



A practical approach to the development of English education in remote areas of China enabled by AI technology

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Abstract

With the development of economic globalization, the international status of English is becoming increasingly prominent. Especially in remote areas, the need for English basic education is more urgent. In recent years, the innovation of AI technology has promoted the development of higher quality English education in remote areas, including personalized English learning, intelligent English tutoring system, virtual English learning environment and so on. In the issue of AI-enabled English education, whether it is the technology itself, or the cultivation of ideas and methods, it is global. Therefore, it is necessary to form broader, more comprehensive and deeper cooperation on the network platform on a global scale to promote large-scale innovative talent training.

1. Introduction

With the rapid development of artificial intelligence technology, the education industry has ushered in a new opportunity for change. AI technology not only optimizes the traditional teaching mode, but also provides new ideas for the allocation of teaching resources. In the remote areas of China, the problem of uneven distribution of educational resources has always been constant, especially English education. Limited to remote areas, such problems as insufficient teacher resources, single teaching content and lack of learning environment have seriously restricted the English learning ability and level of students in remote areas [Wen, W., Han, S., & Zhang, P. (2023)]. However, the rise of AI technology has provided new solutions to these problems. With the theme of "Research on the Practical Path of AI Technology Enabling the development of English Education in Remote Areas", this paper aims to explore how AI technology can enable the efficient development of English education in remote areas through innovative practical paths.

1.1 Literature Review

The development of English education in remote areas of China has long been limited by many factors, such as geographical location, economic conditions, educational resources, etc., showing many differences from urban education, which are not only reflected in teachers and teaching conditions, but also in students' English level, learning environment, policy support and other dimensions [Huang, Z., Liu, M., & Ye, J. (2023)]. The following is a specific analysis of the current situation of English education in remote areas in China:

The foundation of education is weak and the concept of education has not changed

For a long time, under the influence of geographical environment, politics, economy, culture and other related factors, education in remote areas has been neglected, and educational resources lag far behind those in cities, among which English education is the most serious. Urban children are exposed to English as early as early childhood education, while the quality of early childhood education for children in remote areas is far less than that. By the middle school level, the education gap has widened significantly. The quality of English education in remote areas is also far behind that in cities. There is also a huge problem in whether parents in remote areas support and encourage students to devote themselves to learning [[EB/OL]. (2019, July 8)].

Lack of teachers and unreasonable structure of teachers

Affected by a variety of external factors, it is difficult for outstanding teachers and young teachers to choose to stay in remote areas for a long time. Teachers have strong mobility and unstable team structure. Especially in the west. Under such circumstances, it is difficult to establish a qualified teaching structure. In remote areas, non-normal teachers and non-professional counterparts are often hired to teach. Moreover, many teachers have multiple subjects. For example, English teachers also teach Chinese.

Shortage of teaching resources and imbalance of information exchange

English teaching resources and materials used by schools in remote areas often have problems such as small quantity, single type and outdated content. These existing resources are difficult to achieve the teaching objectives stipulated in the current curriculum standards. Meanwhile, the lack of supporting teaching and guidance materials makes it difficult for students to acquire more effective knowledge from the only educational output. This lack of resources not only weakens students' knowledge acceptance but also eliminates students' language learning experience [Chen, Y., & Eichen. (2024)]. In addition, most schools in remote areas lack modern teaching facilities such as multimedia classrooms and language laboratories, which makes the teaching methods always limited to the traditional "blackboard + chalk" mode, resulting in unequal information interaction, unable to transmit and interact the latest preamble information, so that it is always limited to the current situation.

2. Research Methods

Construction of online education resource library

First of all, developed areas have a huge library of educational resources, including various kinds of English teaching materials, reference books, online courses and other diversified teaching resources. By using these resources, English education in rural areas can improve the diversity and pertinacity of curriculum Settings and provide students with a broader horizon of knowledge learning [Zhong, S. (2020)]. In addition, the sharing and exchange of online education resources can also enhance the teaching quality of rural English education and urban English education, and reduce the difference in English education resources. Local colleges and universities are also committed to expanding the interconnection between libraries, databases, multimedia platforms and other resources, forming a system of efficient integration and utilization of teaching resources, and further improving the quality of rural English basic education.

Create intelligent English online courses

Break the time limit

Students in remote areas can also have the same English teaching resources as students in developed areas. Realize the sharing of teaching resources, so that students in remote areas can learn from each other in online courses. Future systems may also be able to simulate the scene of a real classroom, such as raising hands to ask questions, group discussions and other functions. In addition, virtual classrooms can also use facial recognition and emotion analysis technology to monitor students' participation and emotional state, so that teachers can adjust teaching strategies in time [The State Council. (2021)].

Break the space barrier

The location of the class is flexible and students in remote areas can decide the location of the class according to their own needs. The virtual classroom can realize the distance teaching through the network and AI technology. Teachers and students can interact in real time in different locations.

Cheap price

Compared with the price of offline courses, the price of intelligent online courses is cheaper. Online courses mainly implement small profits and quick sales, facing the whole Internet. Remote areas coupled with underdeveloped economies, this cheap online course is more accessible to the audience.

Help teachers change their roles

Construction of teacher training system

Establish a complete technical training system for teachers, and provide training courses for teachers on the application of AI in education. The training content can include the use of intelligent teaching platform, data analysis and interpretation, and the integration of new technologies in teaching, so as to improve the technical literacy of teachers.

Repositioning the teacher role

Teachers should be transformed from traditional knowledge imparts to learning guides, organizers and evaluators. In the teaching process, make full use of the advantages of AI technology, at the same time give play to their own educational wisdom, and pay attention to the overall development of students, such as emotional cultivation and value shaping. Educational institutions and schools should encourage teachers to actively explore new teaching models and improve the quality of education through the collaboration of people and technology.

3. Result and Discussion

Teachers' technology adaptability is limited

The use of AI technology requires teachers to have certain digital capabilities, but the acquisition of these capabilities is obviously not applicable to the current reality of teachers in remote areas. The reason can be seen in the fact that teachers in remote areas have limited vocational training opportunities and few opportunities to participate in specialized training on the use of AI technology, and the level of teachers in the region is limited. Therefore, some teachers are resistant to the use of modern technology [Zhang, S. (2016)].

Students' learning receptivity is limited

Affected by family, environment and other aspects, students in remote areas lack contact with modern technology and experience in using it. Therefore, in the process of AI technology intervention, students are limited by the digital level of teachers, making them unfamiliar with the functional operation of AI platform, and thus unable to learn efficiently. In addition, when teachers are unable to control the quality of online learning resources, students will not be able to learn efficiently. Students may deviate from the correct learning path [Ke, Q., Lin, J., Ma, X., et al. (2021)].

Limited ability of home technology intervention

The use of AI technology in English education involves not only teachers and students, but also parents' acceptance of new technologies and awareness of education investment. On the one hand, most parents in remote areas have insufficient understanding of English subjects and believe that practical subjects are more beneficial to their children. On the other hand, they have insufficient understanding of the role and value of AI technology. Thinking that technical devices will distract students' attention is the realistic challenge of AI technology enabling English education.

4. Conclusions

AI brings unprecedented opportunities to education. The application of artificial intelligence technology in personalized learning, intelligent online courses, virtual learning environment and online education management resource library has achieved remarkable results. However, in the process of integration with the education industry, it also faces challenges such as the change of the role of teachers and the unemployment of a large number of teachers. By strengthening the training of teachers' skills and assisting teacher development and other coping strategies, the deep integration of AI and education can be better promoted. In the future, education researchers, technology developers, educational institutions and governments need to work together to explore and innovate constantly, so as to achieve intelligent, fair and high-quality development of education, narrow the gap between education in remote areas and education in developed areas, and lay a solid foundation for training innovative talents to meet the needs of The Times. In short, the application of AI in the field of education is a process of continuous development and continuous improvement, and we need to take advantage of its advantages while carefully dealing with possible problems, so that education can truly benefit from this great technological revolution. At the same time, it is also hoped that English education in remote areas can use this technology to keep up with the development trend of The Times.

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