

Effect of Computer Assisted Instruction in Grammar Learning

Liping Lai

School of Foreign Languages, Nanchang Hangkong University, Nanchang 330063, China

2459241930@qq.com

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Abstract: As we all know, computers play an important role in today's society. With the development of science and technology, computer-assisted language learning has strategic significance in the field of foreign language learning research, which is a new learning strategy. Because it is difficult for language learners and teachers to learn grammar, computer-assisted language learning is essential to meet the requirements of social and academic achievement. The purpose of this article is to study the effect of computer-assisted teaching in grammar learning. This article uses evidence in the third-person singular form of English to explore and analyze the role of computer-assisted language learning in English grammar learning. In this article, the students enrolled in the Open University in the spring of 2020 are the research objects. There are 40 learners in the experimental group and the control group. In the experimental group, the teaching mode of computer-assisted language learning is a combination of computer, network and virtual. Real classrooms, while the control group used the traditional grammar teaching model, that is, lectures and problem solving. Through empirical research and teaching between the experimental group and the control group, three research methods: pre-test, post-test, interview and questionnaire survey were used to test the role of computer-assisted language learning in teaching grammar. The results show that the P value of the grammar score data of the pre-test and post-test is less than 0.0005, which is statistically significant. It proves that computer-assisted language learning is very effective for grammar teaching. In the score analysis of the entire test, in the statistical analysis before and after the test, the P value is equal to 0.0002, and it is also statistically significant. It further illustrates that computer-assisted language learning also plays a very good role in promoting English grammar learning.

1. Introduction

With the development of social economy and changes in social forms, human society has entered

the information age with the development of information science and technology as the mainstream. The rapid development of computer information technology is changing the world [1-2]. Education, especially higher education, has a very important position in social development. Responsible for the important task of cultivating more high-standard and high-quality talents for the modernization of the country. With the rapid development of foreign language learning, researchers have paid more and more attention to the importance of learner-centered teaching methods, and noticed the importance of a large amount of actual language output [3-4]. Computer-assisted language learning is an effective research direction that can make learners feel at ease and willing to accept when facing a real foreign language environment. Computer-assisted language learning provides necessary tools for the reform of language teaching, which is particularly prominent in open education [5-6].

In the study of the effect of computer-assisted teaching in grammar learning, many researchers have conducted research on this and achieved good results [7-8]. In recent years, the study of computer-assisted language learning in China has quietly emerged, sweeping universities and research institutions. Although the modern distance education network is the focus of research in this area, there are still some researchers who have made useful explorations on the campus network environment of computer-assisted language learning. Al-Khresheh M H used computer-assisted language learning to state the activities and advantages of English writing in 2001. He reported on eight activities in the writing class and said that computer-assisted language learning is very effective in English writing learning [9]. Lumaela E collected data from the foreign language reform of Tianjin Medical University, and explored the relationship between computer-assisted language learning and the improvement of comprehensive English ability [10].

This article uses a controlled experiment method. The experimental group uses computer-assisted learning English teaching using a combination of computers, virtual networks and real classrooms, while the control group uses traditional grammar teaching and still uses lecture-based and under-class Q&A teaching. Through the experimental group and the control group's teaching empirical research, using pre-test and post-test, interview method, and questionnaire survey method three research methods to detect the effect of computer-assisted learning in grammar teaching [11-12].

2. Effect of Computer-Assisted Instruction in Grammar Learning

2.1. Computer-Assisted Teaching Stimulates Students' Interest in Learning and Activates the Classroom Atmosphere

"All careers in the world stem from love." Without the enthusiasm for learning, there will be no motivation to learn. Mr. Lenin once said: "Without human emotions, it does not exist, and it is impossible to pursue the truth." Facts show that when the emotional attitude is positive, the human spirit will be renewed. Emotions are high, concentration and thinking are active. When the emotional attitude is negative, the concentration is low, the thinking is blocked, and the memory is low, you will feel bored and bored with learning. In the teaching process, this is inseparable from the "teaching" of teachers and the "learning" of students. The new curriculum puts forward a resounding slogan: "Teaching based on learning, teaching is the promotion of learning". From focusing on teachers' "teaching" to focusing on students' "learning", this change of perspective has produced a huge impact on today's teaching. In our country's classroom, in the teaching behavior of teachers and in related teaching management. It fully incorporates the modern educational spirit of "subjective education", that is, respecting the educational theme, understanding, approving and

respecting students' thematic situation. Obviously, the use of computer-assisted teaching is the easiest way to achieve this goal. The form of computer-assisted teaching makes students feel very fresh. Through the unique projection method and the unique sound effects of the software, the students' strange psychology has been unanimously understood, and their spirits are very concentrated.

2.2. Computer-Assisted Teaching Helps to Improve the Efficiency of Grammar Learning Classroom Teaching

Experiments show that it takes 2.8 seconds to describe the same information in words, 1.5 seconds to use line drawings, 1.2 seconds to use black and white photos, and 0.7 seconds to see it directly. Therefore, compared with language description, the use of computer-assisted teaching in teaching can save 1/2 to 3/4 of the time. The premise is that the student is very interested in the teaching course. Computer-assisted teaching can enhance the classroom atmosphere in grammar teaching, deepen students' understanding and memory, and enhance students' independent learning ability, thereby making teachers easier to use and improving classroom teaching ability. It reduces the pressure in the classroom and the teaching process and is easy to control, which improves the quality of teaching. Correct computer-assisted teaching can help students understand the process of grammar teaching and deepen their memory.

2.3. Computer-Assisted Teaching Expands the Scope of Art Teaching in Time and Space

Through multimedia teaching, course time is greatly reduced. The previous 2-3 hours of courses can now be taught in a one-hour course. The main reason is that multimedia can briefly explain the problem, turn the band into a simple band, and can better learn time and progress with the teacher. In the development course, the teacher arranges grammar and examples in the software in a predetermined order and method, and displays the materials in the way he designed, or replaces the content on the blackboard or even an action demonstration. Teachers only need simple operations (click the mouse or keyboard) to complete the operation, and more time is used to guide students, communicate with students, observe students' acceptance and check progress and progress.

Through computer teaching software, students can repeatedly learn what they cannot do anytime, anywhere. With the help of software, teachers' understanding of teaching content and common problems can be displayed, which can save a lot of repetitive work and enable teachers to learn more. Time and energy are used to analyze and guide students. In addition, computer-assisted teaching also provides teachers with easy access to materials and an understanding of subject development.

3. Research Experiment on the Effect of Computer-Assisted Teaching in Grammar Learning

3.1. Experiment Object

The subject of this article is a first-year adult learner from an open university in this province. In this study, two classes of students were selected as subjects, one as the experimental group and the other as the control group. The experimental group and the control group were randomly selected by lottery. There are 80 learners in total. The experimental group has 40 learners, while the control group has 40 learners.

The characteristics of adult learners are different from those of traditional college students.

Mainly officials and workers in companies or enterprises. They work full-time and take on family and social responsibilities, they study occupations or receive education themselves. They don't really understand the importance of English, and they are very passive in learning English. They are not interested in learning English, their motivation in the classroom is very low, and their only concern is to pass the exam.

3.2. Target Language Function

The target language item in this experiment is the third-person singular present tense. There are two reasons for choosing this project:

First of all, English verbs will not be affected by most combinations of tenses, expressions, emotions and sounds, but use the structure of auxiliary verbs and modal verbs for circumferential expression. Usually, the only inflection form of English verbs is the present tense form of the third-person singular form in -s. Even at the beginning of English learning, errors in the third-person singular form of English may occur.

Secondly, when second language learners are facing learning challenges, using -s as the subject-verb agreement mark and possessive form also makes contracted copula and plural marks possible. Therefore, the second language learner may be in a fuzzy state and easily make mistakes in the output process.

Third, when second language learners use computer-assisted language learning to use the third person in the current tense as a grammatical marker, it will cause more dissatisfaction. When second language learners encounter the words "she" or "he" with useful tasks, they skillfully practice putting -s at the end of the verb.

3.3. Statistics

This article uses SPSS 22.0 software to count and analyze the results of the questionnaire, and conduct a t test. The t-test formula used in this article is as follows:

$$t = \frac{\bar{X} - \mu}{\frac{\sigma_X}{\sqrt{n}}} \quad (1)$$

$$t = \frac{\bar{X}_1 - \bar{X}_2}{\sqrt{\frac{(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2}{n_1 + n_2 - 2} \left(\frac{1}{n_1} + \frac{1}{n_2} \right)}} \quad (2)$$

$$t = \frac{\bar{d} - \mu_0}{s_d / \sqrt{n}} \quad (3)$$

4. Experimental Analysis of the Effect of Computer-Assisted Teaching in Grammar Learning

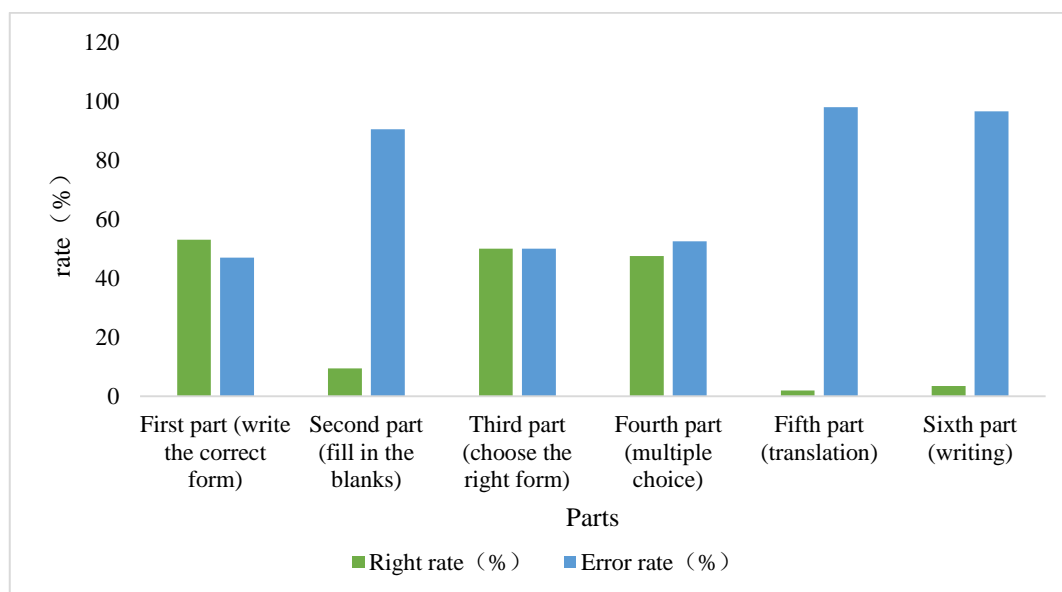
4.1. Test Analysis 1

Before implementation, the author conducted Test 1 to find out the average level of adults. All subjects take the exam at the same time in the same classroom environment. The results are shown in Table 1.

The data of this experiment adopts t-test system type, and data management and analysis adopt SPSS 22.0 to complete. After checking the T system, the analysis of the pre-test and post-test data has statistical significance.

Table 1. The right rate and error rate of the six parts in the test 1

Parts	Right rate(%)	Error rate(%)
First part (write the correct form)	53	47
Second part (fill in the blanks)	9.5	90.5
Third part (choose the right form)	50	50
Fourth part (multiple choice)	47.5	52.5
Fifth part (translation)	2	98
Sixth part (writing)	3.5	96.5

*Figure 1. The right rate and error rate of the six parts in the test 1*

It can be seen from Figure 1 that first, according to the scores of the third-person singular form of English in the pre-test, the correct rate and error rate of different types of problems are compared. The grammar items in the test paper are very simple and straightforward for learners. In the first part of this article, the third-person singular form of English was checked five times. About 32% of the learners chose the correct answer, 48% of the learners chose the wrong verb form, and 20% of the learners chose the wrong answer that did not understand the grammar rules. In the second part of this article, the third-person singular form of English was checked 7 times. About 89.7% of learners could not change the verb to the correct form because they did not know the grammatical rules of the change; about 10.3% of the learners the person completed the problem correctly. In the third part, the pronouns with the correct verb form are also checked. About 50% of learners can do it correctly, while 50% of learners cannot do it correctly; in contrast, in the fourth part and the fifth and sixth parts have almost the same results. In contrast, about 97% of the learners did not do well, and only 3% of the learners did it correctly. Especially in the sixth part, even some learners can't finish writing the entire sentence.

4.2. Test Analysis 2

The students in the experimental group are taking an exam one month later, and the results are shown in Figure 2.

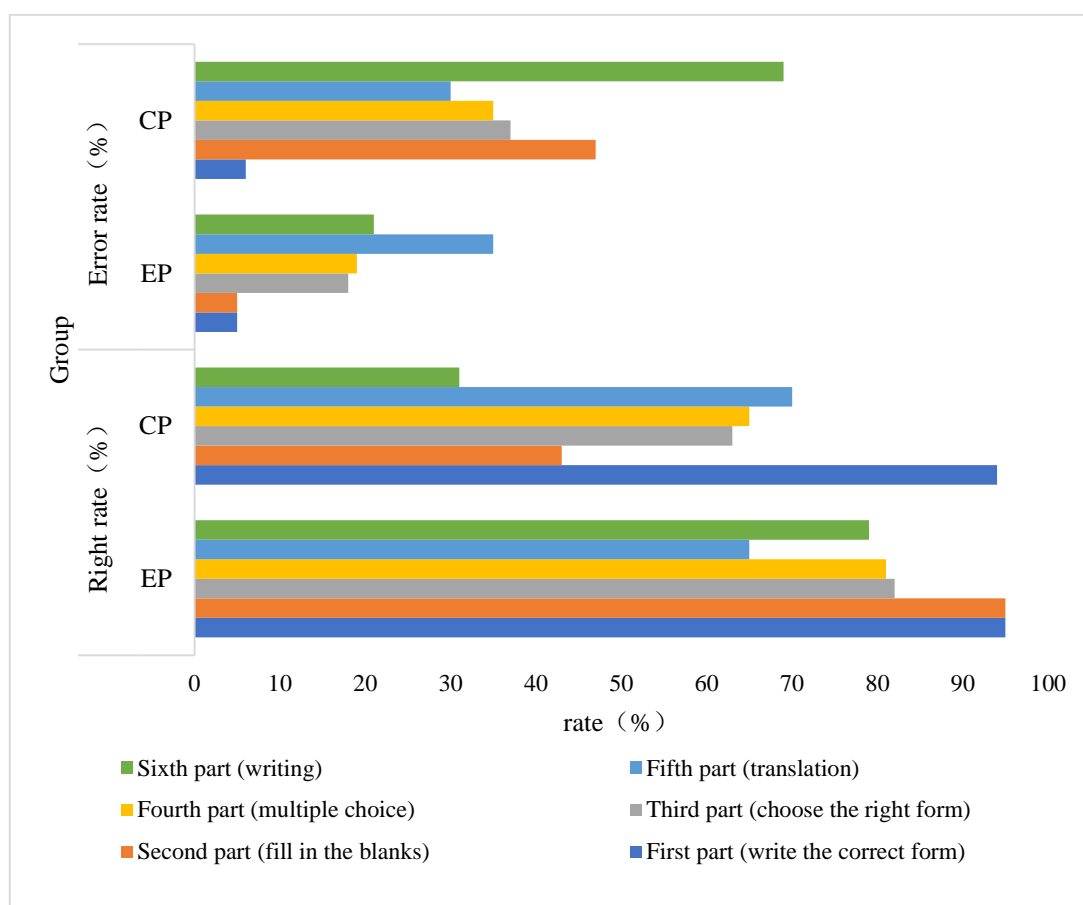


Figure 2. The right rate and error rate of the six parts in the test 2

Note: EP: experimental group; CP: control group

It can be seen from Figure 2 that in the first part of the test paper, in the experimental group and the control group, nearly 95% of the learners made the correct answer. This means that traditional methods can bring its advantages when certain content is recited mechanically, which is the same as CALL. In the second part, the third-person singular form of English was checked 9 times. Sometimes it directly uses "he" to check whether the verb is plus -s. "he" is also a very typical grammatical form in the learning of the third-person singular form of English. In the experimental group, nearly 95% of the learners chose it. Correct answer, but in the control group, only about 42% of the learners chose the correct answer, and 5% of the learners in the experimental group chose the wrong answer because they did not understand the meaning of the sentence. This is not the use of the wrong method.

In the third part, the pronouns with the correct verb form were also checked. About 81% of the learners in the experimental group can do it correctly, while only 65% of the learners in the control group can do it correctly. This seems to make CALL Get better When encountering pronouns, the effect is better than traditional methods. The fourth part has almost the same result. In the fifth part, about 35% of the learners in the experimental group could not translate the sentences into the correct order, but 70% of the learners in the control group made the correct changes. This may be the advantage of traditional teaching methods. In contrast, in the six parts of Test 2, only about 30% of the learners in the control group can complete the thesis in English third-person singular form

without wrong sentences, while about 80% of the learners in the experimental group can complete the thesis.

5. Conclusion

Computer-assisted language learning is effective in grammar learning, while teaching in a network environment consists of a series of carefully designed tasks. Computer-assisted language learning is learner-centered, and the teacher is the main guide in the teaching process. In the course of computer-assisted language learning, the design of the whole course is close to daily life and is connected with reality. Learners learn and use grammatical items in the process of relaxing activities. The real and natural language environment promotes the development of learners' language ability. Computer-assisted language learning is closely related to real life. Learners can experience the joy of language learning, which is conducive to arousing learners' interest and enhancing their enthusiasm for learning English grammar. Computer-assisted language learning has a clear purpose for learning the third-person singular form of English. In the process of computer-assisted language learning, through communication activities between learners and teachers or between learners and learners, learners can master the application of this grammar item, and can use their knowledge to solve problems in learning and work the problem.

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Data Availability

Data sharing is not applicable to this article as no new data were created or analysed in this study.

Conflict of Interest

The author states that this article has no conflict of interest.

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