



The Analysis of Course Ideology and College English “Online + Offline” Teaching Mode Based on the Internet

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Abstract. Nowadays, all colleges and universities are emphasizing “curriculum ideological and political”. In the “curriculum ideological and political” education, the “Internet + curriculum ideological and political” and college English model should be promoted to strengthen the cultural self-confidence of college students when learning English. At present, the Internet has fully penetrated into people’s production and life. Contemporary universities have grown up in the Internet environment and are willing to use the Internet. Therefore, the “curriculum ideological and political” education in colleges and universities should advance with the times, make full use of Internet technology, and effectively promote the “curriculum “Ideological and political” and English classroom online and offline mixed teaching construction, in order to obtain better ideological and political education benefits. This article reveals the necessity of research on hybrid teaching models based on online courses by reviewing relevant literature on the concepts, characteristics, and research status of online courses and hybrid teaching, as well as investigating the current situation of online course teaching in universities. Secondly, it is the research part of the hybrid teaching model based on online courses. This part will study the phased hybrid teaching model of pre class preview, in class discussion, and after class review based on the existing achievements of hybrid teaching and relevant theoretical foundations, combined with the current survey status of online courses, to provide reference for subsequent practical teaching research. Then, the author applies the theoretical concept of hybrid teaching model based on online courses to college English teaching. Through research on college English subject knowledge, detailed design of specific cases, and practice, the applicability of the hybrid teaching model based on online courses is controlled. Finally, evaluation metrics are designed to briefly analyze and evaluate the cases, with a view to providing a theoretical basis for relevant research.

Keywords: Internet · Curriculum ideology and politics · Mixed teaching

1 Introduction

The rapid development of modern information technology has had a profound impact on higher education, prompting new major leaps and changes in the higher education system and teaching mode, and online education resources, as one aspect of the application of information technology in education, have contributed to the reform of university talents [1]. The training model has a very positive significance.

As a very important aspect of the construction of online education resources, online courses play a pivotal role in the modern college education reform. Online courses are courses based on modern educational thoughts and teaching theories. They have become an effective way to promote educational innovation, share high-quality teaching resources, and comprehensively improve the quality of education and teaching. Nevertheless, while online teaching has brought us many benefits, we must not forget our traditional teaching methods [2]. Therefore, if the advantages of the two modes are combined organically, the effectiveness of teaching will be greatly improved.

This combination of traditional classroom teaching and online learning is called a blended learning model. The main feature of the blended learning model is to integrate traditional classroom teaching with online online learning, so that teachers can play a guiding role in classroom teaching, and the enthusiasm and initiative of students' learning will also be effectively mobilized [3]. Both the educated and the educated can fulfill their own demands to the greatest extent, and the learning effectiveness will naturally increase. The mixed teaching mode is divided into the following three types: online preview before class, flipped teaching during class, and consolidation of course tasks after class, as shown in Table 1.

Table 1. The structure of the blended teaching model

Mixed teaching mode	Preview in class	Flipped teaching in class	Consolidate learning after class
Teacher	Design teaching content, sort out knowledge points, make PPT, design knowledge matching exercises	Answer questions, analyze cases and explain common problems	According to the feedback teaching reflection, targeted counseling
Student	Complete the learning content, learn PPT, display knowledge and complete the test	Ask questions and take knowledge notes	Finish homework, review and consolidate

Hybrid teaching mode is a teaching mode that combines online courses with traditional teaching. The main purpose of blended teaching is to optimize the selection and combination of various skills, learning elements, and learning methods. Obtain the best teaching effect and maximum economic benefits [4]. However, the hybrid teaching model

needs to be based on the requirements of different courses. The combination of online and offline education in all aspects of the curriculum can be effectively implemented. Hybrid teaching is a combination of traditional classroom and online learning, a mixture of structured and unstructured learning, personalized learning and real-time collaboration, theoretical mixing, resource mixing, and other aspects. The mixed education based on online courses has expanded the teaching environment from traditional classrooms to virtual classrooms and multimedia learning environments, while teaching methods have also expanded from traditional classroom teaching to online course teaching, while teaching teachers have also expanded from lecturers to online experts, and various factors and links in teaching are being reconstructed. Hybrid education mode breaks the inherent traditional education mode and innovatively combines online courses with traditional education forms [5]. It combines the advantages of online courses and traditional course education, improving teaching efficiency, improving teaching methods, and innovating teaching organization. And integrate various teaching factors to effectively complement each other, and how to effectively integrate online courses and traditional classroom education needs further research. However, as a new education model, the hybrid education model needs to be targeted in the design of teaching resources, teaching links, and teaching organization [6]. The actual teaching effect is far from reaching the expected teaching level, and the construction of a student centered education and teaching model has not yet touched structural changes. Hybrid teaching still has some urgent tasks to be solved.

Therefore, in order to effectively meet the learning needs of students, effectively integrate online course resources and traditional classroom teaching, this study aims to build a hybrid teaching model based on the online classroom, and study how to use the hybrid teaching model to improve teaching effectiveness and meet the personalized needs of students. This study will build a hybrid teaching model based on online courses, relying on the concept of hybrid teaching and related theories.

2 Related Work

2.1 Basic Mechanism of “Internet Plus Course” Model

(1) Foundation

The “Internet plus + Curriculum English” model is a new form of ideological and political education in colleges and universities integrating “Curriculum English” and network technology. It has a unique internal mechanism. Internet technology can change traditional teaching methods, expand the scale of education, and stimulate teaching vitality [7]. Making teaching present the characteristics of networking, intelligence, personalization, and globalization can effectively improve teaching quality. As the name suggests, “curriculum ideological and political education” is based on the ideological and political education elements contained in various disciplines and curriculum as the carrier. As a starting point and basic method for classroom implementation [8]. The “Internet plus Curriculum Thought” is a teaching that combines curriculum ideology and politics with Internet technology, which can stimulate students’ initiative and realize the complementary advantages of multiple teaching spaces. In the Internet environment, it

can not only accurately and quickly update English materials according to the needs of the times and students, bring more updated and open “curriculum English” resources, but also fully exert students’ autonomy under the guidance of teachers [9]. The initiative in learning enables students to gain a new experience in ideological and political education. In addition, it can also allow students to flexibly arrange their learning time, so that teachers and students are no longer limited to the space of teaching interaction, which is conducive to achieving a comprehensive ideological and political education model.

(2) Logical mechanism

The “Internet plus Curriculum English” model is an important form of modern teaching and an organic part of classroom teaching. Value guidance is to achieve the goal of comprehensive education through the collaboration of traditional classrooms and cyberspace. The “Internet plus Curriculum Ideological and Political” education model can reflect effective laws, so that students can better obtain value guidance in knowledge transfer and ability training. First, it reflects the laws of education and teaching. The teaching under exam oriented education is mainly centered on teachers, books, and the classroom [10]. It emphasizes knowledge transfer, neglects ability and cultural training, and ignores value orientation. Under the current quality education, the “Internet plus Curriculum English” model will effectively reflect the concept of “student-centered”, teacher oriented, student-centered, respect students’ individual differences, teach students in accordance with their aptitude, and promote equal dialogue between teachers and students. Respond to students’ value confusion and strengthen ideological exchange. The second is to embody the law of value orientation. In the context of globalization, the characteristics of informatization and networking are obvious, different cultures and ideas collide with each other, and multiple values are mixed, which can easily affect students’ value identification [11]. Advocating value orientation in teaching is conducive to solving the fundamental problem of “who to cultivate, how to cultivate, and for whom to cultivate”. Under Internet education, students’ ideological and political communication has more content and more flexible and diverse methods. Students are more willing to test, discover, and solve problems. This is conducive to guiding and shaping students’ values in experience and exploration [12].

2.2 Online and Offline Teaching Design

(1) Online instructional design

Online teaching refers to the stage of students’ autonomous learning, which requires students to use online resources to conduct video learning of relevant courses, complete online tests, and record course difficulties. Online teaching is a preview of offline teaching, an important component of the SPOC model, and lays the foundation for classroom teaching.

The big data function of the online platform is a major feature of online teaching, providing more convenience for teachers and students than the research on the interaction mechanism between online and offline teaching of Chinese as a foreign language under the SPOC mode. Among them, the automatic scoring function set by the system records and feeds back students’ online tests, which not only facilitates students

to discover problems in the learning process in a timely manner, but also reduces the burden on teachers [13]. This function can automatically correct assignments submitted by students, and provide scores along with detailed answer analysis. This enables real-time correction of errors and prevents students from forming erroneous perceptions. In addition, the most advanced function of SPOC mode is to record and analyze data. The platform helps teachers master students' online learning situation from a macro perspective, understand the problems existing in their learning process, and provide support for offline individualized teaching and personalized tutoring through recording and analyzing students' learning progress, interaction times, and the quality of homework completion [14].

Therefore, before calculating the overall QoS value, it is necessary to normalize the QoS value of each indicator. The normalized calculation formula for Te is as follows

$$Q_k^+ = \begin{cases} \frac{q_k - \min q_k}{\max q_k - \min q_k}, & \min q_k \neq \max q_k \\ 1, & \min q_k = \max q_k \end{cases} \quad (1)$$

$$Q_k^- = \begin{cases} \frac{\max q_k - q_k}{\max q_k - \min q_k}, & \min q_k \neq \max q_k \\ 1, & \min q_k = \max q_k \end{cases} \quad (2)$$

The most common method for evaluating overall QoS values is to convert the normalized QoS values of attributes into a single QoS value through a simple weighting method. The normalized QoS value is multiplied by different weights to calculate the QoS utility value. The Te QoS utility value (fitness value) is calculated using the following formula:

$$\text{Max(QoS)} = \text{Max} \sum \omega_k \times Q_k \quad (3)$$

$$\sum_{k=1}^K \omega_k = 1 \quad (4)$$

(2) Offline Teaching Design

Offline classroom teaching, as an important component of the SPOC model, is the review, consolidation, and absorption of knowledge learned online, as well as the exchange and discussion of problems with teachers and classmates in the classroom, which helps internalize the knowledge learned and improve learning efficiency.

Under the SPOC model, offline teaching emphasizes the dominant position of students, the guiding role of teachers, and classroom discussion and communication are primarily focused on students. Therefore, in offline teaching, the specific teaching content and process are as follows:

First of all, the teacher uses about 5–10 min to comment on students' online learning. According to the SPOC instructional design, students need to complete online tests and online discussions before offline learning, while recording difficulties in the learning process. Therefore, teachers should collect, organize, analyze, and record data from students' online learning, and give oral praise to students who perform well [15].

Secondly, the teacher needs to explain difficult knowledge points twice, which usually takes up about one-third of the classroom time. Under the SPOC model, teachers

are the organizers, managers, and guides of classroom teaching, which has an important impact on teaching effectiveness. Therefore, on the basis of student preview, teachers emphasize the key and difficult points of this section in offline teaching, and then use classroom collective questioning, one-on-one questioning, and other methods to master the learning situation of students.

SPOC is a mixed teaching mode that integrates online teaching, offline teaching, and after-school teaching. The specific SPOC teaching flow chart is shown in Fig. 1.

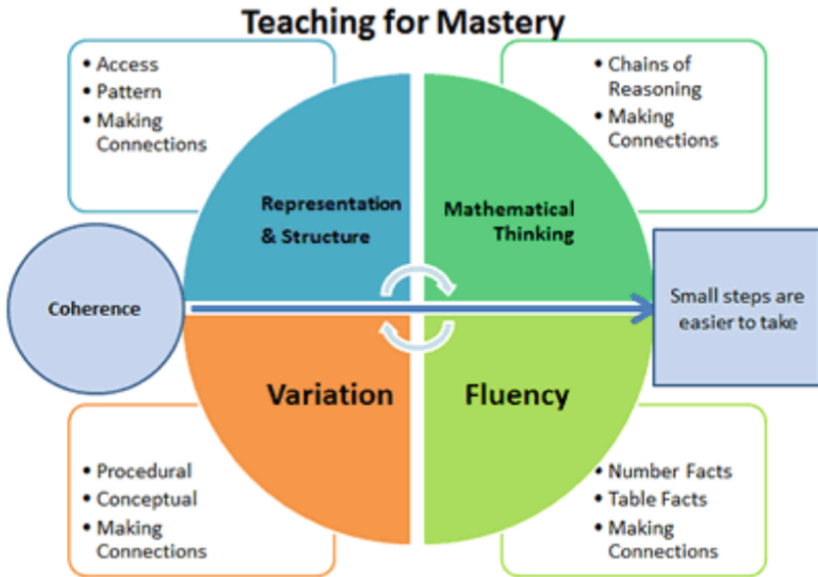


Fig. 1. Online and offline teaching modes

3 Blended Teaching Path of College English Under the Curriculum Ideological and Political Concept

3.1 Determine the Ideological and Political Elements of College English Courses

The construction of mixed teaching models in colleges and universities is also guided by various mixed teaching theories. This is reflected in the following two aspects. On the one hand, different theories guiding mixed teaching have their own advantages and disadvantages, and their specific roles in teaching vary. Therefore, it is required that college teachers should understand and be familiar with the true connotation of various teaching theories, carefully classify and divide them from the guiding role of “teaching” and “learning”, and then, in teaching practice, according to different teaching time, objectives, stages, and styles, Adopting corresponding teaching theories for guidance not only fully exerts the leading role of teachers in teaching, but also stimulates students’ self awareness and subjective initiative; On the other hand, the roles of various teaching

theories are not opposed to each other, but are interrelated and mutually reinforcing, and there is inevitably an intersection of their effects on teaching. Therefore, the construction of a hybrid teaching system in colleges and universities must focus on actual teaching, combining multiple constraints such as the practical characteristics of students' physical and mental development in colleges and universities, the characteristics and syllabuses of different courses, the actual hybrid teaching ability of the faculty, and the teaching environment of specific colleges and universities, in order to maximize the promotion role of the hybrid teaching model in the cultivation of applied talents in colleges and universities.

In specific teaching, teachers should guide students to look at Western culture correctly, neither admiring foreigners, seeking too much, nor "wearing colored glasses", but should study with an objective and fair attitude. When students understand Western culture, and have a certain grasp of English knowledge, English grammar, etc., they are then guided to introduce the excellent traditional Chinese culture in English, so as to inspire the patriotism of the students, so that the excellent culture of our country can be inherited and promoted. For example, when teachers teach Western festivals, they should explain traditional Chinese festivals to students. Through the development of various activities, students should deepen their understanding of traditional Chinese and Western festivals, and treat the differences between Chinese and Western cultures dialectically.

3.2 Establish a Teaching Model That Is Compatible with the Ideological and Political Concepts of the Curriculum

The development of blended college English teaching under the ideological and political concept requires teachers to establish a new teaching model based on students' English proficiency and current English learning situation. The development and popularization of the Internet have provided students with a broader learning space. If teachers rely on the Internet to build new teaching models, they will establish corresponding network platforms to form a hybrid teaching system that focuses on offline teaching and supplemented by online teaching. This model will greatly benefit students in improving their learning effectiveness and teaching quality. Under the new mixed teaching model, students will have a strong interest in learning and actively participate in classroom teaching. At the same time, under the influence of network information resources, curriculum ideological and political concepts and resources will also be optimized and innovated to always adapt to the development needs of students and improve their ideological and moral quality and comprehensive literacy.

According to the relevant constituent elements of existing research and the investigation and research of this study, online courses are most suitable for language learning. Therefore, the model of this study is designed according to the characteristics of language learning; College students believe that the more suitable links are pre class preparation and post class review. Therefore, this study combines learning situation analysis and adopts a phased hybrid learning model to arrange most of the online learning parts before and during class; In the learning of online courses, students relatively prefer video learning resources. In this mode, when using teaching resources such as teaching courseware, more video teaching materials are added; College students believe that the length of online course learning should be controlled within one hour as much

as possible, so the online learning materials in this study are the amount that students can complete within one hour; College students believe that the main problems in online learning are the lack of teacher-student interaction and low learning efficiency. Therefore, face-to-face courses are designed for this model to enhance teacher-student interaction and improve learning efficiency. This model also puts forward higher requirements for teachers’ teaching ability.

The hybrid teaching model of this study can also be called the phased hybrid teaching model, which is divided into three stages: pre class preview, in class discussion, and after class review. In the three stages of this model, teachers and students conduct teaching and learning activities through media (online courses, offline courses), while adopting a diversified and procedural evaluation and assessment method. In the pre class stage, the teacher conducts learning situation analysis, textbook analysis, and instructional design, and adjusts the teaching plan based on the online preview situation of students; Student preview, online quizzes, and online discussion and communication. In the class stage, teachers focus on teaching, guiding discussion, and commenting; Student group discussions, course presentations, teacher-student communication, and online quizzes in class. After class, the teacher prepares a review plan, assigns assignments, and reflects on teaching. Students review their lessons, complete their assignments, and engage in discussions and exchanges. The hybrid teaching mode based on online courses has three stages, as shown in Fig. 2.

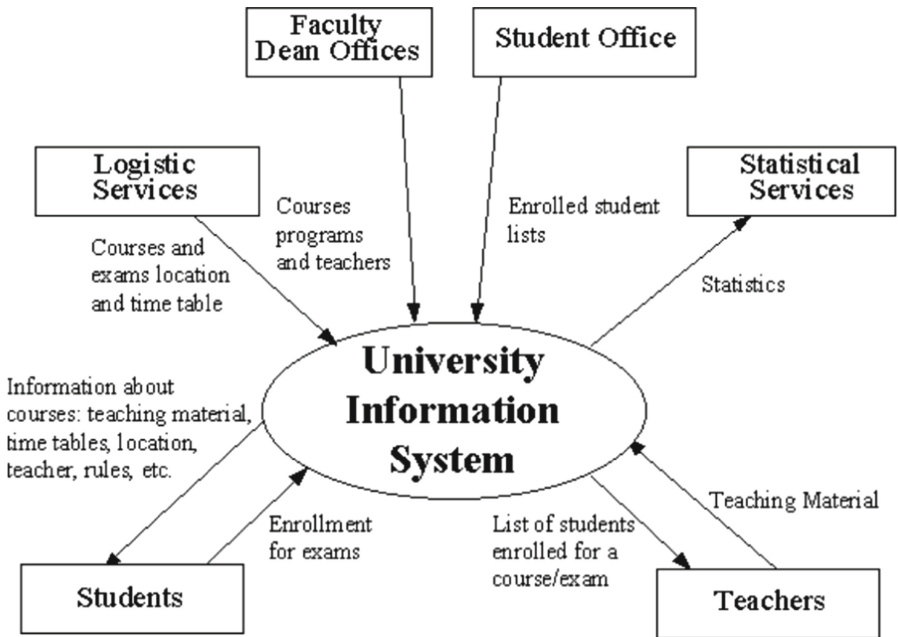


Fig. 2. Staged mixed teaching mode based on network courses

3.3 “Online + Offline” Coordination

Under the background of “Internet plus”, online and offline coordination has become a basic state. “Online” refers to the use of network cloud teaching platform to publish videos, exercises, courseware and other materials, such as superstar learning, which can help students understand the inherent meaning of books, go deep into their memory, and build self-motivated thinking mode and habits. Under the restriction of the network teaching platform, students can complete exercises and ask questions after class. This design gives students a broader space to think, guides them to speak actively on the platform, makes students answer each other, and establishes the mutual learning among teachers, students and students. “Offline” mode refers to the face-to-face teaching link established between teachers and students in the actual place. Teachers need to help students build up their scientific and reasonable value system, give full play to their leading role, and make more difficult analysis and answers on the level of basic teaching knowledge. The specific content of teachers to help students is divided into three points: first, to help their operating platform to complete the basic cloud curriculum objectives; Secondly, according to the different learning conditions of each student, we should pay attention to observe the students’ learning level while teaching, and change the teaching methods at any time, so that students can grasp the important and difficult points; Third, on the basis of the former to carry out classroom interactive communication mode, so that students can make common progress in cooperation and discussion. The combination of online and offline ideological and political teaching not only makes teachers undertake the task of teaching guidance, but also plays an important role in guiding students’ ideological enlightenment, which has an important impact on their three values of life.

3.4 Internet Communication Energy Consumption

The calculation formula of communication energy consumption is:

$$WMEC = \sum_{i=1}^M \sum_{j=1}^N P_{ijwmeC} \times ET_{IJWMEC} \quad (5)$$

WMEC represents the communication energy consumption generated in the working state, P_{ijwmeC} represents the power required for communication intensive task I to execute on physical resource J, ET_{ijwmeC} represents the execution time of task I on physical machine J, and the sum of communication energy consumption generated by all communication intensive tasks executing on corresponding physical machine is the total communication energy consumption.

4 Internet Plus Mixed Teaching Mode

4.1 Characteristics of Internet Teaching

Compared with traditional teaching classes, the introduction of the Internet will play its role in the following aspects: the introduction of the Internet can greatly improve the visualization, visualization, and visualization of theoretical interpretation classes;

In calculus and reasoning classes, the Internet transforms static into dynamic, making abstract problems concrete; Introducing online teaching into the emotional knowledge classroom will create a good atmosphere and mobilize emotions; In skills based classrooms, the Internet can use virtual reality technology to enhance experience and practical opportunities, as shown in Fig. 3.

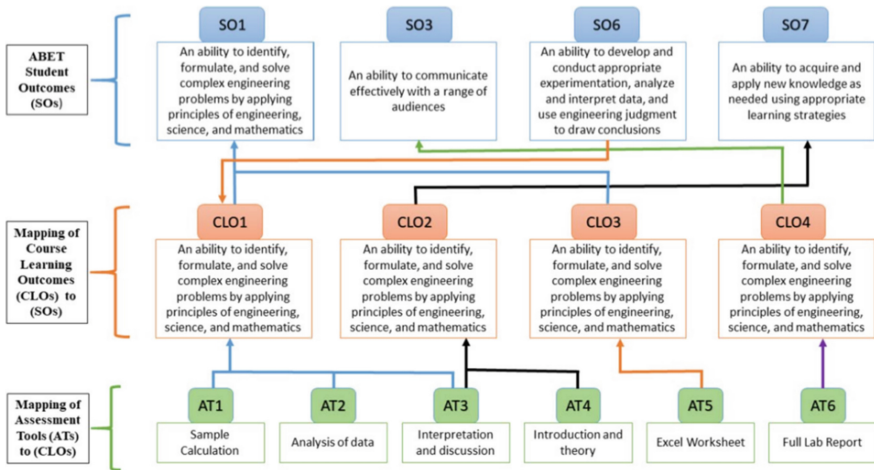


Fig. 3. Basic characteristics of Internet

4.2 Construction of “Internet +” Teaching Mixed Mode Model

The construction of the Internet plus teaching hybrid model is composed of different elements, including teaching objectives, implementation conditions, operation procedures and teaching evaluation. 1) the formulation of teaching objectives mixed mode teaching objectives need to follow the actual teaching purpose and training guidance. According to the corresponding teaching situation setting, it can reflect the overall direction of disciplinary development. While the goal of “Internet plus” is to train high quality, high information processing ability and high comprehensive ability of learners in twenty-first Century. Teaching objectives should be specific, clear and executable. 2). To achieve the “Internet plus” background of mixed teaching mode, the role of teachers from the traditional “constructor” gradually transformed into “mutual aid”; the traditional way of teaching has also been changed into the interactive form. The dominant position of students is more and more obvious. Teachers should comprehensively improve their professional skills and quickly adapt to the new teaching methods. Secondly, the teaching platform with high requirements is one of the main factors that affect the teaching results of mixed mode. Healthy network education implementation scheme is the premise of mixed mode teaching.

5 Conclusion

In the online education with increasingly rich network resources, learners learn through the existing education resources on the learning platform. Teachers and students completed the teaching task through online Q&A discussion. According to the standard of students' knowledge, measure the actual situation of students' learning objectives. Teachers compare and analyze the teaching data in the teaching process, so that teachers have a focus, and strengthen the timely communication with students.

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