Research Article

Construction and Implementation Path of College English Teaching Mode in Big Data Environment

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As a basic course for cultivating innovative and applied foreign language talents in the new era, college English audio-visual courses are facing huge opportunities and challenges in the era of big data. The transformation of the teaching environment under the background of big data is mainly reflected in the role of teachers, the dissemination of the information age, and the improvement of students’ self-learning ability. The role of students in teaching has been strengthened, and the education system has undergone certain changes. This paper analyzes the current teaching status of college English audio-visual courses. According to the actual situation, a feasible reform plan is proposed to reconstruct the teaching mode of college English audio-visual courses, to improve the teaching quality of college English audio-visual courses, and to promote the improvement of students’ comprehensive ability of college English.

1. Introduction

As a public compulsory course in ordinary colleges and universities, college English courses play a pivotal role in cultivating students’ good foreign language communication skills, humanistic quality, and international vision. College English courses are not only the basic requirements for students’ academic studies but also an inevitable requirement to keep pace with the times, face the future, and pursue the optimal development of personal careers [1, 2]. The level of foreign language proficiency and cross-cultural competence will directly affect the breadth and height of future competition choices and the starting point and level of personal development.

In the context of big data and the background, traditional college English teaching methods can no longer meet the needs of the increasingly updated big data and cloud technology culture, and we urgently need to implement a new English teaching model. Of course, in the process of English teaching reform, there will be many factors, such as teachers, learning environment, learning materials, and learning media. A change in the traditional English teaching mode helps to improve the English learning level of college students.

The rapid development of network information technology has laid a solid foundation and guarantee for the reform of college English teaching. While bringing new development opportunities to the traditional college English audio-visual course teaching, it also brings great challenges to the traditional teaching mode and thinking. Constructing a new teaching mode of college English audio-visual courses is an inescapable responsibility and obligation of colleges [3–6]. College informatization means take advantage to deeply explore and construct the teaching mode and the teaching evaluation method of college English audio-visual courses that meet the requirements of foreign language talents training in the new era. Further improvement in the teaching quality and effect of college English audio-visual courses cultivate more high-end compound foreign language talents [7].

The influence of modern Internet technology is increasing, and college English education should be appropriately cited to facilitate students to use mobile phones and computers to find their own learning materials and learning channels [8, 9]. Internet teaching models have entered people’s field of vision. The emergence of platforms such as open courses in world-renowned schools, open courses in major domestic universities, and MOOC has impacted the
senses and receiving systems of teachers and students [10–12]. This paper takes the college English classroom teaching method and practice under the background of big data as the breakthrough point. In order to provide a theoretical basis for college English education in the future, the new education system constructed in college English teaching is discussed.

2. The Current Situation of College English Teaching

2.1. Insufficient Teaching Objectives. Influenced by the traditional exam-oriented education, for a long time, the teaching of college English courses in colleges and universities has focused on cultivating listening and speaking skills and gave emphasis on reading, writing, and translation as well. The teaching objectives of college English audio-visual courses are generally included in the overall college English teaching objectives, and there are no separate short-term or medium-term and long-term teaching objectives for listening practice and oral training. There is a lack of perfect and reasonable listening and speaking testing mechanism and evaluation system in actual teaching [13].

The audio-visual and oral course has long been taught in the “three-step” mode, that is, listening to the recording, checking the answers, and listening to the recording. This kind of mechanical teaching mode is exam oriented, and it is divorced from the real context. Students in the classroom only accept it passively, and their listening and speaking abilities cannot be effectively improved. This teaching mode is contrary to the requirements goals of foreign language.

The learning resources owned by students in traditional classrooms are mainly “teacher + textbook.” Entering the multimedia era, the learning resources owned by students are mainly “teacher + textbook + courseware.” However, in the limited teaching time in the classroom, there is less classroom interaction and less practice, and it is difficult for students to digest the teaching content of the current class. Coupled with the unified model and unified requirements for after-school homework, this seriously restricts students’ creativity and imagination, and it is also difficult to meet students’ individual development needs.

2.2. Teaching Methods and Forms are Relatively Simple. The current forms are relatively simple, and the teaching methods mainly follow the traditional multimedia equipment. The form of the course mainly includes teacher’s explanation by reading new words and playing audio or video [14]. After checking the audio answers, the teacher will play the video or audio again several times, and briefly explain the important knowledge points and difficulties in the materials. Finally, the students will practice the relevant oral dialogue.

In the whole teaching process, teaching is always centered on the teacher, and students only passively complete each step of teaching according to the teacher’s instructions. College English class hours are relatively small, and the class capacity is large. If teachers want to complete relevant teaching tasks within limited class hours, students will have few opportunities to participate in listening and speaking exercises [15]. Due to the limitations of class hours, teachers cannot present the real language environment one by one in the class and cannot fully provide students with all kinds of audio and video materials needed for listening and speaking exercises.

Students lack a realistic language environment and a good learning atmosphere when they practice listening and speaking. Some students have a coping mentality in the classroom. Cramming-style teaching makes students gradually lose interest in college English listening and speaking practice, which is not conducive to the improvement of the teaching quality of college English audio-visual courses. Among them, cramming teaching refers to a teaching method in which teachers blindly instill knowledge into students, and the articles are purely memorized by rote, without considering whether students can understand the meaning.

2.3. Teaching Content Is Boring. The content of traditional college English teaching is monotonous and boring, and the teaching content is generally divided into three parts. The first part is new words. The teacher leads the students to learn and explain the rare words that will appear in the audio-visual materials. The second part is listening exercises, mainly including text comprehension, long and short dialogues, and other exercises. The third part is conversation practice. Students can practice dialogue or debate in groups according to their requirements. Some units also have movie excerpt videos or English songs for students to enjoy.

Students are often very interested in the third part, but in most cases, students only pay attention to the entertainment effect they bring when watching short films and listening to music, ignoring the main purpose and task of listening to music and watching videos [16]. Vocabulary learning does not pay attention to the pronunciation of words but only stays on the level of meaning and understanding. Grammar and speaking exercises are unclear for most students.

3. English Teaching and Its Implementation Path

3.1. The Impact of College English Teaching

3.1.1. This Has Triggered the Explosive Growth of English Teaching Resources. Under the traditional college English teaching mode, English teaching resources are mainly textbooks and paper resources, and teaching resources are relatively poor [17]. English teaching resources are not only huge in quantity but also of various kinds, providing a huge amount of resources for college students’ English learning.

The explosive growth of teaching resources has freed English teaching from resource constraints and greatly improved the content of English teaching. It enriches the content of College English teaching, expands students’ English learning horizons, and leads English teaching into the resource era.
3.1.2. Make It Possible to Teach College English Students in Accordance with Their Aptitude. Under the traditional college English teaching mode, English teaching is mainly based on on-site classroom teaching. The English teaching design is mainly designed for students as a whole. Although teachers can realize teaching in accordance with their aptitude and try to implement layered teaching in actual teaching, they are limited by teaching time, teaching space, and other conditions of teaching, and teaching in accordance with their aptitude lacks operability.

In the era of big data, teachers can make use of the advantages of big data and network platform to break the only main position in the traditional classroom for students. Students can make their own choices according to their English ability, English foundation, interests, and hobbies so as to make it possible to teach students in accordance with their aptitude.

3.1.3. The Camp Structure Is Suitable for Students’ Self-Learning Environment. Autonomous learning ability is one of the necessary abilities of college English teaching students. English learning is mainly limited to the English classroom. It is difficult for students to obtain effective support from the outside world without classroom teaching.

Students’ English learning environment has been further optimized. Not only are there rich learning resources to provide students with a large number of optional autonomous learning resources but also the online learning platform can change the lack of support for students’ autonomous learning in the traditional mode. Students can interact with each other and also students and teachers can interact with each other through the online platform. In the age of big data, the environment for students’ autonomous learning has been relatively mature.

3.1.4. It Will Lead to a Comprehension in Teaching Methods. Teachers’ teaching methods will be transformed from design focusing on teaching to design focusing on learning. Teachers will continue to optimize teaching methods according to the new learning environment and students’ learning needs [18]. The teaching content and teaching evaluation have also undergone major changes, and the teaching content has become more abundant.

3.2. Implementation Path and Strategy of Teaching Reform

3.2.1. Clarify Teaching Objectives. The rapid development of network technology not only injects new vitality into the boring language learning but also makes the learning of college English audio-visual courses more colorful. The basic theory of second language acquisition and constructivism believes that the content of language audio-visual course teaching should be diversified [19–21]. Teachers should use different channels to select network resources and information materials related to the teaching of audio-visual courses to provide students with a real learning atmosphere and language environment. Stimulate students’ motivation and interest in language learning and change their learning concepts. Encourage students to truly realize the importance of audio-visual courses from the bottom of their hearts so as to actively study and actively cooperate with relevant teaching activities.

At present, college English audio-visual courses already have textbooks such as *New Horizons English Audio-visual Teaching Materials* and *New Century English Audio-visual Courses*. However, there are few college English audio-visual teaching materials with strong professional targeting and not every major has corresponding industry audio-visual teaching materials. Teachers should not be limited to existing teaching materials and video materials in the process of audio-visual teaching. In addition, according to the actual needs of teaching, the audio-visual courseware should be carefully produced, and the targeted and personalized college English audio-visual courses should be prepared in combination with the students’ learning interests.

Improve the main body status of students and enhance the effectiveness of college English audio-visual course teaching. By creating a real language teaching environment, visual and auditory, language and situation, graphics and sound are organically combined. Turn the original abstract knowledge into vivid and easy-to-understand classroom performances.

3.2.2. Enrich Teaching Means. With the arrival of the big data era, the traditional teacher-centered audio-visual and oral teaching model no longer meets the requirements of the new era of foreign language talent training. There is an urgent fundamental concept and teaching mode of College English audio-visual oral course, and change the traditional teaching mode dominated by teachers. Classroom teaching takes students as the center and improves students’ dominant position [22]. It collects the course content suitable for students at different levels, and it improves students’ English audio-visual and oral level.

In the teaching process of college English audio-visual courses, teachers can make full use of modern teaching facilities for auxiliary teaching. The teaching content of audio-visual course include listening and speaking which should be organically combined especially the effective combination of college English audio-visual materials with the interactive teaching method and task-based teaching method. Encourage students to deepen the internalization and understanding of English language knowledge and improve their English language application ability.

Teachers can divide college English audio-visual course teaching into three parts: before class, during class, and after class according to actual needs. Before class, relevant teaching tasks will be released in advance through Rain Classroom, WeChat, Learning Star, and other network platforms, and students will be notified to preview and discuss in advance [23–25]. During this period, teachers can provide necessary technical guidance in the background or maintain timely communication with students through the Internet. In this way, the preparation time for classroom
practice can be greatly reduced, and more students have the opportunity to participate in audio-visual classroom teaching activities.

In the class, teachers can divide students into several study groups and encourage students to actively participate in various classroom display activities of audio-visual and oral teaching in groups. Students can prepare audio and video materials related to the topic in advance according to their own needs for follow-up and imitation exercises to correct word pronunciation. For some news hot spots, students are encouraged to have oral debates or talk shows so as to improve their English viewing, listening, and speaking ability [26]. In the class, teachers mainly provide technical support and learning guidance for students’ audio-visual and oral courses and to observe students’ participation in various classroom activities. Give timely feedback and comments on the problems, and teachers play a leading and promoting role in the whole teaching activities.

After class, teachers can properly arrange preview tasks or review contents of audio-visual and oral courses and also timely use various existing network communication platforms to maintain interaction with students. Master the latest trends of students, urge students to complete the tasks assigned after class on time, and timely answer for the practical problems encountered in students’ after-school learning, so as to ensure the effectiveness of after-school learning.

3.2.3. Repositioning Classroom Teaching. The teaching of college English audio-visual oral course is adversely affected by the traditional exam oriented education. Over the years, the teaching effect of audio-visual and oral courses has not made great progress. From the initial contact with English to entering the University, students’ English learning has been mainly based on the evaluation of the answer paper. Although listening is involved in the examination, the visual and oral links are basically in the initial state.

Teachers should reposition audio-visual courses. Adopt the strategy of changing the past one-way output teaching mode and encourage students to actively participate in audio-visual classroom teaching activities [27]. Give full play to the subjective initiative of students and realize the interaction between teachers and students in the audio-visual classroom in the true sense.

Teachers should be the organizers and guides of the classroom in the college English audio-visual classroom. In addition to completing the teaching tasks specified in the textbook, they should also organize different classroom activities and guide students to apply what they have learned in the classroom to practical application. The college English audio-visual course is a highly practical course [28]. Teachers need to organically combine audio-visual in accordance with the rules of English language learning to ensure that students learn with practical tasks every time.

In the classroom, students’ thinking is further expanded, and the three links of sight, listening, and speaking are taken into consideration. Emphasis is placed on the organic combination of the three to promote students to develop good audio-visual habits and to acquire correct English pronunciation, intonation, and speaking speed, thus laying a solid foundation for the improvement of the teaching effect of audio-visual courses.

3.2.4. Establish Diversified Courses. The establishment of a diversified college English audio-visual course evaluation system is mainly to further test the students’ course learning effect and teachers’ course teaching results. A sound evaluation system for college English audio-visual courses helps English teachers to discover [29]. The evaluation system of college English audio-visual courses should highlight the characteristics of the courses and provide higher-level evaluation and feedback according to the needs of the times for talents. The combination of quantitative and qualitative evaluation shall be implemented, and an evaluation system with diversified evaluation subjects and evaluation objects shall be constructed.

Under the background of big data, college English audio-visual course teaching should pay more attention to students’ practice and innovative evaluation, pay full attention to the autonomy and individualization of students, and change the traditional summative evaluation model with teachers as the main body of evaluation. It should establish a more diverse, reasonable, and effective teaching evaluation model so that students will eventually become the main body of course evaluation, so as to fully mobilize the enthusiasm and autonomy of students to study college English audio-visual courses.

4. Construction of College English Teaching Mode in Big Data Environment

Modern new media education methods are mostly based on flipped classrooms, micro classroom, and MOOC. A flipped classroom is the readjustment of time in and out of the classroom, shifting learning decisions from teachers to students. Micro classroom is an interactive learning community centered on group class, in which groups are generated by interest and students’ self-study, and small circles generate large circles. MOOC is a large-scale online course, which is the product of the Internet and modern education. It is an open classroom form that has emerged in recent years.

4.1. Flipped Classroom. Flipped classroom has been advocated by many educators because of its unique advantages. First, each video explains specific problems, which is more convenient to find. This is in line with the students’ psychological development and can also systematically sort out the framework of knowledge. Second, in order to cooperate with the knowledge explanation, teachers will provide voice over and expand some knowledge points. Let students absorb knowledge more vividly, and let students know the learning purpose of this class. Third, it helps students break the traditional passive learning mode and build their own learning system. Fourth, in the video, the teacher will raise several small questions to highlight the key points of the course, and the students will conduct self-examination
according to the questions raised [30]. If you find that the answer is not good, you can answer again and repeat the video playback to help students think. Fifth, in the process of preview and review, students could use fragmented time to study because they use multimedia. It saves more time and improves learning efficiency.

In the process of students’ learning, teachers can adjust the next class according to the specific situation of students, saving a lot of time for preview before class, observation during class, and reflection after class, improving teaching efficiency [31].

4.1.1. Design Method of Flipped Classroom. Select 40 students from a class in a university, and these 40 students have completed 16 weeks of teaching tasks. According to the situation of college English teaching in the previous academic year, teachers used the flipped classroom model to teach these 16 weeks. Students work in groups of four, each in groups of two. Students work in groups of four in different tasks and activities to establish a class WeChat group and a four-person WeChat group. Teachers distribute videos and related materials in the group to facilitate group members to participate. This will help teachers to rectify teaching and facilitate discussions among students. The specific flipped classroom design process is shown in Figure 1.

4.1.2. Application Effect of Flipped Classroom. In the teaching process, each group should preview the knowledge within the specified time. The teacher observes the student’s preparation in the background and records it. In the class, teachers should give targeted explanations for the effect of preview. Students focus on questions and discussions based on questions they did not understand during the preview. After the class, teachers formulate homework based on students’ reactions and discussions among students in the class and conduct exams within one week to test the effect of the class.

The effect analysis is as follows: (1) the video preview before the class can help students understand the significance of the teaching content and the required effect and allow students to have a more systematic thinking construction; (2) the interaction with teachers in the class has increased, and the opportunities to communicate in English have also increased; (3) the efficiency of students’ problem-solving in the discussion process is improved, and the role of mutual supervision is obvious; (4) each member of the cooperative group has made different contributions to the group study, which increases the students’ sense of achievement and helps build the students’ self-confidence in English learning; and (5) the effect of students’ review after the class is obvious.

4.2. Micro Classroom. Micro classrooms do not have the complex teaching process and huge construction system of flipped classrooms nor do they have many educational objects. Although it does not look so comprehensive, it is possible to teach one or two knowledge points in a class. The purpose of micro classroom teaching is clear, the content delivered is short and concise, and it has a certain systemic nature.

The teachers of the micro classroom appeared in the whole process and explained the knowledge points clearly. Taking video animation as the network communication point, each video is 10 minutes, highlighting the characteristics of the discipline. There are real cases as an aid, and the digestion speed is faster. The course is one-to-one, which promotes students to learn independently, with matching exercises and evaluation methods.

4.2.1. Design Method of Micro Classroom. Taking an online platform as a practical case, an "English Micro Classroom" was built on the platform. Teachers build a knowledge system according to the knowledge network, upload shared resources, create new columns, and develop an interactive platform for micro classrooms. The test selected a non-English major class on the network platform with a total of 40 students. Among them, the selected students scored between 115 and 125 in the college entrance examination, with an
average level. Another 40 students in the control class were selected, and these 40 students did not attend classes.

According to the specific content of the micro classroom teaching, teachers sort out knowledge points in the class and provide data sources for students to download after the class, and the students are divided into groups in the way of group assignment so that the students can practice the trial lectures so that the knowledge can be fully mastered. The specific micro classroom design process is shown in Figure 2.

4.2.2. Practical Results of the Micro Classroom. According to the after-school test results in Table 1, 65% of the students in the experimental group scored above 70, and 50% of the students in the control group scored above 70. Students can take English and exams seriously, and their ability to master knowledge has been improved.

In Table 2, the highest score of the control group was 93, which was 3 points lower than that of the experimental group, and the lowest score of the experimental group was 3 points higher than that of the control group. The number of people below 70 points in the control group is 6 points higher than the experimental group. This shows that the learning effect of the experimental group is better than that of the control group.

4.3. MOOC. MOOC is an emerging online course method in modern education. It is a large-scale network open course. It mainly advocates the spirit of sharing and collaboration. It is an open class initiated and organized by individuals. MOOC is a public course, so the service objectives are larger and the scope is wider. The openness of the course is strong, and the teaching purpose of the course is more obvious. Although open, there are no restrictions on where classes can be held and no significant investment is required.

4.3.1. Design Method of MOOC. Taking the English course of a university as an example, a MOOC can be divided into three stages, namely, the preclass preparation stage, the teaching explanation stage, and the summary evaluation stage. Before the class starts, teachers make plans for the course, including course design, course recording, and platform playback. Among them, the entire video course will not exceed 25 minutes, but the learning period can be extended, generally controlled within two months. The frequency of teaching videos is issued twice a week, and there is a lot of time for students to digest and understand. At the same time, teachers will assign classroom assignments, problem discussions, and self-assessment questions after the class.
4.3.2. Post-MOOC Survey. The census results are shown in Table 3. Students have a high degree of recognition for the course help provided by MOOC, and their attitudes towards this course have changed. They are also more satisfied with the interactive effect with teachers in the class. Some students also said that offering MOOC helped them learn the course independently to a great extent and explained about the boring course thoroughly. Some students said that although the course time is short, the effect is remarkable and the overall satisfaction is high.

5. Conclusion

The advent of the era of big data has had a strong impact on college English education for cultivating applied and innovative foreign language talents. We can promote the deep integration of college English audio-visual course teaching and network technology so as to realize the extraction of valuable things from massive information for audio-visual course teaching. Based on students’ formative evaluation, we can make full use of big data and network platforms to optimize student learning. We can scientifically build a classroom teaching evaluation system and optimize the teaching mode in order to improve students’ English application ability and autonomous learning ability. We can reconstruct the evaluation model of college English audio-visual courses, that improved the teaching quality and effect of college English courses and promotes the improvement of students’ comprehensive English ability.

Data Availability

The dataset can be accessed upon request.

Conflicts of Interest

The authors declare that there are no conflicts of interest.

References


