

# Research on the intelligent classroom teaching mode in Colleges and Universities under the mobile Internet

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**ABSTRACT.** *in the actual college classroom, the phenomenon of students' low attention, low attendance, lack of interest in learning, old teaching methods, and teachers' lax supervision of students occur frequently, which reduces the effectiveness of college teaching. This paper analyzes the problems existing in the teaching of intelligence classroom in Universities under the background of information integration, big data and Internet plus education. At the same time, it also expounds the way of constructing smart classroom based on "rain classroom" technology, aiming at improving the effectiveness of teaching in universities.*

**KEYWORDS:** *Mobile Internet; college; smart classroom; teaching mode*

## 1. Introduction

Following the new generation of artificial intelligence development plan, the educational informatization 2.0 action plan further promotes the deep integration process of modern information technology and education. In this context, it has derived new education models such as smart campus, smart classroom and smart classroom. Among them, smart classroom is a solution from theory to practice, from ABSTRACT.to concrete, so it has also become the focus of educational informatization research in China. Some scholars think that smart classroom is the inevitable outcome of the deep integration of modern information technology and education, and it is the inevitable choice of educational informatization. Some scholars think that smart education can only work in theory, can not be widely used, and can not fundamentally solve the problems in the development of education in China. From two perspectives, the issues of concern include: how to implement the smart classroom into the teaching process of different disciplines, how to determine the applicable boundaries of the smart classroom, how to adjust the smart classroom to meet the phased and regional needs of education development.

## 2. The problems of developing intelligent classroom in College

### 2.1 Low popularity of smart classroom

Although the intelligent classroom teaching mode has been promoted for a long time, the process is slow. The reasons are as follows:

1) Schools and teachers do not have a deep understanding of smart classroom. Many educators' understanding of smart classroom still stays in its concept, few people can study the construction and design of smart classroom in depth.

2) Lack of promotion funds. The limitation of education funds only allows some colleges and universities to build smart classroom in professional courses, and realize smart classroom. It is difficult to popularize smart teaching in public classes such as physical education.

3) The idea of teachers is old. Many teachers think that smart classroom will distract students' attention and occupy their main position in teaching, so they do not actively construct smart classroom.

### 2.2 Lack of sharing and expansion of educational information resources in smart classroom

For college teaching, the development and utilization of educational information resources is the premise of the effective development of intelligent teaching mode. Teachers strengthen students' understanding of learning

content related concepts through information resources, enrich students' knowledge reserve, and strengthen the connection between learning and society, life, etc. in addition, the sharing of educational information resources is a strong support for the school and teachers and students to carry out information education. Theoretically speaking, the smart classroom can use the Internet and media technology to realize the integration of educational information resources. However, in the actual process of the integration of smart classroom resources, there are some problems, such as the low degree of sharing educational information resources, the low quality of educational information resources, and the poor timeliness. The reasons include three aspects:

1) Many colleges and universities do not fully cover the resource sharing system, and it is difficult to break through the traditional barriers of region and time in the development and utilization of educational information resources.

2) The current smart classroom platforms are mixed. In order to pursue interests, some platforms do not conduct professional and practical audit on the curriculum resources on the platform, resulting in the lack of scientific curriculum resources.

3) The timeliness of the resources will be reduced if the network teaching resources are not updated in time, lack of timeliness and life.

### ***2.3 The effectiveness of smart classroom is not strong***

From the actual situation of smart classroom, some teachers have basic ability of information technology application, but still can't deeply integrate modern information technology and teaching. The specific performance has the following three aspects.

#### **(1) Rigid teaching concept**

Information technology is only an auxiliary tool of education and teaching, and the teaching subject of college curriculum is still teachers. Some teachers have constructed smart classroom, but they still adopt the traditional teaching method of "teachers speak, students listen", which weakens the function of smart classroom and modern education technology.

#### **(2) Teachers' innovation ability is insufficient**

Innovation and individuation are the main principles of building smart classroom. Different subjects, teaching contents and teaching objectives need to match different teaching methods. Some teachers are easy to "one size fits all", after understanding an information-based teaching technology, apply it to all their teaching stages. This kind of intelligent classroom is low in information level and has no obvious effect.

## **3. Smart classroom teaching mode in Colleges and Universities under the background of mobile Internet**

### ***3.1 Study oriented transfer***

Compared with the traditional teaching mode, the intelligent classroom teaching mode highlights the main position of students. Therefore, teachers need to change the traditional "knowledge infusion" teaching mode, fully guide students to study and explore independently, and cultivate students' habit of independent learning. Teachers need to grasp the connotation of smart classroom deeply and regard students as developing and independent individuals. Therefore, before the formal teaching, teachers can push the teaching resources with MOOC video, exercises, voice and so on to students' mobile phones, so that students can understand the teaching content. Teachers only need to answer the questions raised by students when teaching, which can effectively improve the teaching efficiency.

### ***3.2 Interaction between teachers and students***

One of the characteristics of smart classroom is interactivity, including the interaction between teachers and students, the interaction between students and classroom environment, and the interaction between students and learning content. As the guide of students' learning, teachers need to guide students to interact effectively in the teaching process. In the preparation stage, students use mobile phone to scan code to enter the course. At this time, the teacher's mobile phone becomes the "remote control" for PPT playing and other operations. In the formal teaching, teachers use mobile Internet technology to carry out real-time questions answering, bullet screen interaction, random roll call, classroom red envelope and other activities, to strengthen the interaction

with students.

### ***3.3 Resource sharing***

Smart classroom can use mobile Internet technology to integrate resources of network and other schools. First of all, teachers need to be based on the students in our school, actively participate in teaching research activities, and devote themselves to developing excellent courses that meet the actual situation of students in our school. At the same time, teachers need to use the big data analysis function of the Internet search engine to input keywords such as “smart classroom”, “College”, “teaching” in the search column, find teaching resources with high click rate and strong authority, and supplement and modify the teaching content to optimize the curriculum resources.

## **4. Smart classroom teaching practice in Colleges and Universities under the background of mobile Internet**

### ***4.1 Find out before class***

Finding out the bottom before class can help teachers understand the students' knowledge and determine the teaching content based on it. Based on the relevant technology of rain class, teachers can carry out “brainstorming”, “intelligence testing” and other activities to fully mobilize the enthusiasm of students to participate. After understanding the basic situation of students, teachers determine the teaching focus according to the different performance of students, and choose the appropriate teaching methods. For example, the teaching method of “mind map” can be used in theoretical courses, the KEYWORDS of teaching content can be displayed by PPT, and the students can be guided to read the teaching materials independently to supplement and complete the branches in mind map; for practical courses, the group cooperation teaching method can be used to reduce the learning difficulty of students and improve the technology.

### ***4.2 Refining in class***

The key points of refinement in the course are the accuracy of teaching objectives, the difference of learning tasks and the refinement of teaching methods. After a thorough investigation before class, teachers have understood the differences in students' learning, so we can use the layered teaching method to divide students into different levels according to the level of sports knowledge. Teachers can use “nail” technology to build online education platform, “nail” software is set up with “sub sector management” module, teachers can place students in different “departments”, arrange differentiated learning tasks, and then realize refined and differentiated teaching.

### ***4.3 After class feedback***

After class feedback can not only integrate educational information, but also optimize teaching methods. Teachers push teaching materials and after-school tests to students, guide students to consolidate knowledge, and can communicate with teachers on the platform, feedback their learning situation and opinions on teachers and teaching. Teachers improve teaching methods and processes on this basis.

## **5. Conclusion**

At present, there are some problems in the construction of smart classroom in Colleges and universities, such as low popularization of smart classroom, lack of sharing and expansion of educational information resources, and weak effectiveness. Therefore, college teachers need to deeply grasp the connotation of smart classroom, change the educational concept, attach importance to students' subjectivity, actively interact with students, and tap curriculum resources through the network. At the same time, in teaching practice, we should use various teaching methods flexibly, stimulate students' interest in learning, attach importance to students' opinions, and improve our own teaching methods to improve teaching quality.

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