The Application of modern multimedia Technology in English Teaching

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Abstract. In order to improve students' interest in English teaching, the author puts forward the research hypothesis that the new method of teaching assisted by multimedia technology can stimulate students' interest in reading and improve their reading level, and verified by experimental study. The experiment takes two parallel classes taught by the same teacher in grade two of A middle school in A city as the research object. Before the experiment, a questionnaire was sent to the teachers to understand the effects of multimedia technology and the main reasons affecting their reading level. Through classroom observation, interview, questionnaire and other methods, statistical methods were used to analyze the reading scores and comprehensive language ability test scores of the two classes, the results showed that before the experiment, there was very little difference in English scores between the experimental class and the comparison class, the average score of the experimental class was only 0.3 points higher than that of the comparison class, and the P value was greater than 0.05, indicating that there was no significant difference between the two samples. But after a semester of changes in teaching methods, the results show that, although the English scores of the two classes have improved, the English scores of the experimental class are 1.97 points higher than that of the comparison class, and the P value is less than 0.05, indicating that there is a significant difference between the two samples. It is proved that the application of multimedia technology to the new teaching method can improve students' interest in learning and reading level.

Keywords: Multimedia technology; English teaching; Interest in reading; Reading level; English.

1. Introduction

With more frequent economic and cultural exchanges between China and other countries, as a tool of communication, English has also been valued by people. Due to the influence of economic conditions and teachers' quality, English teaching in junior high school is limited to the traditional teacher's blackboard and chalk, and multimedia technology has not been applied in the applied teaching, and the effect of multimedia technology has not been effectively played [1]. The biggest advantage of multimedia technology is that it can create a realistic English communication environment, promote the improvement of students' English communicative ability. At present, in most schools in China, due to the limited conditions, no more than hired foreign teachers, so students have no chance to communicate with people who speak English with a pure accent. Multimedia technology can provide students with better oral English learning software and platform, students can stay at home to communicate with people in these English-speaking countries, which can not only improve students' English communication ability, but also increase their knowledge reserve. Because of the increasing number of Internet users in China, guiding students to communicate with English learners in China can help students communicate in familiar situations. Multimedia technology plays a positive guiding role in English teaching activities, the application of multimedia technology in English classroom can help students broaden their vision of English culture, obtain rich learning resources, and effectively develop and improve their listening, speaking, reading and writing abilities. Multimedia technology teaching should start from the characteristics of English subject, create a good language environment for students, so that students can quickly engage in learning, and further improve the learning efficiency of learners. At the same time, multimedia technology can also train students' listening, speaking, reading and writing ability, so that students can receive more English resources in class, on the basis of reducing the writing task of teachers, improve the efficiency of

classroom teaching. In English teaching activities, the use of multimedia teaching is conducive to realizing the interaction between teachers and students and computers, and further improving students' audio-visual effects. In English teaching activities, teachers can also use multimedia technology to break through the limitations of time and space, create a new learning mode, and make the classroom teaching effect get rid of the shackles of curriculum, teachers can adjust the content according to students' feedback, so as to cultivate students' interest in learning and mobilize their enthusiasm for learning. Multimedia teaching can reduce the difficulty of learning and simplify the relevant knowledge points in the classroom, at the same time, it can also make the static book knowledge become dynamic, so that students' interest is mobilized, learning attention is focused. In addition, the use of multimedia can also help students to apply the theoretical knowledge they have learned into practice, make English learning more life-like, and further improve students' English expression and writing ability, Figure 1 shows the multimedia classroom system.

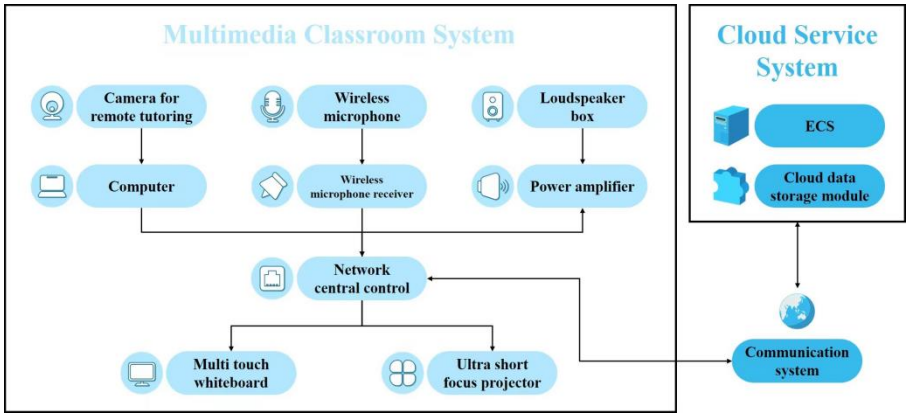


Figure 1 Multimedia classroom system

In view of this research question, Duan, X. et al. focused on how to apply English activity teaching method in high school reading teaching, aiming at the problems of traditional teacher-centered teaching and knowledge-oriented learning, three kinds of learning activities are designed. The results enable front-line teachers to fully understand the new concept, it should be implemented in accordance with its own teaching needs, so as to penetrate the consciousness of practical significance into front-line teachers [2]. Fu, H. et al. will analyze the positive and negative effects of multimedia on high school Chinese teaching on the basis of investigation, research and teaching practice, and put forward some thoughts on the negative effects [3]. Crawford-garrett, K. et al. presented a framework for an educational literacy approach, the framework is centered on critical, locally contextualized, content-rich approaches, and provided detailed examples, explain how this study implemented the framework in two different teacher education settings, these include different institutional barriers, regional student groups and program requirements [4]. Now, in the field of English reading, domestic scholars mainly focus on the theoretical research of multimedia technology in English reading teaching, teaching methods, teacher-student interaction and quality assessment system. However, the application of multimedia technology in teaching mode, teaching process and teaching evaluation is less, the research on combining theory with practice in English reading teaching is relatively weak. Most of the studies focus on the cultivation of teachers' information literacy and awareness of using multimedia teaching, repeatedly demonstrating and discussing the necessity and importance of multimedia technology application in English, however, there is a lack of operation and implementation of the teaching practice process, and the research on the use of the technology is less and less. When teachers use multimedia technology to assist English teaching, they need to have certain operation technology and use ability, which leads to some teachers will use advanced multimedia technology as much as possible, and strive to make the courseware exquisite; Some teachers use multimedia in order to use multimedia, and often list the teaching content word by word on the courseware, so that students lose interest in learning.In this way, teachers not only neglect the design of curriculum details, the research of teaching methods and teaching models, but also make

students slowly lack thinking training, in the classroom can only follow the teacher's ideas blindly listen to the lecture, and did not master the basic method of learning. Therefore, teachers should constantly summarize and study the teaching methods suitable for students, by constantly updating the teaching methods, students can better accept the knowledge, master the language learning methods and improve the learning efficiency. This study focuses on the practical research of combining multimedia with English reading teaching methods, aiming at the problems of students' lack of interest in English reading and difficulty in improving their reading ability, the author puts forward a new reading teaching method, and uses multimedia technology to assist the new teaching method.

2. The Application of multimedia in High school English Reading teaching

2.1. Concepts and characteristics of multimedia

The word Multimedia is translated from English "Multimedia", on the one hand, it refers to the text, image, video, sound and other media information acting on the senses, on the other hand, it refers to the multimedia technology that can present these sensory information [5]. Multimedia technology in classroom teaching is an organic teaching system composed of computer technology, network technology and educational software. Because computer has good information display, human-computer interaction, timely feedback and other characteristics. Scientific and reasonable use of multimedia technology in classroom teaching can innovate classroom teaching mode and teaching methods.

(1) Integration of multimedia technology can improve reading efficiency

The process of reading is essentially a process of ideological exchange with readers in the two stages of symbol recognition and understanding using language symbols as the medium [6]. Thoughts are conveyed to readers through language symbols, and readers understand, process and accept a series of language symbols through different sensory channels. In the process of learning English, the mastery of reading skills is one of the most effective ways to improve the efficiency of reading. Reading skill is a kind of unconscious behavior, only when learners can unconsciously use certain strategies to obtain information, understand text, and complete tasks can they master certain skills. As a language carrier, multimedia integrates text, graphics, sound and other forms, which is more conducive to promote readers' unconscious learning and understanding of knowledge.

(2) The interactive diversity of multimedia technology can stimulate students' reading interest

Attention is a characteristic of mental activity, but it does not reflect the attributes of things, it only ensures that the psychological process can better reflect and change the objective reality [7]. Attention enables the mind to choose something that is meaningful, meets the needs of the body, and is related to the current activity, and the psychological activities to avoid or inhibit irrelevant things, so that psychological activities will be according to the needs and wishes of the people for concentration or transfer. Multimedia technology is to use information processing, multi-dimensional information, in order to focus and attract people's attention, so that in the process of application to meet people's information requirements for multimedia.

(3) Multimedia technology collaboration can realize sustainable teaching

Foreign language learning is a process in which learners' knowledge and experience interact with the external environment [8]. It is necessary to maintain a relatively stable teaching environment and prevent distracting stimuli from appearing in foreign language classroom teaching. Such a variety of factors depend on each other, mutual restriction, constitute a whole ecosystem. There is a strong emphasis on the teaching and learning of foreign languages in ecosystems, and getting these relationships right, it is helpful to comprehensively understand the influence of various factors in the classroom on teachers and students in the process of teaching, avoid one-sidedness in teaching and research.

2.2. Methods

(1) Experimental subjects

This experiment is a comparative study of two classes of students in Grade two of high school who are taught by the same English teacher for one semester. The two classes are parallel classes, the English reading test results of the final exam before the experiment show that there is little difference between the two classes, the total score of the reading test is 40 points, 31 students in the experimental class scored more than 20 points, and 30 students in the control class scored more than 20 points. There are 44 students in the experimental class and 42 students in the control class.

(2) Experimental hypothesis

This experiment assumes that multimedia technology, in the teaching method combining task-based teaching method and genre teaching method, it can stimulate students' interest in learning English reading and improve their reading level [9].

(3) Experimental design

According to the relevant theories of reading teaching method, a teaching method combining task-based teaching method with genre teaching method is proposed, and multimedia technology is used to assist teaching in the teaching process.

2.3. Experimental Investigation

Before the experiment began, English teachers at No. X Middle School in Dalian were given questionnaires, in order to understand the views of English teachers on English teaching and the effects of multimedia technology, the results of several important content surveys are shown in Figure 2 and 3[10].

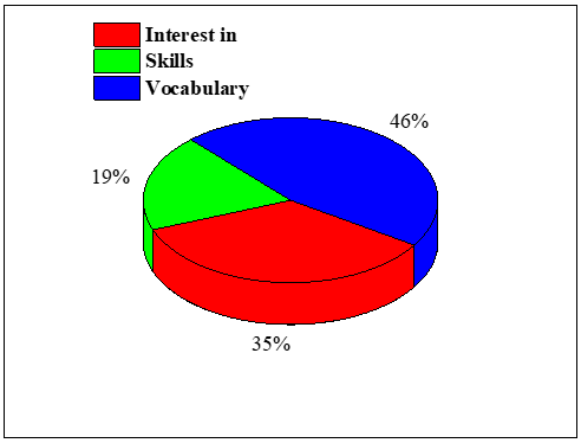


Figure 2. Results of the survey on the influence of English reading level

In response to the question, "What do you think is the main reason that affects students' English reading level?" 46% teachers think it is "vocabulary", 35% teachers think it is "interest", 19% teachers think it is skills [11]. It can be seen that interest, skills and vocabulary are the main reasons that affect students' English reading level, and vocabulary problems are the most important among the three reasons. Due to the limited class time, teachers can only teach the vocabulary in the textbook, and it is far from enough for students to learn vocabulary only by class time, so it is necessary to use suitable teaching methods or efficient media tools to make up for this deficiency.

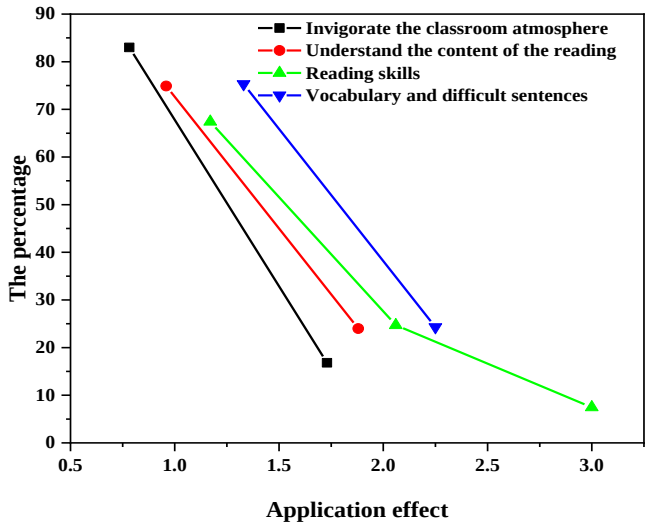


Figure 3 Results of the investigation on the application effect of multimedia technology in reading teaching

According to the survey results in Figure 3, 75% of teachers still believe that multimedia technology has a positive effect on reading teaching [12]. However, there are also a few teachers think that the function of multimedia has not reached their ideal effect, which shows that there are also shortcomings and deficiencies in the process of using multimedia, this requires teachers to strengthen the practicability of multimedia technology and timely communicate with students. And teachers' affirmation of the effect of multimedia assisted English reading teaching lays a certain practical foundation for the experiment of this research.

3. Results and analysis

In the course of English reading teaching for one semester, a new reading teaching method assisted by multimedia technology was adopted in the experimental class, namely, the combination of task-based language teaching method and genre teaching method [13]. After the test, it is found that students can effectively use reading strategies to learn reading, and the reading speed is also significantly accelerated. Of course, tests are the most common way to check students' mastery of knowledge and skills because of their reliability and authenticity. However, in order to test whether the new reading teaching method is effective, we should not only look at the final reading score test of students, but more importantly, we should test students' autonomous learning ability of comprehensive language application ability of listening, speaking, reading and writing. The author analyzed and compared the results of the pre-test and post-test, the pre-test score is the reading score in the final examination of the semester before the experiment, and the post-test score is the reading score in the final examination after the experiment.After analysis and comparison, it will be found that whether the new teaching method assisted by multimedia has improved students' English reading scores, that is, whether it has improved students' reading ability. Since the data of this experiment are from two different samples, and it is necessary to compare and analyze whether there are significant differences between the data of the two samples, therefore, the T-test two-sample variance detection method was used for data analysis. Before T test, the variance of F test should be compared between the two samples, if there is no significant difference in the variance, that is, F value is greater than 0.05, then T test was used to detect equal variance. If the variance is significantly different, that is, F value is less than 0.05, then heteroscedastic test is used. Firstly, the F-test was used to compare whether the variance of the two samples was equal. Through data analysis in Table 1 and Table 2, it can be seen that F values are all greater than 0.05, so it can be considered that the overall variance of the two

groups of data is equal. According to the values of F-test, two-sample T test with equal variance was conducted on the two groups of data, as shown in Table 1 and Table 2.

Table 1 Analysis Table of T-test two-sample equal variance data between experimental class and control class for semester reading

	Laboratory class term	Reference class term
On average	22.15644886	21.83996429
The variance	20.88656782	21.70863897
observations	44	42
Merger of variance	21.28781683	/
Assumed mean difference	0	/
df	84	/
t Stat	0.317971904	/
P(T<=t) double tail	0.751295391	/
t two-tailed critical	1.988609629	/

Table 2 T-test two-sample equal variance data analysis table for experimental class and control class in the next semester

	Experimental class next semester	Control class next semester
On average	23.91242898	21.93611607
The variance	20.27 138404	22.18832413
observations	44	42
Merger of variance	21.20703337	/
Assumed mean difference	0	/
df	84	/
t Stat	1.989378888	/
P(T<=t) double tail	0.049913446	/
t two-tailed critical	1.988609629	/

As can be seen from Table 1, before the experiment, there was little difference in English scores between the experimental class and the comparison class, the average score of the experimental class is only 0.3 points higher than that of the comparison class, and the P value is greater than 0.05, indicating that there is no significant difference between the two samples [14]. However, after a semester of teaching method reform, it can be seen from Table 4 that although the English scores of both classes have been improved, however, the English score of the experimental class is 1.97 points higher than that of the comparison class, and the P value is less than 0.05, indicating that there is a significant difference between the two samples. This result fully shows that the application of multimedia in the new teaching method is obviously helpful to students, students not only improve their interest in English reading, but also improve their reading ability.

Secondly, the reading ability of the two classes is compared. The main factors that affect students' reading ability include reading amount, proportion of new words, reading speed and comprehension rate of reading materials. In the process of result statistics and analysis, the formula used is:

Average reading speed (WPM)= Words read (w)/ time (minute)

Average rate of correct understanding (n)= number of correct answers/total number of questions ×100%

Reading efficiency (n)= average reading speed × average correct understanding rate

The comparison results are shown in Table 3 [15-16].

Table 3 Comparison of reading ability between experimental class and control class before experiment

	Number of words read	Proportion of new words	Average reading speed (per minute)	Average comprehension rate	Reading efficiency
The experimental group	460	2.6	48	56	26.88
The control group	460	2.6	46	53	24.38

However, according to the "English Syllabus for Full-time Senior Middle School", students are required to read more than 200,000 words in addition to texts. Able to read material slightly less difficult than the language you are learning with the help of a dictionary, at a rate of 50-60 words per minute, they should be able to grasp the main ideas and facts by reading different subjects such as biographies, stories, and social and cultural materials with a vocabulary rate of less than 3 percent. The correct rate of understanding reached 70%[17]. As can be seen from Table 4, before the experiment, the reading speed of the two classes was between 40 and 50 words per minute, which means that the pre-test score of reading ability did not meet the requirements [18-19]. In the process of reading, new words are an important reason to hinder the reading speed, students do not master certain reading skills and reading strategies, as a result, in the process of reading, the clues and information provided by above and below are not used to infer the general meaning of the new words. They lack the ability to reason and process information based on the background knowledge of the article, and they are not active in reading extracurricular materials, so they do not read much outside the classroom.

The statistical table of post-test results shows that (Table 4) : The application of multimedia technology in the teaching of new methods, arouse students' initiative of independent learning, students began to use various channels to read independently, participate in various activities assigned by the teacher. The reading speed of students has been significantly improved, which is very close to the level 2 of syllabus, and the understanding ability of articles has also been improved [20]. Therefore, the experiment proves that the new teaching method assisted by multimedia teaching can improve students' learning, help students develop good reading habits and use reading strategies suitable for article genres.

Table 4 Comparison of reading ability between experimental class and control class after experiment

	Number of words read	Proportion of new words	Average reading speed (per minute)	Average comprehension rate	Reading efficiency
The experimental group	520	2.7	75	79	59.25
The control group	520	2.7	65	62	40.3

4. Conclusion

Starting from the teaching of English reading in senior high school, the author found the problems in English reading teaching through the investigation and interview of teachers and students, and put forward a new teaching method combining task-based teaching method with genre teaching method,

in order to solve the practical problems in reading teaching, multimedia technology is used to assist English reading teaching. Through evaluation, testing and questionnaire data, it is verified that "the application of multimedia teaching in the new method can stimulate students' reading interest, improve students' autonomous learning ability, and more conducive to the improvement of students' reading ability and the ability to use reading strategies".

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