Integration of Big Data and College English Education

Saisai Zheng and Shengwen Zhu*
Nanchang Institute of Technology, Nanchang, Jiangxi. 330099
Email: zhengsaisai83@163.com
Jiangxi Academy of Sciences, Nanchang, Jiangxi. 330096
Corresponding author Email: zsw8305@163.com

Abstract. With the arrival of the era of big data, the traditional English education has been difficult to adapt to the needs of social development. Under the background of big data, college English teaching needs to keep pace with the times. By analyzing the impact of big data on college English education, this paper discusses the innovative strategies of college English teaching. Only by making full use of high-quality resources in the era of big data, changing teachers' traditional ideas, using data platform or learning software reasonably, and promoting the integration and development of various teaching modes, can the quality of college English education be improved.

1. Introduction
Under the background of rapid development of information technology, big data technology is coming to the public with a new attitude. With the arrival of the era of big data, great changes have taken place in all walks of life. As an important course in college, English is also impacted and influenced by the development of big data. The traditional teaching mode has been difficult to adapt to the impact of the development of information technology. For college English education, the era of big data brings not only opportunities, but also greater challenge. Its powerful impact will certainly lead to changes in college English education. Therefore, English teachers should actively understand the infiltration of big data era into teaching, update ideas, keep pace with the times and innovate teaching.

Big data mainly relies on the Internet, integrates and analyzes the corresponding data, and shares high-quality resources under the processing of applications. Big data is mainly composed of complex structure, large number and various types of data. It is a data processing and application mode based on cloud computing mode, and is also knowledge service ability and intellectual resources formed by integrating and sharing data and cross reuse. The birth of big data has led to the development of all walks of life, even in the field of education, especially in college English teaching, which has a wide and far-reaching impact. Big data is a very forward-looking research topic whether from the perspective of English subject development or from the perspective of the change of education form. This is because English education is closely related to social development. If big data technology is integrated into modern English education, it can not only effectively improve English teaching level, but also promote the construction of English discipline itself to a new height.

2. The Influence of Big Data on College English Education
2.1. Influence on Teaching Mode
In the context of big data, innovative teaching models emerge in endlessly, such as flipped classroom, MOOC, etc., which are more and more popular among students. Traditional teaching mainly relies on teaching materials, blackboard writing and other ways to teach students English. The form is relatively...
simple and boring. Students are easily bored and tired in the process of classroom learning. Over time, students will lose interest and motivation for college English learning. Under the background of big data, such innovative teaching modes as MOOC and flipped classroom can enable students to choose high-quality and rich teaching contents in combination with their own situation at any time, formulate learning plans and control learning progress according to their own level, so as to realize the organic combination of online and offline learning. In addition, flipped classroom and MOOC online platform can also make a detailed analysis of students' learning situation, learning methods and characteristics, so as to maximize students' learning efficiency and learning effect. After the birth of these new and rich teaching models, it is very easy to attract students' attention. Therefore, it is urgent to change the traditional English teaching mode.

2.2. Influence on Teaching Content
Most of the contents in traditional English education are based on English textbooks written by publishing houses. Such textbooks are usually equipped with teaching CD-ROM. teachers will make use of this part of content for secondary processing, and produce PPT in the way of screening and integration, so as to expand learning content and improve students' interest in learning. However, these teaching CDs are still relatively single, and students are also easy to lose their enthusiasm for learning in the long-term passive acceptance. After the arrival of the era of big data, what teachers present to students in the classroom is not only textbook knowledge and teaching CD-ROM, but also rich information-based teaching resources such as open class in famous schools, micro class and Ted by means of Internet, mobile app and online platform. However, in order to realize these innovations and reforms, big data technology has very high requirements for teachers' information technology ability. Therefore, teachers should strengthen their own teaching ability, make full use of modern information technology, constantly enrich teaching content and improve teaching effect.

2.3. Influence on Teaching Role
Under the positive influence of big data technology, many colleges and universities in China have introduced the Internet and mobile phone into English classroom, and created colorful internet classroom to facilitate students to learn English anytime and anywhere, so as to improve the efficiency of English teaching. Because of a series of changes, the role of college English teaching has begun to change. Students have changed from passive recipients to active learners. With the help of rich information resources on the Internet, students can choose English courses according to their own needs and learn on demand. In the process of teaching, teachers mainly act as the organizer of classroom activities, the guide and evaluator of students, and they have also changed from a single knowledge imparter to a classroom guide. Therefore, in the era of big data, college English teaching reform in China is imperative.

3. Rational Analysis of Big Data Application in College English Education
Data is numerical value. Under the concept of data in computer science, data is the basis for various calculations, statistics, technical design and scientific research. Big data is the expansion of data, which means that it can not be managed, processed, captured and collected by conventional software tools within a certain period of time. It requires stronger insight, optimization ability and decision-making power to have a large number of diversified information assets. Connecting big data with college English education is to change the current situation of college English teaching, build a more efficient teaching mode, analyze, understand, compare and master relevant information resources, and then extract valuable data parameters and knowledge content, so as to provide scientific decision-making and analysis for college English teaching. Some researchers have proposed: "Big data has induced the reform of education structure and thinking. In order to continuously deepen the in-depth reform of education and promote the deep integration of big data and university education, we should make use of the supporting conditions of big data to induce the deep reform of teaching, excavate the behavior data of teachers and students, build valuable big data teaching resources, and cultivate harmonious and symbiotic big data teaching learning culture."
The application of big data in college English teaching strategy is mainly based on the role of teachers, how to use the value and function of big data to teach. University teachers can use big data to guide students to achieve personalized learning, excavate the teaching value of big data, put forward innovative strategies of teaching reform induced by big data in practice, clarify teaching objectives, adopt targeted teaching methods, and construct personalized teaching mode. The application of big data in education includes data acquisition and storage. In theory, smart classroom is to record and store students' daily behavior data through sensors, and analyze relevant education data. This requires analysis of students' repetition and stay time, and with the help of machine learning, semantic analysis, psychology to locate students' learning difficulties, present relevant educational data, and carry out targeted teaching on the parts of students that need to be strengthened through practice, learning, examination and other methods.

4. College English Teaching strategies under the Background of Big Data

4.1. Improve Teachers’ Ability of Data Analysis and Application

In the era of big data, English education is facing new challenges. The same is true for English teachers. Only by fully mastering advanced teaching methods in the era of big data, can teachers accurately grasp teaching under the current background. The era of big data can not only provide students with a diversified learning environment, but also provide unprecedented technical and knowledge support for teachers' teaching. Under such a background, English teachers should not only have the corresponding teaching ability, but also have the ability to plan teaching activities. Only in this way can they make timely adjustments in the direction of talent cultivation according to the requirements of the era of big data. To improve the overall quality of teachers, the key is to enable them to have the core ability to carry out teaching under the background of big data, so as to impart English knowledge to students more systematically and efficiently. In terms of specific abilities, teachers are required to have a basic understanding of psychology, pedagogy and big data knowledge, organize corresponding teaching activities by using advanced teaching concepts and teaching methods in accordance with requirements of talents cultivation in the new era, so as to enable students to effectively grasp the learning content at this stage, and achieve ideal results and higher standards English ability and lifelong learning ability.

Therefore, the key to improve teachers’ teaching level is to enhance teachers’ ability of using modern teaching methods for education effectively. Therefore, schools should regularly organize relevant teachers to pay attention to emerging multimedia big data, and hold information technology exchange meetings. As far as students' learning is concerned, we should teach students how to use the network to study independently and cultivate the consciousness and ability of lifelong learning, so as to effectively adapt to the current employment needs of Enterprises. It can be seen that in the actual process of teaching, as the maker and main participant of teaching plan, the quality of teachers determines the quality of teaching. Therefore, under the background of big data era in which new technologies emerge in endlessly, it is very urgent to strengthen the ability construction of teachers. Teachers should strive to improve the understanding and mastery of new technology, enhance the ability of teaching data analysis and application, and apply it to daily teaching activities.

4.2. Using Big Data to Optimize Teaching Mode

In the traditional teaching process, teachers judge the learning situation by students' achievements. Under the background of big data, teachers judge the learning situation according to the data provided, optimize and reform the classroom teaching, deeply mine the optimized teaching methods, pay attention to the application of teaching skills, and supplement English knowledge with the times. Although teachers can analyze in-depth teaching methods by big data, to see what kind of teaching methods can achieve good results, so as to choose appropriate teaching methods for curriculum arrangement, so that it can stimulate students' learning interest, to achieve a sense of satisfaction and achievement. However, relying too much on big data will make the judgment one-sided, leading to biased teaching methods; teachers can not see the real learning situation. Teaching and learning is a kind of interpersonal communication, which needs emotional communication. Simple data cannot
fully explain the problem. Therefore, we need to find a balance between the traditional teaching mode and the network teaching mode, which can realize the complementary advantages of the two modes and achieve the purpose of promotion through integration and development.

4.3. Building Intelligent Data Platform
In the process of English teaching, the construction of an independent English teaching system can effectively integrate the school's educational resources. Relying on the powerful multimedia technology, the English teaching will be digitized and informationized, and the function of data will be brought into full play. For example, at present, more mature platforms are "MOOC" and "flipped classroom". These platforms can be used for course teaching, effective management of learning situation, attendance management and assignment. Although the development of a new platform can effectively improve the function and personalization, it requires high cost and a long development cycle. Compared with the mature platform, which rely on its strong data processing ability, can effectively use big data to develop and optimize the curriculum, and also can effectively record the learning status of students.

4.4. Building Internet plus Learning Mode
In English teaching, teachers cannot increase the length of teaching at will, but can use Internet plus mode to increase teaching width under the background of big data. By using mobile phone and Internet plus mode effectively, teachers can give relevant language knowledge and professional knowledge to students before class or after class, so as to improve students' interest in learning and enrich their learning contents. Under the background of big data, teachers can monitor the learning situation timely and effectively, and get real and timely feedback, which is conducive to improving the teaching effect. Students can carry out different learning according to their own needs, so as to teach students in accordance with their aptitude and self-study. In addition, teachers can also effectively discover students' learning needs by big data, effectively match learning plans according to their mastery of English, help students customize personalized learning methods, and reasonably select teaching mode according to their own specific conditions, so as to achieve the goal of hierarchical teaching. For example, some students like reading English articles, while others like watching English movies. They can make reasonable choice of teaching methods according to the specific situation, and constantly improve the training program according to the specific situation, so as to improve students' learning efficiency, enhance their interest in English, and form good English learning habits.

4.5. Innovating Teaching Evaluation Methods
There is a close relationship between English teaching and information technology. In the process of college English teaching, teachers should guide students to conduct correct autonomous learning, collect relevant English materials by using network technology, carry out orderly classroom teaching activities, arrange task-based homework after class, revise teaching plan, realize interaction online and offline, before and after class, and make network information platform become teacher’s main means of evaluation to promote students’ diversified development. College English teachers should adopt targeted teaching methods according to the differences of students' learning level, study the areas where students need to strengthen, and carry out targeted teaching in relatively weak areas.

Under the background of big data, College English teachers should apply information technology, change teaching mode, innovate teaching evaluation methods, and conduct a comprehensive evaluation of students. Through online mutual evaluation and online questionnaire, students can conduct online mutual evaluation, so as to reflect students' recent learning situation through computer system, so as to improve the efficiency and quality of evaluation. In addition, College English teachers should focus on the application of information technology in each school, correctly recognize the students' shortcomings and advantages in learning, guide students' autonomous software study by network technology, to improve students' autonomous learning ability. If students make mistakes in the process of learning, teachers should give correct guidance.
5. Conclusion
To sum up, the advent of the era of big data has brought opportunities and challenges to the development of college English education. College English teachers should combine English teaching with big data background, update teaching concepts, actively learn information technology, create a diversified teaching environment, integrate data platform into classroom teaching online and offline, and actively innovate college English teaching strategies to stimulate students' learning enthusiasm and interest and to improve the quality of college English teaching.

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