

Realizing Intelligent Teaching and Constructing a New Environment for College English Teaching

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Keywords: Information Technology; Intelligent Teaching; College English; Teaching Environment

Abstract. This paper analyzes the characteristics of intelligent teaching, including teaching environment, process and contents. It emphasizes the significance of integrating information technology with college English teaching, the necessity of carrying out college English intelligent teaching, and the ways of building a new environment for it. The paper suggests optimizing the virtual and physical teaching environment as well as teaching resources, to upgrade educators' teaching philosophy and keep their sustainable development, and to improve the campus service, providing necessary facilities for intelligent education.

1. Introduction

With the rapid development of the Internet, cloud computing, the Internet of things and other information technologies, educational informatization has entered a new era and is revealing a trend of intelligent development. The education in the new era shows a trend of qualitative change in education paradigms, education goals, education mechanism and education processes. As a result, intelligent education came into being. How to adapt college English education to the ever-developing and changing learning needs and methods of college students, how to optimize the learning environment with the help of modern information technology, how to carry out intelligent teaching and build a new environment for intelligent college English teaching are important issues deserving attention from educators.

2. Intelligent Education and Learning

2.1. Intelligent education

Intelligent education originates from philosophical thinking and aims to awaken and develop human intelligence. After entering the 21st century, with the rapid development of information technology, the concept of intelligent education has been further extended and expanded. Big data not only lengthens the time and expands the space of education, but also deepens the connotation of education, facilitating the development of intelligent education.

On one hand, big data gathers and stores information assets, laying the most important foundation for the development of intelligent education. And the technology of data mining and learning analysis bridges big data and intelligent education [1]. Data technology is the determinative factor in constructing an intelligent education system. The technology of IOT highlights the significance of education environment and teaching activities; big data technology enhances the intelligence of educational administration, decision-making and evaluation [2].

On the other hand, the construction of the intelligent education environment is emphasized in intelligent education. As a high-end form of personal learning environment, virtual information environment and social environment, intelligent education provides a ubiquitous learning environment by connecting the physical and information learning space seamlessly.

In addition, intelligent education highlights the subject status of learners and encourages them to actively explore knowledge, adopt various learning resources and media, interact with the external environment, and construct knowledge system, so that learners can actively renew and construct the knowledge they have learned. Under this circumstance, learners change from passive recipients of external stimulation and indoctrinated objects of knowledge into actual subjects of information processing.

Finally, intelligent education encourages and supports learners' interaction and collaboration. The advanced technology provides efficient and convenient interacting equipment and platform to meet the needs of collaborative learning, mobile learning and blended learning. At the same time, intelligent education involves a large amount of dynamic, open and shared digital resources, which can not only identify and select personalized push and learning services for learners, but also carry out intelligent assessment and administration of learners' learning.

2.2. Intelligent education and learners

Intelligent education impacts learners in the following ways.

Compared with digital learning, intelligent learning not only focuses on the construction of infrastructure and learning resources but also focuses on providing adaptive and personalized learning for learners with reliable and useful information [3]. Intelligent learning emphasizes self-orientation of learning and active motivation inspired by learning interest. Learners can install terminal equipment, make full use of the Internet to break through the limitation of time and space, and work on their own schedule instead of following the arrangement of schools. It is more flexible. In addition, the popularization of intelligent learning tools provides students with all-round learning opportunities. Learners choose and adjust learning content and speed according to their own learning state, so as to realize extensive and in-depth learning. Thirdly, real learning experience enables students to have a stronger sense of responsibility to complete the learning mission. Their subject consciousness of learning will be cultivated. Due to this, the intelligent learning environment is no longer exclusively designed by traditional teachers; it's the outcome of the co-work of teachers and learners. As cooperative organizers of the class, learners can choose appropriate content for their personalized learning.

Moreover, students can get immersed in an authentic learning context. The ultimate goal of intelligent learning is to develop learners' learning intelligence and improve their innovation ability. It can provide the most appropriate learning path and methods for learners [4]. In the opened intelligent learning environment, learners have maximum choice of plenty of authentic learning materials and are no longer exposed to texts screened, edited and processed by textbook writers. Besides, intelligent education also integrates artificial intelligence and socialized learning to expand opportunities for collaborative learning. Intelligent learning tools, based on the surrounding environment of learners, build a learning community in the same region or learning context, enhancing the interaction and communication among learners and meeting the needs of cooperative learning of learners [5].

In addition, intelligent learning ensures the sustainability of learning. In the era of big data, traditional teaching elements (textbooks, contents, methods, etc.) are replaced by new elements (computers, Internet, information resources, information technology methods, etc.). The disadvantages of ecological factors such as teaching time, places, materials and teachers in traditional teaching contexts are greatly weakened. In the large database, learners are faced with huge selection opportunities and the learning process will not likely be interrupted by various objective restrictions. At the same time, intelligent tools can identify learners' learning characteristics, recommend suitable learning community for them, and make timely feedback. In traditional education, the syllabus and teaching plan limit the depth and breadth of learning. Paper materials are limited in content and cannot interact directly with learners. When offline textbooks are connected with online courses, the class is extended and expanded, making continuous and lifelong learning possible.

3. Constructing a New Environment for College English Teaching

The penetration of the network-based information technology into higher education brings challenges to the foreign language teaching paradigm. The transmission of teaching information, the effective combination of teaching content and teaching activities, and the unification of the teaching process and pattern design are all facing significant changes. The stable teaching ecology in traditional education has been seriously impacted by information technology and the structure is out of balance. In the process of integration, all factors in traditional educational ecosystem are

unbalanced in their structure and function. Under the background of intelligent education, how to straighten out the relationship between education system and the external information environment, rationally allocate and utilize educational resources, optimize the educational structure, realize the virtuous circle of education, and promote the ecological development of education has become an urgent problem to be solved. The author suggests that the following respects should be given consideration:

3.1. Optimize the teaching environment and realize integrated development of physical and virtual classroom

To reconstruct college English teaching environment, information must be taken into the context. Network platform works as a supplement to classroom teaching. By abiding by the development rules of education and language learning, information technology and foreign language teaching, physical and virtual classroom should be integrated scientifically and rationally. The improved English learning environment is supposed to enhance the personalized, characterized, comprehensive, innovative and sustainable development of English learners in the information age. The optimization of teaching environment mainly involves technology optimization and resource optimization.

Continuous optimization of technology makes language learning keep pace with the development of the information age. Hardware technical equipment such as mobile communication technology, network technology and the learning analysis technology is the necessary basis of intelligent teaching. In a broad sense, technology involves the large capacity of the learning platform, friendly user experience, a large number of learning resources, personalization of integration, and pertinence and high efficiency of learning service. Education institutions should increase investment, introduce intelligent learning tools, establish a seamless network support system, achieve effective integration between information technology and college English teaching, make online and offline education complement each other, the real and virtual switch freely, so as to establish a service-oriented intelligent teaching environment.

Without appropriate allocation and arrangement, the variety and large capacity of traditional digital resources are not favorable to the cultivation of learners' wisdom [6]. Educational administrators have the obligation to allocate and optimize educational resources scientifically according to the guidance to college English teaching objectives in the information technology environment, so as to build an English intelligent learning system that is in line with the target learning group. Based on the huge database, education resources are expected to be refined and allocated in a favorable way. To be more specific, it involves scientific arrangement of teaching content, adoption of scientific teaching method, friendliness of collaboration platform, and teachers' monitor and assessment of students' learning process.

3.2. Update teaching philosophy and realize the sustainable development of teachers

Intelligent learning environment realizes organic integration of physical, virtual and social education environment, obtains and analyzes relevant learning data with the help of data mining and learning analysis technology, and makes intelligent decisions and multiple evaluations of the learning process [7]. At the same time, it puts forward higher requirement for teachers: teachers need to change from designers and organizers of knowledge to educators who guide wisdom--which not only requires teachers to update their teaching philosophy, but also needs them to improve their ability of teaching and information technology application [8]. Learners' maximum choice in the selection of learning content and learning mode during the learning process is bound to challenge teachers' dominance in the traditional classroom, requiring teachers to become the guide, monitor and evaluator of students' learning. In order to adapt to big data-based teaching, teachers are supposed to improve themselves from the following aspects: application of teaching technology and methods, interpretation of teaching content, construction of resources, organization and asynchronous management of teaching procedures, etc [9].

With the help of big data technology and related software, teachers are expected to deeply integrate advanced intelligent technology with their professional knowledge, take advantage of various resources, develop online courses, scientifically decompose the target teaching content, and

push it to students through network platform or mobile terminal. At the same time, it is necessary to summarize students' problems in the learning process with strong screening ability of big data, conduct online examination or feedback, and bring problems to the classroom for further explanation. In conclusion, educators are expected to change their teaching philosophy, keep learning, reflecting and adapting in the teaching process, so that they can keep up with the fast pace of college English reform and realize personal sustainable development.

3.3. Improve campus service and management to realize “service for learning”

The development and application level of education informatization is increasingly becoming one of the core competitiveness of universities in China. Moving from digital campus to intelligent campus has become the trend of higher education informatization development in China [10]. The construction of the college English intelligent teaching environment is inseparable from the social environment of the intelligent campus. The principle of the ecology of education shows that each ecological factor in an ecosystem needs an appropriate range and interval in its development. To ensure the healthy and benign development of college English teaching ecology and build a healthy and efficient teaching environment, education administrators should actively upgrade the campus intelligent technology, establish a seamless network support system, enlarge the influence of college English, providing a good teaching environment for education practitioners and a friendly learning, communication, and collaboration platform for learners. Only in this way can the top-down “student-centered” and “service for learning” be truly realized.

4. Conclusion

Intelligent education provides a new direction for college English reform. Under this background, integrated, connected, open, dynamic and balanced ecological principles should be insisted on. The ecological factors in college English education should be kept in a cooperative, coordinate and balanced state, thus a dynamic, harmonious and balanced new English teaching environment will be achieved.

Acknowledgment

In this paper, the research was sponsored by the Special Fund for the Construction of High-level Teachers of Beijing Institute of Fashion Technology (Project No. BIFTBJ201802).

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