

*Enhancing English Language Proficiency for Primary School Students Through
the Implementation of Online Interactive Multimedia Learning*

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Abstract

This study investigates the use of online interactive multimedia learning to enhance basic English skills (listening, speaking, reading, and writing) among primary school students in China. Moving beyond traditional classroom methods and textbook content, the study aims to develop a comprehensive approach to improving students' foundational English abilities. The study has two main objectives include 1) to compare the pre-test and post-test results, analyzing whether there is a significant difference in English proficiency when using online interactive multimedia learning 2) to assess students' satisfaction with learning English through this method. The research was conducted with 15 primary school students in China, aged 8 to 10 years, in grades 3 and 4. These students were selected using a simple random sampling technique, ensuring no significant difference in their initial English proficiency. The findings reveal: 1) the average post-test scores were significantly higher than the pre-test scores, indicating a positive impact on students' English proficiency ($p < .05$), 2) online interactive multimedia learning was found to enhance teaching effectiveness, boost students' interest and enthusiasm, and foster greater interaction and communication among students and between students and teachers. This research underscores the potential of online interactive multimedia as a valuable tool in modernizing English language education, making it more engaging and effective for young learners.

Keywords: Online Interactive Multimedia Learning, Primary English, Basic English Skills

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Introduction

With the rapid development of network and information technology, interactive multimedia learning methods are also constantly updated. The role of traditional multimedia methods in education has gradually exposed its shortcomings of insufficient capabilities and lack of innovation. Nowadays, artificial intelligence-based interactive tools such as AI and AR are developing rapidly, and their perfect combination with other multimedia has brought great impetus to the innovation and development of the education industry.

As the world's largest language, English occupies a high position in the development of the education industry in various countries. English is a second foreign language for Chinese students. The teaching model of English learning and students' learning methods have always been the focus of Chinese English education practitioners.

1. Research of Objectives

This research aims to combine online interactive multimedia learning with the teaching of primary school students' basic English learning abilities (listening, listening, reading and writing), and realize the organic combination of network information technology and multimedia in teaching, so as to meet the needs of students' personalized learning and change Student learning methods and teacher teaching methods.

1.1 Investigate and study students' learning effects before and after using online interactive multimedia learning.

1.2 Investigate and study the satisfaction of students with online interactive multimedia learning.

2. Research Definition

Through the study of the subject of English in primary school teaching, teachers are no longer limited to the teaching tasks of words, sentence patterns and basic grammar, but also allow teachers to update their teaching methods in the teaching tasks of basic English phonetic symbols. At the same time, it also allows students to say goodbye to boring vocabulary, phonetic symbol memory and tedious sentence grammar learning, allowing students to master the basic abilities of English learning in fun, and greatly mobilizes students' enthusiasm for English learning. Provide students and teachers with a good learning and teaching experience by making full use of different forms of interactive multimedia learning methods.

3. Research Methods

3.1 Variables

The independent variable is the online interactive multimedia learning software used for students' English learning.

The dependent variable is (1) The students' performance before and after and the improvement of their basic English learning abilities (listening, speaking, reading and writing); (2) Students' satisfaction with online interactive multimedia learning and their development potential in teaching.

3.2 The population

The subjects of this study were 200 third and fourth grade primary school students from Xigu Primary School in Xigu District, Lanzhou City, Gansu Province. The sample for this study was 15 students from Xigu Primary School in Lanzhou City, Gansu Province, China. The 15 students were randomly selected from grades 3-4.

3.3 The research instruments consisted of:

1. Online interactive multimedia learning application software for English learning.
2. The students were pre-test and post-test.
3. "Questionnaire star" APP.

3.4 Data and Statistical Analysis

3.4.1 Evaluation of online interactive multimedia learning by sample students.

3.4.2 Use t test dependence to compare the situation test before and after using online interactive multimedia learning.

3.4.3 By means of mean and standard deviation, this paper studies students' enthusiasm for using online interactive multimedia learning to improve students' learning interest.

3.5 Content

First of all, This paper focuses on students' perception and feedback on interactive multimedia learning; secondly, the role of interactive multimedia learning in improving the four basic abilities of Chinese primary school students in English listening, speaking, reading and writing application; finally, there are precautions for developing and applying interactive multimedia learning in primary school English teaching in the future.

4. Conclusion

The analysis result of the above information answers to the research objectives as follows:

4.1 Comparison of students' learning tests in English classes using online interactive multimedia learning.

Table 1: The Effect of Using Interactive Multimedia Learning in the Classroom for English Learning

Items	n	\bar{X}	S.D.	t-test	Sig. (2-tailed)
Pre-test	15	10.87	1.125		
Post-test	15	17.67	1.291	-17.872	.000*

*p<0.05

The table shows the effect of using interactive multimedia learning in the classroom for English learning, which improves students' interest in learning English. The average score before the test was 10.87 points. The test score was 1.125, SD. After using interactive multimedia learning, the average score after the test was 17.67, and students' interest in

learning English increased significantly, with a score of 1.291, S.D. The t-test analysis before and after the test was -17.872, and the difference was statistically significant at the 0.05 level.

By comparing the learning performance of students using online interactive multimedia learning in English classes, the results show that after using online interactive multimedia learning, students scored higher in the post-class test of English classes, reaching a significant level of 0.05. When students choose to use appropriate online interactive multimedia learning to learn English, online interactive multimedia learning can produce effective learning effects. This is because novel technologies such as dynamic graphics and images, interesting video animations, clear and guiding audio and voice software can improve students' learning interest and efficiency (Xia Bing, 2021; Houria Kelkoul, Adil Zabadi, Youssef Zaz, 2023; Djusmaini Djamas, Vonny Tinedi, Yohandri, 2018) compared online interactive multimedia learning with traditional learning methods. The results showed that students who used online interactive multimedia learning achieved higher grades, with a significance level of 0.05.

4.2 Analyze students' satisfaction scores with English learning through interactive multimedia learning.

From the data results, it can be concluded that the average scores of students are between 4.20 and 4.80, which is above average. The highest average score is "the difficulty of the test questions is suitable for students" (4.80). The lowest average score is "the unit exercises are sufficient to check understanding", which is 4.20. The overall average score of this dimension is 4.52, indicating that students are highly satisfied with improving basic English skills (listening, speaking, reading and writing) through online interactive multimedia learning.

The above research results show that the application of online interactive multimedia learning in English learning has a significant effect on improving students' basic English ability and significantly improving their grades. At the same time, students are highly satisfied with the application of online interactive multimedia learning in English learning, which shows that online interactive multimedia learning is conducive to the improvement of students' learning and promotes the development of teaching models and methods. The above research results are consistent with the results and situation of literature research (Yang Yi, 2019; Wang Wenjing, 2021; Huang Chao, 2021).

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