

An Empirical Study on the Fossilization of English Language Learning in the Context of Multimedia Network Teaching

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Abstract. To carry out the pilot teaching of multimedia assisted teaching and self-learning mode of network platform for experimental class, the data analysis results obtained by using tools such as questionnaire survey show that: The multimedia network teaching environment has a great effect on the students' vocabulary knowledge fossilization, but has little effect on the grammar knowledge fossilization; The fossilization of reading ability among the four communicative abilities of English language is alleviated obviously, and the self-assessed oral ability of students improves faster after the addition of oral English classes; It accelerates the ossification of writing and listening ability, but it is mainly caused by the characteristics of the network itself and improper learning methods of students.

Keywords. Multimedia network, teaching environment, learning fossilization, empirical research

1. Introduction

Multimedia network-assisted English teaching has been given the sacred mission of updating teaching methods, reforming teaching models, improving teaching efficiency, and promoting teaching reform since its birth. It provides a large number of convenient and rapid visual, three-dimensional, interactive teaching based on audio-visual and communication, so that learners can become more effective processors of information and constructors of knowledge meaning, which greatly enriches teachers' classroom teaching. The student autonomous learning model under the network platform has greatly exercised and improved the ability of students to use network resources for autonomous learning, and gave full play to the subjective initiative of students in learning. However, after a period of teaching practice, we find that the fossilization of English language learning that is common in the traditional teaching mode still exists in the multimedia and network teaching environment, and has its own characteristics. Multimedia classroom teaching and the autonomous learning model under the network platform can activate the fossilization in some aspects, but in other respects it accelerates the formation of the fossilization in English language learning. It is of great significance to study the characteristics and causes of such fossilization for optimizing multimedia and network teaching and making better use of modern technology for English teaching. In the theory of fossilization, the term language fossilization was first put forward by American linguist Larry Selinker(1972)[1]. He believes that most second language learners will

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ossilify in the acquisition of language ability after the foreign language learning has reached a certain level. The study of fossilization was carried out earlier by foreign scholars. The research focuses on the causes of fossilization, such as Selinker (1972), Lenneberg (1967) [2] and Lamendella (1979)[3], Schumann(1975)[4], Vigil and Oler(1976)[5], Ellis(1994)[6], Krashen(1985)[7], Sims(1989)[8] etc. Domestic scholars have been paying attention to the phenomenon of fossilization since the beginning of this century. Niu Qiang (2000)[9] believes that four factors, including emotional factors, interference of mother tongue and transfer, teachers and teaching materials, are related to the causes of fossilization. Liu Runqing (2003)[10] conducted a large-scale questionnaire survey with students from key universities as the research object. Relevant data statistics and analysis show that language learning fossilization is common among students. He believes that the main causes of fossilization are cognitive perspectives, learners' personal factors and learning atmosphere, etc., and put forward many feasible measures to improve fossilization.

However, with the continuous deepening of higher vocational English teaching reform, multimedia assisted teaching equipment and network platforms have been introduced into English classrooms and extracurricular autonomous learning, and the fossilization of students' English language learning has been given new characteristics. Xu Yushu (2006)[11] explored the phenomenon of English learning fossilization in higher vocational colleges under the multimedia teaching mode. Wang Shunling and Zhang Fake (2006)[12] studied the fossilization of college English learning in the context of multimedia projection, and found that the rigidity of students' vocabulary and grammar was serious due to the factors of multimedia itself, learner's personal factors and teacher's factors. Hu Gang and Sheng Fan (2007)[13] analyzed the causes of transitional language fossilization under the new environment of multimedia assisted foreign language teaching and put forward some solutions. Since multimedia classroom teaching and the autonomous learning model under the network platform have a new perspective on the role of fossilization phenomena, there are few relevant studies. Through experimental class pilot teaching and questionnaire survey, this research aims to study the following questions: First, what is the relationship between multimedia-assisted classroom teaching and autonomous learning on the network platform and rigid phenomena. Second, whether this mode will accelerate the occurrence of some language proficiency fossilization. Through specific operations in the experimental class, students' opinions and suggestions are statistically analyzed, so that the new teaching model is more targeted, more in line with the specific needs of students, and more conducive to comprehensive promotion and spreading.

2. Research Methods

2.1 Research Subjects and Goals

The research subjects are 238 students in 8 administration classes of non-English majors in the 2018 grade, including 138 boys and 100 girls, of which 111 are liberal arts students and 127 are science and engineering students. As experimental classes, these 8 administrative classes have been using multimedia network to assist English class teaching since the first semester of freshman year in September 2018. A one-year English course is offered, with an average of 54 hours of three lessons per week. In addition, students are required to use the network platform to conduct independent learning outside the classroom, in which the listening training part no longer occupies the classroom

teaching time, but becomes a part of the network independent learning content. Questionnaires were sent to students twice at the beginning of the first semester and at the end of the second semester of the first year of college, in order to grasp the expression forms and changes of fossilization in English learning before and after multimedia and network classroom teaching. And the students' opinions and suggestions are statistically analyzed, so that the multimedia network classroom teaching model is more optimized, more activated, to avoid the emergence of new language fossilization.

2.2 Research Tools and Content.

The measurement tools used in this study are the "Questionnaire on the Fossilization of English Learning" and the "Questionnaire on English Learning in the Multimedia Network Teaching Environment". The first questionnaire was issued after the freshmen enrolled in October 2018. The questionnaire mainly refers to Liu Runqing's (2003) "Distribution Table and Causes of the fossilization of Chinese College Students", which involves three major factors: the existence of fossilization in English learning of college students, the distribution of fossilization, and the causes of fossilization. In terms of questions, the questionnaire is based on multiple-choice questions. The second questionnaire was issued in June 2019, that is, after one year of multimedia online classroom teaching in the experimental class. The second questionnaire is formulated in accordance with the actual situation of our school. The main contents include: Does the multimedia network teaching environment have an activating effect on the fossilization of English learning, and in what ways? Does such an environment accelerate the occurrence of certain fossilization phenomena? Suggestions and opinions on this teaching mode and so on. The questionnaire is based on open questions.

3. Research Result

3.1 The Overall Situation of Fossilization

According to the statistics of the two questionnaires, 198 students (83.19% of the total number of participants in the survey) and 152 students think that their English learning is rigid (63.87%). In addition, the majority of students hold a positive attitude towards the promotion of multimedia and network teaching environment on English learning: 195 students (81.93%) believe that the multimedia network teaching environment can alleviate the occurrence of fossilization; 173 students (72.68%) believe that they are confident to make progress in English language learning.

3.2 Fossilization Distribution

The statistics of the first questionnaire show that: The proportion of fossilization English vocabulary knowledge is the highest, with a total of 167 people, reaching 70.17%. The second most rigid area is grammar, with a total of 127 people, accounting for 53.36%. The four major English communicative competences of speaking, listening, reading, and writing all have fossilization. Among them, the fossilization of oral communicative competence is the most serious, with a ratio of 67.65%, a total of 161 people; the fossilization proportion of listening ability is 61.34%, with a total of 146 people, ranking second; and the proportion of reading ability is the third, up to 50.42%, a total of 120 people; although the fossilization proportion of writing ability is ranked the last, it also reaches 46.64%, totaled 111 people, showing a serious degree of rigidity.

Statistics from the second questionnaire show that the proportion of rigid English grammar knowledge is the highest, with a total of 120 people, reaching 50.42%; the proportion of lexical rigidity falling to the second place, with a total of 92 people, accounting for 38.66%. The proportion of other kinds of English knowledge rigidity is still less than 20%, which is almost the same as the results of the previous questionnaire, and the research is of little significance. Among the four major English communicative competences, the rigidity of listening and communication skills rose to the first place, with a total of 172 people, accounting for 72.27%; the rigidity of writing skills ranked second, reaching 56.3%, a total of 134 people; the proportion of reading skills was still ranked thirdly, it is 41.6%, a total of 99 people, and the rigid proportion of speaking ability drops to 34.87%, a total of 83 people.

3.3 Comparative Analysis of Questionnaire Results

The two questionnaires in this study were issued at the beginning of the freshman enrollment and at the end of the freshman year about a year later. During this period, teachers used multimedia network classroom teaching for two consecutive semesters to the students in the experimental class, and set additional oral English classes and increased the time for independent online learning. From the results of the two questionnaire surveys, it can be seen that the rigidity of English language learning is widespread among the junior college students. In general, the fossilization was greatly alleviated after the use of multimedia network teaching mode, which decreased by about 20 percent.

Since most colleges and universities introduce multimedia assisted teaching equipment in English classes at the time of higher vocational colleges are expanding their enrollment, most of the classes using multimedia assisted teaching equipment are combined classes of two or more administrative classes with at least 40 or 50 students. It is predicted that such a large class is not helpful to the cultivation and improvement of students' oral English ability, therefore, a single-class oral class with an average of one hour per week is offered for non-English majors in freshmen and sophomores. In addition, because students generally report that the effectiveness of collective listening lessons in the classroom is not good, the teaching content of the listening part has also been separated from the English class. Listening homework is a part of the exercises that must be completed, and students need to learn the listening content on an online platform after class. One of the expected effects of the above two teaching reform measures is to prevent the rigidity of oral English and listening learning under the multimedia network teaching mode. According to the results of this survey, the statistical data of the rigidity of students' self-tested English learning after one year of English classroom teaching using the multimedia network teaching model has the following changes:

The number of students who believe that their oral English proficiency is fossilized decreased from 161 to 83, and the fossilized proportion of oral English proficiency changed from the highest to the lowest among the four kinds of English communicative competence, showing a huge change before and after. 83.31% of the students believe that the new oral class is the main reason for this change.

The rigidity of listening and communication skills rose from second to first, and the proportion increased by more than ten percentage points. 85.67% of the students felt that using the online self-learning platform to learn listening has accelerated the occurrence of listening ability fossilization.

The ranking of reading ability fossilization remains unchanged, ranking the third, but it has decreased by nearly 10 percentage points, which proves that the fossilization

of reading ability has been greatly alleviated.

The proportion of writing ability fossilization rose from the last place to the second place, with an increase of 10 percentage points, indicating a decline in students' writing ability.

4. Discussion and Inspiration

Through the above data analysis and comprehensive statistics of students' answers to the open questions in the second questionnaire, we can draw the following conclusions from this teaching practice:

Generally speaking, the multimedia and network teaching environment has a considerable effect on activating and alleviating the rigidity of the English language. Students generally believe that compared with the traditional teaching model (blackboard + chalk + teacher), multimedia-assisted classroom teaching and the self-learning model of the network platform are more helpful to improve their English language comprehensive ability and stimulate learning interest and motivation.

In the aspect of oral communication ability, multimedia network teaching environment is more likely to cause rigidity than traditional classroom teaching. The reasons are as follows: First, the communication between multimedia auxiliary devices and students is mostly one-way indoctrination. Second, under the co-class teaching method, there are a large number of people in class. Third, there are few opportunities for oral communication between teachers and students as well as between students. However, with the addition of oral English classes, the situation is greatly improved, and the students' oral English ability has entered an upward curve from a plateau period or even a decline period. 68.91% of the students think that there is only one class per week in oral English class, and the class hours are too short, and they hope to increase the proportion of oral class teaching. This fact shows that opening oral English class separately is an effective measure to alleviate the rigidity of oral English ability under the multimedia network teaching environment. It can create an environment and atmosphere for students to practice oral English regularly under the guidance of teachers for a long time. This cumulative and imperceptible effect is still very significant.

After students use the online platform self-learning model to learn the content of classroom listening, the number of students who believe that their listening ability is rigid has increased by about 10% compared with the previous one. From the data, it seems that the autonomous learning model of the network platform has more catalyzed the rigidity of students' listening ability. However, after detailed statistics and analysis of the answers to open questions, we found that nearly seventy percent of the reasons why students do not like to train their listening skills in the form of online self-learning are improper learning methods. Such as: The listening time is too long each time, and the learning effect is poor due to fatigue; Students often choose to give up learning because the selected listening materials are too difficult to understand; The time period the students choose to practice listening is not ideal, which leads to their failure to form a virtuous cycle of biological clock; The students lack sufficient personal self-control, so that they are attracted by other content on the Internet, and unable to concentrate on listening exercises, etc. The reasons for this are all because in the traditional classroom listening teaching, from the selection of listening materials, to the control of the duration

and frequency, to the explanation and re-listening of key and difficult points, all are carefully designed and arranged by the teacher. Therefore, the timely guidance of teachers, especially the guidance of listening learning methods, is of vital importance for the students who use the network self-learning mode to train their listening.

The multimedia network teaching environment also has a considerable effect on alleviating the rigidity of English reading ability. As is known to all, traditional English classroom teaching mainly relies on books, chalk and teachers, which can convey quite limited information, while multimedia assisted classroom teaching and independent learning on the network platform provide students with a large amount of information such as English texts, pictures, audio and video. In this case, the average amount of information in a class can be several times or even dozens of times that of a traditional class. The commonly used English vocabulary, sentences and chapters contained in this information are repeatedly presented to students. The huge amount of reading and the continuous recurrence of reading content are undoubtedly beneficial to the improvement of students' reading ability.

From the data point of view, the multimedia network teaching environment will aggravate the rigidity of students' writing ability to some extent. Co-class teaching has doubled the amount of teachers' homework corrections, and the speed of teachers' review and feedback of students' compositions has been reduced. Although in some teaching method reform classrooms, students' mutual evaluation and teachers' selective evaluation are used to reduce the workload of teachers and mobilize students' enthusiasm to participate in the evaluation of classmates' compositions. However, the implementation effect is not satisfactory due to the differences in students' attitudes and limitations. Students still prefer teachers to review their compositions. On the other hand, the main reason for the rigidity of students' writing ability does not lie in the adoption of multimedia network teaching model itself, but in the richness of network resources. The amount of information available on online platforms makes it easier and easier to write an English composition. Some students even sign their names on the searched materials, leaving the rest of the content unchanged and handing it over as their own homework. The massive amount of information also makes it increasingly difficult to identify the originality of an article, which can no longer be done by the teachers alone. It is not surprising that the lack of writing training opportunities leads to rigid writing skills.

The multimedia network teaching environment has a greater activation effect on the rigidity of students' vocabulary knowledge, but has little effect on the rigidity of grammatical knowledge. The repetition of common English vocabulary and the doubling of reading volume will naturally enable students to master more vocabulary. As for grammar, students do not pay much attention to the study of grammar because grammar knowledge has been basically taught in high school English classes, while it is only deepened and consolidated and reviewed in college English classes. When students use the network to study independently, they are more likely to do listening, speaking and reading training rather than learning grammar on the computer. In addition, the mastery of grammar knowledge requires more lectures and guidance from teachers than the mastery of other English knowledge, so the multimedia network environment has little effect on the rigidity of grammar knowledge.

The influence of multimedia network teaching environment on English language fossilization, whether positive or negative, is the result of interaction of various factors. It's believed that more relevant research will enable educators to make better use of educational technology to serve teaching.

References

- [1] Selinker, L. Inter-language. *International Review of Applied Linguistics*, 1972(10).
- [2] Lenneberg, E. *Biological Foundations of Language*. New York: Wiley and Sons, 1967, 23-56.
- [3] Lamendlla, T. General Principles of Neuro-functional Organization of Their Manifestations in Primary & Non-primary Language Acquisition. *Language Learning* 1977(27).
- [4] Schumann, J. Second language acquisition pidginization hypothesis. *Language Learning*, 1975 (26)
- [5] Vigil, F. & Oller. Rules of Fossilization: A Tentative Model. *Language Teaching*, 1976 (26).
- [6] Ellis, Rod. *The Study of Second Language Acquisition*. Shanghai: Shanghai Foreign Language Education Press, 1999, pp 55.
- [7] Krashen, S D. *The Input and Practice: Issue and Implication*. London: Longman, 1985, pp 64-71.
- [8] Sims, W. R. Fossilization and Learning Strategies on Second Language Acquisition (ERIC Document Reproduction Service No. ED339 195), 1989.
- [9] Niu Qiang. The Fossilization of Transition and Its Implications in Teaching [J]. *Foreign Language and Foreign Language Teaching*, 2000(5).
- [10] Liu Runqing, Dai Manchun. Research on the status quo and development strategies of foreign language teaching reform in Chinese universities [J]. Beijing: Foreign Language Teaching and Research Press, 2003: 263-274.
- [11] Xu Yushu. Research on the rigidity of English learning under the multimedia teaching mode of higher vocational colleges [J]. *Journal of Chinese Language and Literature*, 2006(S1).
- [12] Wang Shunling, Zhang Fake. A study on the fossilization of college English learning in the context of multimedia projection [J]. *Audio-visual Teaching of Foreign Languages*, 2006(8).
- [13] Hu Gang, Sheng Fan. On multimedia-assisted foreign language teaching and interlanguage rigidity [J]. *Economic and Social Development*, 2007(11).