Research on the Impact of Modern Information Technology on English Teaching in Colleges and Universities

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Abstract: In the era of rapid development of modern information technology, English teaching in colleges and universities in China is facing unprecedented changes and new opportunities, and while making full use of the convenience brought about by science and technology, English teaching in colleges and universities is also facing many challenges. This paper provides a more comprehensive discussion on the use of modern information technology in the process of teaching English in colleges and universities, and analyses the impact and challenges it brings. From the aspects of cost, equipment and network environment, this paper makes an in-depth analysis of the use of modern information technology, the development of students' information skills and self-learning ability, and puts forward the countermeasures that should be taken in English teaching in colleges and universities.

Keywords: English teaching; Modern information technology; Impact; Challenges; Teaching methods

Introduction

In the information society, it has been a general trend to apply modern information technology to English education and teaching in colleges and universities. In today's rapidly changing science and technology, information technology provides rich teaching means and resources for English education and teaching, and also creates a more flexible and personalised learning atmosphere for teachers and students. However, the challenges are also obvious, so in the teaching of English education in colleges and universities, how to better play the advantages of modern information technology has a very important role for English teaching.

1. Challenges in application of modern information technology in teaching English in colleges and universities

1.1 Limitations of cost, equipment and network environment

First of all, cost is a noteworthy issue. Acquiring, updating and maintaining modern information technology equipment requires a lot of money, which is usually restricted by limited educational budgets, which leads to the fact that many colleges and universities cannot easily keep pace with technological development, and thus also brings certain impacts on English education and teaching in colleges and universities. Secondly, equipment limitations are also a challenge. Some colleges and universities do not have adequate computers, tablets or other modern facilities, thus not allowing students to get the best learning materials. In addition, the frequent upgrading of instruments can lead to the lack of synchronisation between instruments and equipment, resulting in the ineffective integration and use of teaching resources. Finally, the network environment is also a major constraint, and the unstable or slow speed of the network in some regions can also adversely affect online teaching and access to resources, which is one of the difficulties faced by English education in the current network environment.

1.2 Promotion of information quality and the improvement of independent learning ability

The rapid development of information technology requires students to have information quality such as information search, evaluation, integration and application. However, the lack of certain basic skills causes some students to be unable to use information competence effectively in digital teaching situations. But for this knowledge to be fully utilised, students are required to have the ability to learn independently, which involves making a study plan, solving problems arising from learning, and monitoring and adjusting learning strategies independently. The lack of this ability makes it difficult for some students to maximise their own learning potential under the conditions of information technology [1].

2. The impact of modern information technology on English teaching in colleges and universities

2.1 Richness of learning resources

With the development of information technology, English education in colleges and universities presents rich and varied learning contents, which makes a great change in the traditional way of education. Through the Internet, students can be made aware of a wide variety of

information, thus improving the interest and authenticity of the classroom. These teaching contents, which are both up-to-date and practical, can not only increase the learning interest in English teaching, but also improve students' language-using skills. Multimedia teaching tools such as teaching videos and virtual laboratories can also provide students with more visual teaching resources, enabling them to better grasp some abstract language knowledge and strengthen their memory of what they have learnt. Through simulation experiments, students can fully understand and apply what they have learnt in a real environment. Network information resources such as online libraries and e-journals bring a wide space and convenience for students to study and communicate. At any time and in any place, they can obtain the latest research progress in various English topics, broaden their learning horizons, and deepen their understanding of the profession.

2.2 Expanding teaching space, realising off-site teaching and resource sharing

Modern information technology breaks through the geographical limitations of traditional English courses in colleges and universities, enabling teaching resources to be exchanged over the network, thus achieving the purpose of distance teaching. Colleges and universities build cloud computing platforms for storing network resources, such as open courses, videos, and assessment materials for teachers and students to retrieve, which greatly expands the scope of classroom use and enables teachers and students to access a large number of high-quality teaching resources at any time. In addition, network video software also provides a platform for teachers to teach remotely. For example, an English teacher in a university is able to open live English open class for students nationwide, as well as one-on-one online teaching, which can not only alleviate the contradiction of the shortage of teachers in remote and backward areas, but also build a good platform for communication between teachers [2].

3. The application of modern information technology in English teaching

3.1 Application of intelligent auxiliary tools in English teaching

3.1.1 Language learning APP and software

Language learning APP and software integrate gamified learning and personalised teaching, so that students can get more convenience and efficiency in the process of English learning. Through a variety of teaching methods, such as games and interactive tests, they improve the fun of teaching and students' motivation to learn. For example, the use of card games and grammar challenges and other methods, so that need to negotiate in a relaxed atmosphere to master the English language, to achieve the purpose of twice the result with half the effort. Using the algorithms of artificial intelligence to analyse students' learning habits, levels and needs, so as to design learning programmes for students and provide them with targeted learning content. Such teaching methods can be adapted to different types of students and improve the quality of teaching.

3.1.2 Intelligent speech recognition technology

Intelligent speech recognition technology can instantly correct pronunciation and strengthen students' ability to express themselves. Through real-time feedback methods, students can evaluate the quality of their speech, thus correcting speech deviations and enhancing the accuracy of their verbal expressions. These instant feedbacks allow students to quickly construct appropriate pronunciation patterns and enhance their understanding and performance. The software allows students to evaluate factors such as voice fluency, intonation and speed by using statistics on voice data, thus providing students with all-round feedback on their oral training. This personalised evaluation helps students to better define their learning objectives, thus enhancing the effectiveness of teaching and learning. Through the use of the software, students have access to a wide range of instant speech modelling, oral presentations, listening materials and more. This variety of learning resources can be adapted to different learning needs, as well as making learning more flexible and personalised.

3.2 The scientific use of micro classes in English teaching in Colleges and Universities

With the rise of the wave of "Internet + education", the new teaching mode is impacting the global education development at an unprecedented speed. Concepts and technological updates and changes in the learning period of college students feel afraid of regression, as a college English teacher, if you cannot keep pace with the times, then there is a risk of being eliminated in the future. College students today, as "aborigines" in the digital age, have been in contact with digital devices since they were young. If college English teachers can't face this situation and stick to the original teaching mode, they will be replaced by the educational tools of the new era. At present, China's research on micro classes is still in the preliminary theoretical construction process, and there is a lack of complete standards on how to design and develop micro classes. In the creation of micro courses, we should pay attention to the following points: first, "student-centred" design and production of English micro courses; second, in terms of specific teaching content, we should combine English teaching content with the structure of the discipline; third, we should set up an English micro course teaching team to improve the research and development of micro courses and the ability of English teachers to build micro courses, so as to prevent low-level duplication of development. repeated development. English micro courses in colleges and universities should be set up to follow the purpose of "teaching-learning-doing" unification, and should scientifically reflect the modern education and teaching method of "taking students as the core". English teachers should set up reasonable teaching contents according to students' psychological characteristics and their own characteristics. In particular, they should pay attention to the practical

training of English, create a pleasant atmosphere in the English classroom, adopt various forms of teaching methods, and focus on practical operation in order to improve students' interest in English. In the process of implementing microteaching, English teachers in colleges and universities should not only achieve completeness, systematicity and operability, but also grasp the course content, teaching plan, teaching script, recording video, editing materials and other aspects.

First, to determine the teaching theme; as microteaching is mainly a short teaching video, usually about 8 to 15 minutes, it is important for teachers to make it concise, and the teaching content is designed so that students can better understand the meaning of it, so that the purpose of teaching can be better accomplished according to the topic. Teachers can focus on a key point in the content of the lecture, but also for a particular teaching step, to make a distinctive, overall, unified teaching planning and design. Microteaching should not only be vivid, but also highlight the main idea of teaching, and show the key points and difficulties. Secondly, it is necessary to master the teaching programme. The microteaching programme can revolve around the teaching process, objectives and methods. In terms of the teaching method setting, English teachers can either do it in the multimedia classroom or apply it in the training room, internship base and real scenarios of each profession. Not only can screen recording software be used to record the whole process of the classroom, but also devices with camcorder function can be used. In addition, the teaching methods should be diversified, and when using micro classes, teachers can not only answer students' questions in language according to their own needs, but also be able to interact with students, and not only act as their instructors, but also as their hands-on demonstrators.

3.3 The scientific use of augmented reality technology in English teaching in colleges and universities

Augmented Reality (AR) technology has formed a complementary relationship with teaching from the day of its appearance. This technology can scientifically integrate the virtual and the real, display the knowledge entity and model, facilitate the user to operate on the spot, and provide teachers with a brand-new way of teaching in the classroom. In the traditional classroom, as there are great differences in the learning ability of students, it takes a lot of time for teachers to carry out targeted teaching. AR technology can easily provide teachers with personalised guidance, and the integration of AR technology and multimedia teaching provides a kind of visualisation and interactivity between teachers, students and knowledge. This form of courseware creates a wide imagination, expands students' knowledge of the educational context and content, enhances real-world knowledge situations, enhances educational situations that are not available in the real world, and allows students to develop a new understanding of and interest in the content of the course. In the past, teachers often used presentations, videos and other forms of presentations in information technology education. With the application of AR technology, many text-based learning materials can be combined with physical teaching materials, which greatly facilitates English teaching in colleges and universities without having to switch back and forth between the virtual and the real, which not only saves valuable learning time, but also effectively improves the teaching effect of the English classroom. The application of virtual reality technology in China's English teaching will certainly produce profound changes and development of English education and teaching in colleges and universities.

4. Conclusion

To sum up, in today's rapid development of modern information technology, in order to make the English education and teaching in colleges and universities give better play to its potential, it needs to be closely linked with modern technical means. On this basis, full attention should be paid to the use of information technology, and the quality of teachers and students should be strengthened in order to guarantee the fairness and safety of the digital teaching environment; teachers in colleges and universities need to adopt a brand new concept of English teaching in order to push forward the continuous development of China's higher education, and cultivate a group of senior English specialists with international competitiveness for China.

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