilization of students' speaking ability in such a classroom.

### **3. Research Methodology**

#### **3.1. Subjects and Questionnaire Design**

The study is to investigate fossilization of speaking ability among non-English majors in multimedia classroom, so 152 subjects (non-English majors) were randomly selected from Harbin Engineering University, who were required to answer questions in the questionnaire. The questions in the questionnaire are divided into two groups: (1) the causal factors for fossilization of students' speaking ability and possible solutions to it; (2) the role of multimedia in speaking class and students' attitudes towards the application of multimedia. The first part is composed of 20 objective questions, covering the factors like age, native language transfer, learners, instruction and solutions to the problem. There are 10 objective questions in the second part, which are concerning the application of multimedia and students' attitudes towards the new technology.

#### **3.2. Data Analysis and Interpretation**

As is supposed, there still exists fossilization in students' spoken-English learning in multimedia classroom. When asked whether they have made great progress in speaking learning with the new technology, 86% of the subjects offer negative reply, who say unanimously that their speaking ability has been fossilized to different degrees, and what is worse, 38% participants complain that they are faced with severe fossilization. When asked whether they are content with their speaking ability, only 26% students' answers are in the affirmative, 58% negative and 16% ambiguous. When it comes to the question—how well they have made development in oral learning since multimedia technology was introduced into English class, 56% students admit they have made a little progress and only 3% students consider their achievements great. And as to the causal factors, students' replies vary largely from internal to external factors. The detailed data are shown in Table 1.

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<sup>a</sup> L1—First Language; IL—Interlanguage; TL—Target Language

Table 1

Factors	Percentage
Native language transfer	48%
Inappropriate learning strategy	68%
Lack of favorable learning environment	82%
Age	51%
Lack of interest	66%
Lack of opportunity to speak English	87%
Lack of input	39%
Quality of input	46%
Lack of talent	20%
Instruction	74%

According to the figures shown in the above table, we can see that both internal and external factors are involved in the process of fossilization, which act on learners in concert and induce fossilization. Unexpectedly, the factor—lack of opportunity to speak English ranks first among the variables. Other important ones are lack of favorable learning environment, instruction, inappropriate learning strategy, and lack of interest.

Since the study is to investigate fossilization under new circumstances, the items concerning multimedia are the lion's share in the questionnaire. The data in Table 2 can reveal students' opinions and attitudes towards multimedia and its application in speaking class.

Table 2

The typical questions or statements in the questionnaire	positive	negative	ambiguous
Do your teachers often use multimedia?	82%	18%	0
Multimedia is vital to improving fossilization of students' speaking ability.	59%	30%	11%
Can multimedia save much time for both teachers and students in class?	71%	19%	10%
Multimedia stimulate students' enthusiasm for spoken-English learning.	64%	33%	3%
Is multimedia important for classroom atmosphere?	77%	21%	2%
The more frequently teachers use multimedia, the more progress students can make.	23%	69%	8%
Application of multimedia is partially imputed to fossilization.	52%	26%	22%
Will frequent use of multimedia hinder students from practicing spoken English?	78%	15%	7%
Teacher-student interaction has proved to be less than before.	65%	28%	7%
It is essential that multimedia be used properly in speaking class.	90%	10%	0

In line with questions from 2 to 5 and students' oral feedback, we may find that about two-thirds students agree that multimedia play a positive role in spoken-English teaching and learning, which is not only helpful to stimulate students' attention span, but to activate their ideas and opinions in speaking practice. But as is revealed by figures from questions 6 and 7 which focus on the efficiency of multimedia-assisted speaking class, 70% students hold similar view that multimedia technology is not powerful to the extent that it can largely enhance their spoken-English level and radically improve the fossilization. And seen from the last question concerning how multimedia ought to be employed in spoken-English class, almost all students (90%) maintain that appropriate application of multimedia is quite important for them to improve their speaking ability, or it will impede students' learning in that a large amount of teaching content overwhelms them and frequent use of multimedia takes up too much time in class.

#### 4. Causal factors of fossilization

Regarding causal factors, zhaohong Han (2008) provided a sketch of variables proposed by other scholars, which, broadly speaking, fall into four categories: environmental, cognitive, neurobiological, and socio-affective. According to Han's classifications, and mainly in association with the questionnaire results,

we will highlight and discuss three categories of factors contributing to fossilization of students' speaking ability in multimedia-assisted English class.

#### **4.1. Environmental Factors**

Of the four categories, only environmental factors are incorporated into external variables, while the other three categories—cognitive, neurobiological, and socio-affective fall into internal ones. Instruction, as an environmental factor, accounts a lot for fossilization of non-English majors' speaking ability. On the positive side, instruction, occurring at the right time, may serve to prevent fossilization; on the negative side, instruction can impede learning (Han 162). This should arouse teachers' attention. Due largely to the existence of setting—internal constraints, instruction provides a restrictive learning experience (Han 162). Additionally, students regard the environmental variable—lack of favorable learning environment as an important factor. They complain that their trouble does not just lie in the fact that they have difficulty seeking out opportunities to speak English in life, but in the poor learning environment where they cannot be exposed to sufficient input. In addition, quality of input is another environmental factor driving students to fossilization.

#### **4.2. Cognitive Factors**

The cognitive group may cover a large number of factors, and in this paper, we lay more emphasis on two cognitive factors: lack of opportunity to speak English and inappropriate learning strategy. From the questionnaire, we can see that 87% students take the factor—lack of opportunity to speak English as the top one which directly influences the knowledge processing in the stage of output. Compared with other skills, spoken English, as a communicative means, is highly dependent on opportunities of practice to improve. Without adequate opportunities to speak English and sufficient output trainings, there is no use that students are exposed to a great amount of input knowledge. Therefore, students should be provided more opportunities to speak English and need to seize every opportunity both in class and after class to practice their spoken English, but as a matter of fact, opportunities offered in multimedia classroom are no more than those in traditional English class. Besides, it is worth noting that from the psychological point of view, the factor—inappropriate learning strategy is also attributable to fossilization of students' speaking ability.

#### **4.3. Technological Factor**

Besides the above factors, another one we will play a special stress on is technological factor, namely application of multimedia. 52% students agree that application of multimedia partially brings about the fossilization of their speaking ability. Multimedia are just a kind of technology that can not directly trigger fossilization, but its involvement in spoken-English class has changed teaching approaches and models to a large extent. 65% students provide the feedback that teacher-student interaction becomes less than before, which has a knock-down effect on students' spoken-English learning.

Constructivists hold that students should be the center of learning process, and they are not passive recipients of knowledge, but active constructors. The role teachers play in class should change from knowledge conveyors to helpers in students' learning process. But many teachers are not accustomed to the change of roles in class, so the traditional teacher-centered class has turned out to be multimedia-centered class, which still ignores the subjective position of students. Many teachers devote major efforts to designing flowery and fancy courseware after class and spend much time pressing the mouse on the platform in class, owing to which students cannot afford time to communicate with teachers and teacher-student interaction ultimately gives way to teacher-machine interaction. Students who roam about in the fancy flash, cartoons, and so on, have no strong desires to practice spoken English in class, so students' role does not change at all with appearance of multimedia and undoubtedly fossilization of students' speaking ability has not been improved under new circumstances.

### **5. Suggestions**

In accordance with students' feedback and analysis of causal factors, we put forward the following suggestions to help both teachers and students overcome fossilization of speaking ability in multimedia-assisted English class.

### **5.1. Less dependence on multimedia**

Garrett (1991) thinks that "the use of the computer does not constitute a method (cited in Li & Liu, 69)". Healy (1999) also points out depending on information technology only cannot ensure effective teaching and learning (cited in Liu, 80). Therefore, teachers should change their ideas on employing multimedia technology, which is not equal to teaching optimization. Influenced by traditional habits and ideas, some teachers use old bottles for new wine and put all the study material into the courseware (Gong & Zhou, 37). They are occupied with showing flash and PPT in class, which actually has an adverse effect on normal teaching activity. Just like blackboard and chalk, multimedia technology is just a kind of teaching tool and should not play a dominant role in class. Taking teaching contents, objectives, and measures fully into consideration, teachers should lay emphasis on study of teaching approaches and strive to select teaching material and design class activity, not to make amusing courseware and not to press the mouse ceaselessly in class. Teachers should always keep it in mind that an efficient class should be student-centered, not teacher-centered or multimedia-centered. To sum up, teachers should not rely on multimedia excessively to enhance students' spoken-English level, and they ought to focus on study of teaching activity as they do in traditional class. Smart utilization of multimedia may prevent students from fossilization, or multimedia is likely to run counter to our desire.

### **5.2. More opportunities to practice spoken English**

Piaget (1970) holds that learning is a dynamic and active construction process. By continual interaction with external environment and self-adjustment, learners can form a complete knowledge structure. According to Swain's view (1995), "lack of opportunities to use the target language" is also an important factor leading to fossilization (cited in Han, 27). Thus, besides adequate input knowledge, students need enough opportunities to deal with output practice, which will consolidate input knowledge in turn. Therefore, teachers need to set aside more time for students to do spoken-English practice in class. Fortunately with multimedia equipment, teachers may design and plan abundant activities to cultivate students' interest of speaking English. For example, teachers may ask students to do role play based on what they have seen, which can not only practice their spoken English but arouse their attention. With an easy access to internet, teachers can download and present different pictures to each group of students and ask them to tell stories according to them. In a word, teachers should spare no efforts to create opportunities for students to practice spoken English both in class and after class.

### **5.3. Providing a timely corrective feedback**

Besides the above, there is a rather widespread conviction that corrective feedback which is an essential part of explicit instruction can prevent fossilization. Errors have to be dealt with or otherwise can fossilize and teacher correction is the way to save learners from fossilization (Han 148). With multimedia equipment, teachers can constantly monitor students' performance and note recurrent errors, incorrect pronunciations, and undesirable productions in the stage of spoken-English practice, and then present them in PPT or other forms to students after the activity has been finished. A timely feedback is a key to saving students from fossilization in that it can draw students' attention to the gap between native language and target language and make students aware that the errors are not part of input knowledge, which ought to be eradicated immediately. Through corrective feedback, students will restructure their knowledge pattern and make some changes in their behaviors, which is rather beneficial to the fluency of their spoken English and will gradually improve their speaking ability.

## **6. Conclusion**

It is not beyond our expectation that multimedia technology can not eliminate fossilization of students' speaking ability. The formation of fossilization can be attributed to many factors. And compared with

traditional class, the application of multimedia is a new factor which has a deep influence on teacher-student interaction and impedes students' spoken-English learning to some degree. Considering characteristics of speaking skills and advantages of multimedia, it is deady required that multimedia be used properly and only in the case may multimedia promote students' learning as well as foster their speaking ability. However, this study is still in the early stages because it does not offer more detailed information. For example, in which grade of non-English majors, freshmen or sophomores, fossilization of speaking ability is more likely to occur? Therefore, it needs to be perfected and has a long way to go in the future.

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