Online and Offline Blended College English Classroom Teaching Based on MOOC Internet Platform

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Abstract. The blended teaching mode organically combines the advantages of online teaching and traditional classrooms, and is an essential activity for teaching. The purpose of this paper is to study the blended English based on the MOOC Internet platform. Using the natural experiment method in the educational experiment method, a pioneering experiment of single factor, single subject and single item was carried out, and the pre- and post-test design of equal groups was adopted. Two classes with similar English proficiency and certain English learning motivation were selected as the research objects with a four-month experiment. Class A conducted traditional offline teaching, and class B conducted online and offline "blended" teaching mode. The standard deviation, the highest score and the lowest score were used for data analysis, and the changes in English proficiency before and after the experiment were compared between the two classes. The experimental results show that the total score of class B increases more than that of class A, which puts forward practical suggestions for the future blended teaching mode.

Keywords: MOOC Platform · Blended Teaching · Online and Offline · College English

1 Introduction

In classroom, teachers are the guides, guiding students to actively and actively participate in cognitive activities and master the teaching content. The purpose is to promote students' comprehensive development step by step [1, 2]. Classroom teaching is a basic way for Chinese students to improve their comprehensive language ability, and also the main way for students to formally learn English [3, 4]. English classroom teaching is a process in which teachers teach students English knowledge, skills and culture in a purposeful and planned way. In the English classroom, students can use the interpersonal communication among teachers and students to help students' cognitive development, thereby improving their English proficiency [5, 6].

How to correctly guide college students to learn and master English knowledge and improve English skills in college English teaching has always been a problem that teachers must pay attention to [7]. Antonaci A develops game elements in a MOOC inspired by intent theory and strategy game implementation. Investigate SP usability

through usability testing, eye tracking, and loud retrospective thinking. Also check that design choices match the user's conceptual planning process. It is found that the system conforms to the planning concept of the sample, and the system availability can be further improved [8]. Al K applies an online learning approach to effectively disseminate all aspects of the nation's culture and heritage to students in a fun and systematic way. The online application used is the Massive Open Online Course (MOOC) on heritage topics. MOOCs introduce students to online learning methods currently carried out in universities [9]. The MOOC Internet platform plays a key role in China's future education development.

This paper takes the English students of M University as the research object, trying to research the current situation of classroom teaching through educational experiment method, and on this basis, clarifying students' curriculum requirements, and then designing an improved college English classroom through a blended learning method. The platform is to evaluate teaching effect, impact and potential changes of the course on college English teaching, so as to give appropriate suggestions for improving the effect of English teaching, and promote teachers' professional development.

2 Research on Online and Offline Mixed College English Classroom Teaching Based on MOOC Internet Platform

2.1 Current Situation of College English Teaching

Most college students' English learning is still in the shallow stage of learning, such as description, memory, copying, imitation and so on. Influenced by test-oriented education, students hope to face various standardized English tests such as college English CET-4, Cambridge Business English Test, IELTS, TOEFL, etc. [10, 11]. In order to pass English exams or get high scores, students often perform mechanical recitation and imitation of simple language skills [12]. They are only interested in the content of the next test. Immediately after the exam, they may forget what they have learned. So, the online and offline blended teaching mode is applied in college English teaching so as to improve students' activity in learning English, and promote their ability in using English.

2.2 MOOC Internet Platform

MOOC, short for Massive Open Online Course, has the characteristics of large scale, low threshold, online, free, open, interactive and big data.

MOOC has created a new educational paradigm in the digital information age due to its high-quality learning resources and advanced educational concepts. MOOCs are divided into two types: cMOOCs based on connectivist learning theory and xMOOCs based on behaviorist learning theory. The cMOOC is centered on the establishment of a learning network, emphasizing the construction and creation of knowledge, emphasizing learners' autonomous learning and social network learning, which requires learners' strong autonomy, and learners conduct autonomous learning through resource sharing and interaction. xMOOC is centered on the transfer of content, emphasizing the transfer and copying of knowledge, and emphasizing video learning, assignments and tests.

The main way for students to acquire knowledge is course study. Although the first MOOC was the cMOOC based on Connectivism, because the xMOOC model is closer to the traditional teaching model, it has obvious advantages in knowledge transfer and replication, which is more conducive to the transfer of deterministic knowledge and is more conducive to learners' acquisition. In addition to mastering knowledge, the presentation of xMOOC's course resources is mainly short and concise videos, which is more in line with the fast-paced lifestyle and fragmented learning methods of modern society. Therefore, relatively speaking, the xMOOC course model is more favored by commercial institutions, and known as a curriculum construction model with the most investment.

3 Investigation and Research on Online and Offline Blended College English Classroom Teaching Based on MOOC Internet Platform

3.1 Experimental Design

This paper selects the students of Class A and Class B of English major of M University as the research objects. Among them, class A is the control group; class B is the experimental group, the independent variable of the experiment is set to the online and offline blended teaching mode, and the dependent variable of the experiment is the students' comprehensive scores; all the candidates took the pre-test and post-test.

3.2 Data Preprocessing

After conducting a four-month educational experiment in Class A and Class B, in order to test the impact of using only offline teaching mode and online-offline blended teaching mode on students' comprehensive performance, the researchers conducted a study of Class A and Class B. The scores of the test papers before and after the test were tested. In order to explore whether there was a significant difference in the improvement of class A and B, the data was imported into SPSS for two independent samples for T-test:

$$t = \frac{\overline{X} - \mu}{\frac{\sigma X}{\sqrt{n}}} \tag{1}$$

$$t = \frac{\overline{X_1} - \overline{X_2}}{\sqrt{\frac{(n_1-1)S_1^2 + (n_2-1)S_2^2}{n_1+n_2-2}\left(\frac{1}{n_1} + \frac{1}{n_2}\right)}} \tag{2}$$

Formula (1) is a single population test, s is the sample standard deviation. Equation (2) is a double population test.

3.3 Teaching Methods

(1) MOOC online teaching
Students enter the online learning website. After completing the registration and login, they can select the course video to watch, answer the questions in the video to deepen their understanding, complete the learning tasks and obtain grades.
(2) Offline teaching
After students complete online learning, teachers organize classroom discussions according to the learning content, help students answer questions, encourage students to exchange ideas, and enhance enthusiasm for independent learning and participation in classroom discussions.

4 Analysis and Research on Online and Offline Blended College English Classroom Teaching Based on MOOC Internet Platform

4.1 MOOC-Based Blended English Classroom Teaching

The MOOC-based blended English classroom teaching relies on the Wisdom Tree online education platform. After the college English MOOC course is released on the Wisdom Tree platform, courses can only be selected on the Wisdom Tree platform at the specified time. The platform functions are shown in Fig. 1. After logging into the website, students enter the personal center, where they can manage the selected courses. And in the homework exam module, they can view the homework that needs to be submitted and the homework that has been submitted, the unfinished exams and the exams that have been completed, timely check and fill vacancies, and complete the required assignments. In the course forum module, students can carry out interactive exchanges, post questions encountered in the learning process to the forum, get real-time answers from teachers or students, and learn knowledge that they did not notice during the exchange process. The online teaching resources obtained can also enrich their knowledge structure and make the learning more effective; teachers share course handouts and reference materials to open resource module, which is convenient for students to download and print when watching videos. Students can also formulate personal learning plans according to the assessment standards of the course, master the progress of learning, complete learning tasks conscientiously, actively participate in teaching activities organized by teachers, and achieve excellent results academic performance. In the course notification module, students can be informed of important notifications and arrangements in a timely manner so as to help them adjust their study plan according to the content of the notification or complete the course requirements on time, and start the online learning process according to the course plan.

4.2 Test Results

Table 1 shows the comparison results of the test scores of Class A and Class B before and after the test. After four months of traditional offline courses in Class A, the highest score and the gap between students' performance levels in the test papers have changed
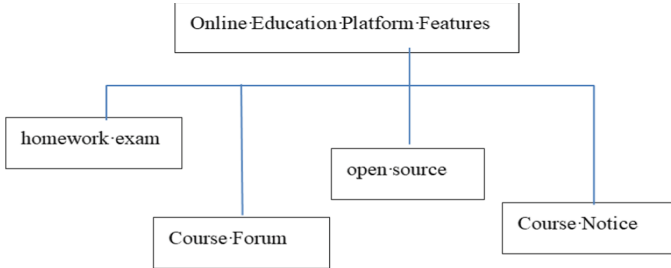
Fig. 1. Online Platform Features

Table 1. Comparison results of pre- and post-test scores in the test papers of Class A and Class B

Pre- and post-test	highest score	Lowest score	The average score	total score
Pre-test for class A	83	53	70	1512
Pre-test for Class B	81	50	68	1493
A post-test	95	59	88	2009
Class B post-test	98	65	92	2048

significantly, and the scores in the post-test are significantly higher than those in the previous test. After four months of online and offline blended teaching, class B has become smaller. The gap between students' performance levels has also changed significantly. The scores of the post-test are significantly higher than those of the pre-test, and the gap between students' performance levels has become larger. Comparing the scores, it can be seen that in the pre-test, the difference between standard deviation, average score and total score of Class A and Class B is not large. After the blended teaching mode, the highest score, lowest score and average score of class B are higher than those of class A, the increase of the total score of class B is greater than the increase of the total score of class A, and the degree of dispersion of students' test papers in class B is greater than that of class A (Fig. 2).

The result of the t-test "assuming unequal variances": Among them, the observed value of the t-statistic is -1.075, and the corresponding two-sided probability P-value, that is, the Sig. (two-sided) value is 0.082 if the significance level α is 0.10, Since the probability value P- is less than 0.10, it is considered that there is a significant difference in the mean of the two populations, that is, there is a significant difference in the overall mean of the improvement in the grades of Class B and Class A. Through the T test, it is shown that through the four-month educational experiment on the students of class B, the comprehensive performance of the students of class B has been significantly improved compared with that of class A, which proves that the implementation of the mode in the English classroom is practical and feasible.

Fig. 2. Achievement test results

5   Conclusions

Through the content analysis of text data, this paper has some suggestions for MOOC-based blended English classroom teaching. First, in terms of software functions: it is recommended to add a message reminder function or a message sound to prevent students from forgetting the pre-class self-study tasks; increase the semantic map Display tools such as mind map, brain map and other functions, and then effectively help students to carry out brainstorming and group task activities; second, software modules: it is recommended to add a group discussion community, or increase student authority to allow students to freely form disscution group, record the entire process of the group completing the project, including the entire online and offline discussions, which is helpful for the recording of group interaction data, which will bring great breakthroughs to the research on group interaction and collaboration; The support of classroom teaching can also be improved. At present, the screen projection function has been added. In addition, some interesting activities, such as barrage, can be added to the screen projection function to help students who are afraid to raise their hands to speak into the classroom.

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