

Study and Practice of Blended College English Teaching Mode in Application-oriented Undergraduate Colleges under the Background of New Liberal Arts

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Abstract: Under the background of new liberal arts construction, in order to cultivate compound and innovative talents with all-round development of knowledge, ability and quality, college English teaching in application-oriented undergraduate colleges should also be based on the development trend of the times, seize the opportunity of digitization and informationization construction of higher education, strengthen the in-depth application of information technology in teaching, and promote the blended teaching reform of online and offline organic integration with digital empowerment. In view of the shortcomings of traditional college English classroom teaching, this study introduces MOOC excellent online courses and “rain classroom” into the curriculum teaching, supplemented by relevant teaching resources in line with different professional knowledge structures, and creatively constructs a blended teaching mode of college English courses based on “massive open online course + rain classroom”. Teaching practice shows that compared with the traditional classroom teaching mode, the blended teaching mode constructed in this study has obviously promoted the development of students’ learning enthusiasm and autonomous learning ability and the improvement of teaching quality, which has achieved better teaching effect on the whole.

Keywords: Applied Undergraduate Colleges; Blended Teaching Mode; College English; New Liberal Arts.

1. Introduction

In November 2020, the Conference on the Construction of New Liberal Arts sponsored by the Working Group on the Construction of New Liberal Arts of the Ministry of Education of China issued the *Declaration on the Construction of New Liberal Arts*, which marked the full start of the construction of new liberal arts in China. The novelty of “new liberal arts” lies in that it breaks through the thinking mode of traditional liberal arts, integrates modern information technology into traditional liberal arts majors, and promotes interdisciplinary and deep integration, aiming at cultivating comprehensive, interdisciplinary and integrated new liberal arts talents. As an important part of the construction of new liberal arts, foreign language disciplines should also take this opportunity to constantly update the connotation and goal of foreign language education and teaching reform and development, and actively explore the path and mode of cultivating new talents that meet the needs of national strategic needs and social development. For application-oriented universities, college English teaching, as a compulsory basic course, is an indispensable part in the process of cultivating application-oriented talents. Under the new era, with the acceleration of China's economic and social development and the increasing frequency of foreign exchanges, all walks of life are in urgent need of a large number of compound and high-quality applied English talents. College English teaching plays an important role in serving the training objectives of professionals and improving students’ English language ability and practical application ability. However, currently college English courses in many

colleges and universities in China are out of touch with the needs of society, and it's difficult to cultivate students’ intercultural communicative competence and language application ability in different environments through the traditional teaching mode. Therefore, under the background of the construction of new liberal arts, college English teaching in application-oriented undergraduate colleges should re-examine the curriculum orientation, training objectives, teaching concepts and teaching methods, constantly innovate teaching modes, strengthen the in-depth application of information technology in teaching on the basis of traditional classroom teaching, and promote the blended teaching reform of college English with the organic integration of online and offline by digital empowerment, which not only has strong practical significance for cultivating compound and applied talents with solid and generous basic language knowledge and professional knowledge, strong application ability and high comprehensive quality, but also can provide reference for the research and practice of blended teaching reform of other public courses in colleges and universities under the background of new liberal arts.

2. Literature Review

At the beginning of the 20th century, foreign scholars began to do a lot of research on blended teaching mode. On the whole, the research on blended teaching mode can be divided into three stages. The early related research mainly focuses on the proposal of blended teaching mode and the construction of blended learning environment; Later, the related research mainly focuses on the connotation of blended

teaching mode, among which the representative one is the definition of blended teaching by Sloan Consortium (2003), which holds that blended teaching is the combination of face-to-face teaching and online teaching, and combines two independent teaching modes in history[1]. At present, the relevant research mainly focuses on the design, strategy and effectiveness of blended teaching. At present, the concept of blended teaching emphasizes “student-centered”. Goodyear (2015) emphasizes that the so-called blending is not only the blending of face-to-face teaching and online teaching, but also the blending of teaching and tutoring methods in a “student-centered” learning environment. In blended teaching, teachers’ main responsibility shifts from imparting knowledge to designing and organizing learning activities, guiding and promoting students’ learning[2]. In addition, the current research on blended college English teaching mainly includes the theoretical connotation and research paradigm of blended foreign language teaching (such as Hu Jiehui, 2021[3]; Hu Ting, 2021[4], etc.). Blended teaching research based on massive open online course, flipped classroom, micro-class, etc. (such as Yang Fang, Wei Xing and Zhang Wenxia, 2017[5]; Zeng Guoxiu and Zhu Xiaomin, 2022[6], etc.); There are also studies (such as Ma Xiaolei, Ge Jun and Hu Qiong; 2021[7], etc.) introducing semantic wave theory into the blended teaching design of college foreign language. Although some scholars have carried out practical exploration of blended teaching of college English (such as Zhang Yi and Gao Jian, 2015[8]; Chen Juanwen, Wang Na and Li Jinyu, 2017[9]; Guan Chen, 2023[10], etc.), generally speaking, there are few studies on the effect of blended teaching through empirical research, and even less studies on the reform of blended teaching in application-oriented undergraduate colleges under the background of new liberal arts.

Therefore, based on the current social demand for high-level compound applied English talents, this study aims at the dilemma of teaching and learning of college English courses in application-oriented universities, and takes the

construction of new liberal arts as an opportunity to discuss and practice the blended teaching reform of college English courses, so as to solve the tricky problems in college English course teaching and personnel training in application-oriented universities.

3. Construction and Teaching Practice of College English Blended Teaching Mode in Application-oriented Undergraduate Colleges

3.1. Construction of Blended Teaching Mode

In view of the main problems in college English teaching in application-oriented undergraduate colleges, taking advantage of the opportunity of new liberal arts construction, this study makes full use of the advantages of online teaching platform, introduces massive open online course video and intelligent teaching tool “Rain Classroom” into curriculum teaching, supplemented by relevant teaching resources in line with different professional knowledge structures, and strives to promote the organic integration of online and offline teaching resources. At the same time, aiming at the problem that the original assessment method of college English curriculum is too single, this study fully considers the characteristics of blended teaching mode, combines pre-class, in-class, after-class and examination, and designs a diversified curriculum assessment system based on blended teaching, emphasizing the cross-integration of teaching process and evaluation process, as well as the integration and interaction of evaluation subject and object, so as to promote the process reform of teaching and learning of college English curriculum by multi-evaluation. On this basis, this study has carried out the top-level design of blended teaching mode as shown in Figure 1, and innovatively constructed the blended teaching mode of college English based on “massive open online course + rain classroom”.

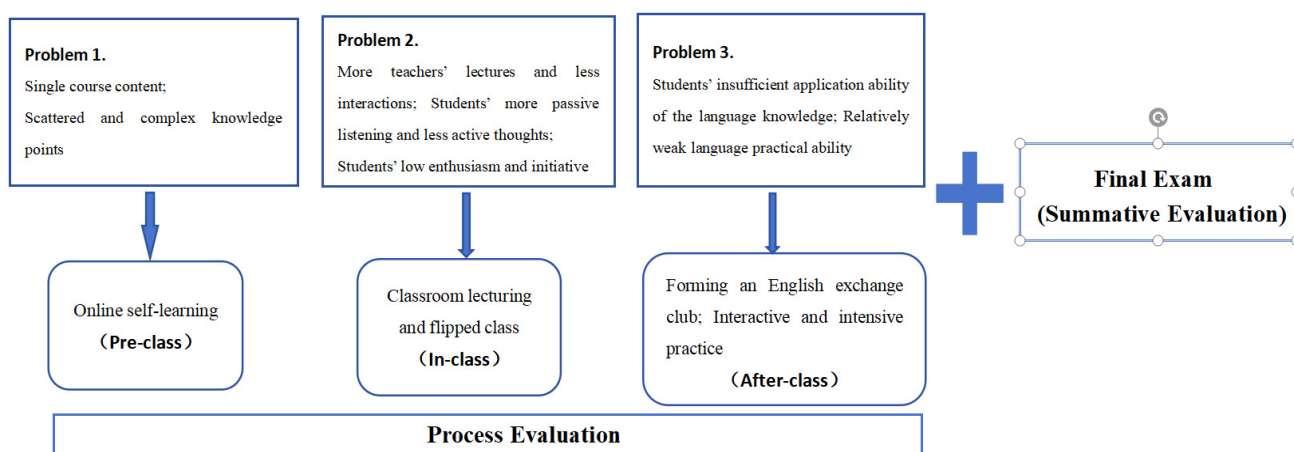


Figure 1. Reform Design of Blended Teaching Mode

3.2. Blended Teaching Practice

As mentioned above, the blended teaching mode constructed in this study involves three stages: pre-class, in-class and after-class. Except for the stage of in-class, both “pre-class” and “after-class” are conducted online. The online learning space of students in these two stages is mainly composed of massive open online course curriculum platform and rain classroom interaction platform.

Firstly, in order to meet the needs of blended teaching mode, this study starts with integrating online high-quality teaching resources, and builds an online learning video resource library of college English courses based on national-level MOOC of Chinese universities. Then, based on the intelligent teaching tool “Rain Classroom”, a set of rain classroom courseware, online discussion area and test question bank covering the whole course of blended teaching is formed. In addition, in order to combine college English language learning with

professional knowledge, this study has established a professional terminology database (English-Chinese/Chinese-English translation) involving mechanical, electronic, international trade and other fields.

Then, this study takes Qilu University of Technology (Shandong Academy of Sciences) as a teaching pilot. In the first and second semesters of the 2022-2023 academic year, the blended teaching mode was applied to college English teaching for Mechanical, Electronic and International trade majors in Grade 2022, and the blended teaching practice was carried out throughout the whole process before, during and after class. The teaching effect under this mode was discussed by means of questionnaire survey, classroom observation and comparative analysis of pre-and post-test scores.

4. Curriculum Evaluation and the Effect of Blended Teaching Reform

4.1. Students' Evaluation of Teaching

In the first and second semesters of the 2022-2023 academic year, the students' final evaluation scores of College English I and College English II under the blended teaching mode for Mechanical, Electronic and International Trade majors in Grade 2022 of Qilu University of Technology (Shandong Academy of Sciences) were 95.67 and 96.38 respectively, which showed that the students were generally satisfied with the teaching mode, teaching methods and teachers' teaching quality.

4.2. Student Satisfaction Survey

After a one-year blended teaching practice, in order to get a more straightforward and in-depth understanding of

students' attitudes and views on the blended teaching mode of college English courses, this study conducted a questionnaire survey among the students who participated in the teaching experiment. A total of 240 questionnaires were distributed, and 116 valid questionnaires were actually collected, with an effective rate of 98.3%. According to the statistical results of the questionnaire, the proportion of students expressing "highly agree" and "agree" with the curriculum and the blended teaching mode is 100% (among which, the proportion of "very satisfied" option is 81.37% and 88.69% respectively), and 94.38% of students hope to continue to use this teaching mode in the subsequent learning process of College English III.

In addition, as shown in Table 1, the results of the questionnaire also show that almost all students think that the blended teaching mode innovatively constructed in this study has brought a lot of help to college English course learning, which not only improves their interest in the course, enhances their awareness of autonomous learning and autonomous learning ability, improves the learning efficiency and quality of the course, but also enables them to better master English technical terms in their respective professional fields, improves their reading and understanding ability of professional English literature, and enhances their comprehensive application ability in "major + English".

The above research results show that, compared with the traditional teaching mode, the blended teaching mode improves students' enthusiasm and initiative in learning college English courses, improves classroom teaching efficiency and students' learning effect, promotes students' comprehensive English application ability, and achieves better teaching results.

Table 1. Perception of Blended Teaching Mode in the Teaching Practice of College English Courses

NO.	Titles	Percentage of each option (%)				
		Highly Agree	Agree	Uncertain	Disagree	Highly Disagree
1	The blended teaching mode is helpful for your learning of college English course.	93.945	6.055	0	0	0
2	The blended teaching mode increases your interest in learning college English course.	82.41	17.59			
3	The blended teaching mode enhances your awareness and ability of self-directed learning of college English.	90.64	9.36			
4	The blended teaching mode will help you better grasp the content of your college English course.	86.29	13.71			
5	The blended teaching mode improves the learning efficiency and quality of college English course.	83.545	16.455			
6	The blended teaching mode can help you better grasp the English terminology in your professional field.	79.77	20.23			
7	The blended teaching mode will improve your reading and comprehension skills in specialist English literature.	91.675	8.325	0	0	2.175
8	The blended teaching mode improves your comprehensive ability in "professional + English".	82.98	14.845			

4.3. An Empirical Test of the Effect of Blended Teaching Mode in College English Course

In order to objectively verify the effect of the blended teaching mode, this study adopts the method of equal group comparing pre-test and post-test experiment. In the first semester of the 2022-2023 academic year, 30 students majoring in electronic information engineering of Grade 2022 who are taking College English I course (randomly selected) are taken as the control group, and the traditional teaching mode is adopted for teaching; Taking the students majoring in

electronic information science and technology of Grade 2022 (randomly selected 30) who studied this course at the same time as the experimental group, the blended teaching mode was adopted. In addition, the teaching materials, teaching contents, teaching hours, the proposition scope and difficulty of the final exam used by the two groups of students are the same.

Before carrying out the blended teaching experiment, in order to ensure that there is no significant difference in the learning ability of college English course I between the control group and the experimental group, this study first

conducts an independent sample T test on the pretest scores of the two groups of students. The results are shown in Table 2. From the Levene test results of variance equation, it can be seen that $F=1.268$ and $P=0.312 > 0.05$, so it can be considered that the variance of the pretest scores of the two groups of students is equal, that is, the condition of

homogeneity of variance is satisfied. According to the test results of homogeneity of variance and variance, $t=0.396$, $P=0.706 > 0.05$, indicating that there is no significant difference in the course learning ability between the two groups.

Table 2. Independent Sample T-Test Results of the Pre-test of the Course

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	<i>F</i>	<i>P</i> -value	<i>t</i>	df	Two-tailed <i>P</i> -value	Mean Difference	Standard Error	95% Confidence Interval for the Difference	
								Upper Bound	Lower Bound
Equal Variances Assumed	1.268	0.312	0.396	58	0.706	0.89173	2.57642	-3.28915	5.18302
Equal Variances Not Assumed			0.396	40.652	0.706	0.89173	2.57642	-3.29221	5.22678

After the blended teaching experiment, this project carried out independent sample T-test on the final exam scores of the

two groups of students. The descriptive statistical results are shown in Table 3.

Table 3. Descriptive Statistical Results of the Post-Test of the Course

Grouping	Number of Students	Average Grade	Standard Deviation	Standard Error of Mean
Experimental Group	30	76.2518	8.69274	1.73264
Control Group	30	81.6765	10.66358	2.18596

In addition, according to the Levene test results of variance equation in Table 4, $F=0.349$, $P=0.581 > 0.05$, indicating that the post-test scores of the two groups of students meet the condition of variance homogeneity. According to the test results of homogeneity of variance and variance, $t=-2.318$, $P=0.029 < 0.05$, it shows that there is a significant difference

between the two groups of students in college English course I, and the average score of the experimental group (81.6765) is significantly higher than that of the control group (76.2518), which shows that the blended teaching mode can effectively promote students' mastery of college English course knowledge and significantly improve their learning effect.

Table 4. Independent Samples T-test Results of the Post-test of the Course

	Levene's Test for Equality of Variances		t-test for Equality of Means						
	<i>F</i>	<i>P</i> -value	<i>t</i>	df	Two-tailed <i>P</i> -value	Mean Difference	Standard Error	95% Confidence Interval for the Difference	
								Upper Bound	Lower Bound
Equal Variances Assumed	0.349	0.581	-2.318	58	0.029	-6.27358	2.64705	-11.36452	-0.49632
Equal Variances Not Assumed			-2.318	39.145	0.029	-6.27358	2.64705	-11.37145	-0.49948

5. Problems and Countermeasures of Blended Teaching Mode

The results of a year's teaching reform and practice show that the blended teaching mode based on "massive open online course + rain classroom" can not only stimulate students' interest in learning, cultivate students' independent inquiry ability, improve students' classroom participation and knowledge mastery, but also change the current situation of "more theory and less practice" in college English teaching, and improve students' comprehensive language application ability and cross-cultural communication ability in multiple dimensions. It has achieved multi-disciplinary cooperation and cross-complementarity under the background of new liberal arts, and achieved good teaching results in practice. It can provide some ideas and experience support for deepening

education and teaching reform in China's application-oriented undergraduate colleges based on the concept of compound talents training.

However, in the specific teaching practice, the blended teaching mode proposed in this study also has the following three problems: First, students' participation is not enough, and there is a coping phenomenon for learning tasks. blended teaching integrates online and offline resources, and strives to motivate students' enthusiasm and initiative. However, some students mechanically complete the pre-class and after-class tasks assigned by teachers exactly according to the items of process evaluation, copying or plagiarizing other people's opinions, and some students even hire others to complete learning tasks. This phenomenon becomes more and more serious in some students with the progress of the course, which violates the original intention of blended teaching. Secondly, the workload of teachers is heavy, which requires

high teachers' ability. Teachers not only need to carefully prepare and arrange online and offline teaching resources, but also spend a lot of spare time communicating with students, analyzing and dealing with problems in students' learning process, and adjusting teaching design and arranging learning tasks at any time according to teaching conditions. In addition, teachers have to deal with the technical problems in the process of online learning and explore the rules and characteristics of blended teaching, which is undoubtedly a big challenge for teachers under the pressure of scientific research. Third, it is difficult to innovate classroom teaching organization. In order to achieve the coherence and complementation of online and offline learning, the organization of classroom teaching is particularly important, which should not only test and consolidate the effect of online learning, but also avoid the repetition of learning content. Teachers usually organize students to ask questions, show and discuss in groups on the basis of course content, which leads to lack of creativity in classroom teaching[11].

In this regard, this study believes that, on the one hand, from the perspective of teachers, through continuous improvement of teaching design and improvement of teaching resources, "entertaining and learning" can further stimulate students' enthusiasm and motivation for active learning, as a supplement to students' weak supervision of online learning; On the other hand, from the school level, we should increase the incentives for teachers who actively implement blended teaching mode through relevant policies, encourage teachers to actively declare blended teaching pilots and reward courses that meet the requirements; At the same time, we should organize regular training of blended teaching, and carry out all-round training on the concept of blended teaching, the construction of online courses, the organization of classroom teaching and the use of related platforms, so as to comprehensively improve teachers' blended teaching ability. In addition, the construction and implementation of blended teaching mode itself is also a dynamic adjustment process. For these problems, relevant research needs to be continuously improved and optimized in long-term teaching practice, so as to continuously improve the quality and effect of blended teaching of college English courses.

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