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Case Study on Intelligent Classroom Teaching Based on Internet + Education

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ABSTRACT. *With the development of technology, intelligent classroom emerges as the times require. It is the result of the combination of emerging technology and traditional teaching, and has become the forefront of current education research content. With the help of network and big data analysis, this paper applies the smart classroom to English teaching, achieves the comprehensive analysis of English curriculum, expands students' learning time and space, greatly stimulates students' learning enthusiasm, changes the boring teaching in traditional classroom, and creates an intelligent learning atmosphere.*

KEYWORDS: *Blended Learning Theory; Intelligent Classroom; Internet + Education*

1. Introduction

Contemporary college students grow up in the information environment. The information environment changes the cognitive structure of their brain. To be exact, their way of thinking has undergone a qualitative change. Information technology has a great impact on their cognitive style, learning attitude, learning habits and so on. They like to receive information from multiple sources, multitask, process information at the same time, present information in various forms, and enter into hyperlink resources at any time so as to learn interestingly. However, due to the age difference, teachers and parents prefer to obtain information they can control from effective ways, and they tend to choose unidirectional and centralized tasks. They like text information, which tends to present information in a linear and sequential way. This shows that the biggest problem faced in current education is that teachers and students, parents and children do not understand each other, so it is difficult to optimize the education effect. Therefore, as the educators of contemporary college students, it is urgent to change the concept of education and improve information.

In recent years, with the advent of the Internet era, the Internet + as a new vocabulary, has brought great opportunities to education and has been deeply integrated with the education industry, making a new situation. From the macro

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level, the Internet + education further breaks the limitation of time and space, and thus students can achieve ubiquitous learning at any time. The emergence of new technologies such as big data and learning analysis makes students' learning more personalized, adaptive and intelligent. Traditional teaching mode has also been greatly affected by the Internet + education mode and many scholars and schools are springing up to explore new teaching models. The more diverse the forms of education are and the more flexible the system will inject fresh energy into teaching, improving students' interest in learning and learning effects. From the micro level, the Internet + has made significant changes in terms of curriculum, teaching and learning methods, and evaluation methods in school teaching. The reason why the teaching mode needs to be changed lies in the qualitative change of college students. The traditional teaching mode attaches more importance to the teacher's dominant position, neglecting the students' subjectivity, hindering the development of students' personality and the cultivation of innovative thinking, so it is difficult to meet the needs of the society. With the development of information technology and the change of learning environment, people call for new teaching mode more and more strongly.

With the development of information technology, smart phones have become the personal belongings of college students and an indispensable part of their lives. In the past, it was not recognized by education experts and excluded from classroom teaching. Because smart phones not only bring convenience to students, but also seriously affect the university classroom. Some university teachers even object to installing wireless networks in the classroom and forbidding students to play mobile phones. Nowadays, it is common to see smartphone addicts in university classroom. However, it is undeniable that students can also use mobile phones to search for learning materials and use some educational app to study, record and take photos. Smart phones bring great challenges to the traditional classroom, but also bring new ideas to the traditional classroom. In the current classroom, more and more teachers slowly accept that students use mobile phones to obtain information in the classroom, and even encourage students to use mobile phones to receive information, do exercises, participate in voting and etc. Reasonable and efficient use of mobile phones can achieve the effect of learning while teaching. The functions of smart phones are more and more powerful, the access to the network is more and more convenient, and the learning resources are more and more abundant. It is only a matter of time for mobile phones to enter the classroom and integrate with them. What teachers need to do is to actively welcome, not passively accept.

2. Theoretical Basis of This Paper

2.1 Blended Learning Theory

At the end of 1990s, e-learning (online learning) developed rapidly in the field of education and promoted educational reform. Compared with the traditional classroom, e-learning is more convenient and efficient without time and space constraints. On the basis of these two learning methods, blended learning came into being. Blended learning combines the advantages of traditional learning and network learning, which

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not only plays the leading role of teachers, but also reflects the main role of students. It emphasizes the leading role of teachers and the masters of students. It is carried out in the form of the organic combination of face-to-face teaching and online learning between teachers and students. Based on the literature at home and abroad, blended learning theory has the following characteristics: 1. Feature of the times. Blended learning theory has obvious characteristics of the times. It appears with the development of information technology and is put forward on the basis of people's reflection on network learning. At present, with the continuous development of science and technology and the continuous innovation of information technology, blended learning theory will continue to get improved and developed. 2. Feature of comprehensiveness. It is integrated with teaching and learning aspects, such as learning methods, learning environment, learning tools and other elements. At the same time, blended learning theory has its diversity, including behaviorism learning theory, constructivism learning theory, humanism theory, cognitive learning theory and so on. 3. Feature of applicability. In basic education and higher education, many scholars apply blended learning to teaching reform, pointing out that blended learning is the most efficient learning method compared with single classroom teaching or online learning. A large number of research results also prove the advantages of blended learning, and thus, the blended learning theory indeed improves the learning effect and satisfaction of learners. 4. Feature of the development. First, its connotation will continue to enrich and improve with the passage of time, the blended learning mode will be more and more diversified, and the courses involved will be more and more extensive. Second, the application of blended learning theory will continue to penetrate into all kinds of people, schools, enterprises and so on. The development of blended learning theory promotes the internationalization and globalization of education to a certain extent.

2.2 Internet + education

There has been no uniform definition of the concept of Internet + education. Different scholars have different views. Wu Yuan believes that Internet + education means Internet technology is deeply involved in the field of education. Qin Hong thinks that the definition of Internet + education is a new form of education, reflecting the essence of Internet + education. Internet + education is not just the application of Internet and mobile Internet technology in education, nor is it on the basis of educational and learning platform with Internet technology. It is the deep integration of education, Internet and mobile Internet. Wu Nanzhong thinks that Internet + education is to infuse education into Internet genes through information network technology, including the comprehensive reforms: talents training objectives, talent training process and personnel training evaluation. To sum up, the researcher made a conclusion of the connotation of Internet + education as follows: the application of Internet technology has changed traditional education constantly, and at the same time, education centered as a core, the Internet gets reformed around it to form a new system structure. The main characteristics of Internet + education include cross-border connection, innovation drive, optimization of relationship, openness and ecological characters.

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2.3 Intelligent Classroom

At present, there is no certain definition about the concept of smart classroom. Many domestic scholars have different understandings from different angles. Based on the perspective of intelligent education, Tang Yiwei and others defined the smart classroom as a new classroom with the support of information technology, by changing teaching methods and integrating technology into classroom teaching, to build a personalized, intelligent and digital classroom learning environment, so as to effectively promote the cultivation of intelligent ability. Pang Jingwen believes that in the new technology environment, the smart classroom should use the innovative teaching mode to build a new relaxed, pleasant, personalized and digital classroom with the goal of cultivating students' wisdom ability. And the smart classroom is positioned in the following points: smart classroom is the basis for the occurrence of smart education and smart learning, aiming to cultivate students' personalized learning and creative learning ability, so that students can carry out intelligent learning. Sun Shuhui pointed out that smart classroom is based on the constructivism learning theory, using the Internet + thinking mode and big data, cloud computing, Internet of things and other new generation of information technology to build up intelligent, efficient classroom to support the whole process of pre-class, in-class and after-class. At present, many domestic enterprises and schools have jointly released the relevant products or applications of smart classroom. The application of smart classroom teaching mode in this paper emphasizes the combination of mobile terminal and classroom, and establishes a smart classroom teaching mode based on mobile terminal to provide teachers and students with an efficient teaching and learning mode.

3. The Design of the Intelligent Classroom Teaching Mode

As can be seen from figure A, the ultimate goal of the smart classroom teaching mode is to promote the forming of students' intelligence. The realization of the final goal depends on each specific goal, which can be divided into three-dimensional goals according to different teaching contents. The forming of students' intelligence needs the careful cultivation and correct guidance from educators step by step. The realistic conditions in figure 1 are external support conditions, including teaching tools (intelligent mobile terminal), intelligent technology (intelligent learning technology), teaching environment (intelligent learning environment) and teaching resources (intelligent learning resources). In addition, it also includes the main body of teaching and learning, that is, teachers and students. As teachers, they should change their educational concepts in time, improve their information literacy, and highlight the dominant position of students. The interaction between teachers and students and their relationship are mainly reflected in the wisdom teaching activities, which are not pointed out in figure 1; the intelligent classroom teaching activities are divided into three sections, namely, before-class, in-class and after-class. Each stage has its basic steps. These teaching steps are not immutable. Teachers can make corresponding adjustments according to the actual situation to meet the teaching needs; finally, that is intelligent teaching evaluation, including online evaluation and

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offline evaluation, which runs through the three links of pre-class, in-class and after-class, and the evaluation data is also the learning data that cannot be collected in traditional classroom. Offline evaluation mainly refers to students' learning, including classroom status, learning outcomes and self-evaluation. In addition, this figure does not point out the theoretical basis of the smart classroom teaching mode, because the theoretical basis is included in the smart classroom teaching mode, which always guides the implementation of teaching objectives, teaching activities and teaching evaluation.

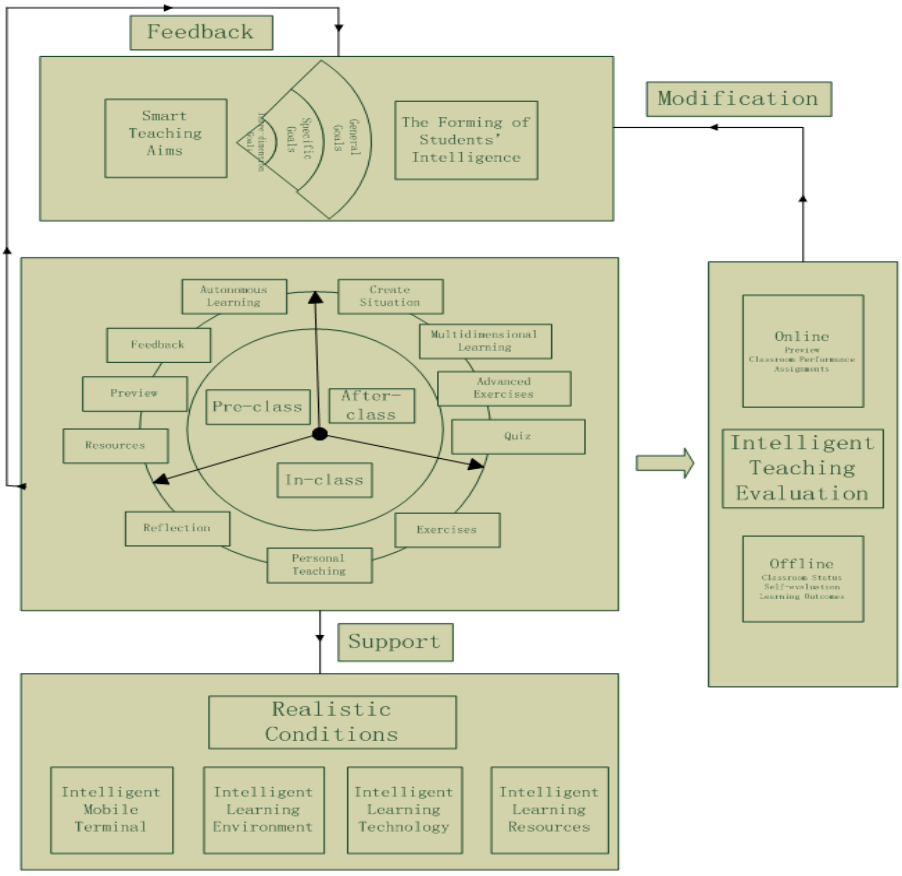

Figure 1. The Framework of Smart Classroom Teaching

4. The Application of Internet + education to Intelligent Classroom Teaching

Before carrying out the smart classroom teaching mode, author will help to introduce the functions of the platform to the English teachers of Shandong Vocational College of Industry, how to use and the process of course implementation,

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and introduce the operation of the platform to the students, help them to be familiar with the new learning methods, understand the learning process and evaluation methods.

In the pre-class preview stage, the teacher's main task is to make preview materials. To use rain class, teachers only need to install rain class plug-ins on PC, prepare preview materials, release courseware on mobile phone, and then present them to students in real time through mobile phone rain classroom platform, and set class and deadline. Students will receive new messages prompt in Wechat, preview materials include micro video, preview exercises and questions voting feedback made by teachers.

Before class, the students watch the teaching video according to the preview task, get a preliminary understanding of the learning content, preview before class, and complete the preview exercises. After the preview, students will see their current ranking, total time and the number of correct answers. For the problems encountered in the preview process, students can report their ideas to the teacher, and the teacher will receive the feedback information from the students, and adjust the class content according to the students' feedback. Because rain class is a teaching tool based on Wechat public platform, teachers can set up class discussion group through Wechat, and students can ask teachers for advice on problems encountered in the process of preview at any time. For some small problems that can be solved online, teachers can answer questions and solve doubts, so as to improve the communication between teachers and students.

Classroom interaction is to change the passive and boring classroom atmosphere and increase the interaction between teachers and students. The online interaction based on rain classroom public platform mainly includes barrage function, quiz in class and voting. Teachers can set corresponding interactive links through teaching content to adjust learning atmosphere.

Exercise after class is an indispensable link to test and consolidate the effect of learning. After class learning activities based on rain classroom platform are mainly online learning. Teachers make after-school exercises through PC terminal and upload them to the platform. Then they release exercises through Wechat platform of rain classroom, and select deadline, test time, answer release time and class. After the release, students will receive real-time homework reminders, and click to do the problem-solving. Students need to complete the after-class exercises before the deadline. After the completion, they will have feedback on the details of answering questions, so that they can see their correct rate, score and total time. Through the data recorded by the platform, the teacher can understand the overall situation of the students, including the completion of homework, scores and answers.

5. Conclusion

Smart classroom is a hot spot in the current education informatization research. It applies the theory to classroom teaching and focuses on the activities of teachers and students. With the deep integration of the Internet and education, the Internet of

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things, cloud computing, big data, mobile Internet and other new generation of information technology are constantly applied to school education and teaching, aiming to create an intelligent and efficient classroom and promote the intelligent development of students.

According to the intelligent classroom teaching mode, taking the vocational college students of Shandong Vocational College of Industry as the research object, the practice is carried out through the rain classroom intelligent teaching platform. Through the application of the model, it is found that the smart classroom teaching mode can solve some problems existing between the mobile phone and classroom, turn the disadvantages into advantages to a certain extent, improve the learning effect and learning satisfaction of college students, and meet the learning needs of contemporary college students.

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