Study for Coexistence and Development of Mobile Internet Technology with Traditional Teaching Mode

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Abstract. With the development of mobile internet technology, mobile internet equipment represented as smart phones has presented every cases in every colleges and universities, which demonstrates a great challenge to traditional teaching model focusing on teaching knowledge in classroom. In order to deal with sudden emergence of mobile internet technology with easy to use and accessibly, it is necessary for advanced educators working in university and colleges to face with the requirement to address the impact of mobile internet equipment on students in the teaching process. Based on the property of mobile Internet technology and student-centered teaching idea, in this paper we will discuss the problems how to face the mobile Internet technology entering students to learn knowledge process in the new era. Meanwhile, we also explore the methods for coexistence and development of mobile Internet technology with traditional teaching mode.

Introduction

In recent years, a new concept has emerged in the major media of the world, "Internet Plus". There are different interpretations and understandings for this concept from different field of society. Its essence is to extend or expand its own attributes on the basis of different professional fields with the help of mobile internet technology. For our educators, especially in the field of advanced education, the application of mobile Internet technology is a great epoch-making significance. It is not only a simple addition based on the traditional field, but also a subversive innovation, followed by a great change after the invasion of mobile Internet technology. Mobile Internet is to subdivide the original field into different parts, and then take Internet technology as the center, reconstruct its own unique attributes and form a new system or structure. Therefore, based on these characteristics, mobile internet technology is to subdivide and reconstruct the subdivision of traditional or existing field.[1]

Definition of Mobile Internet Technology

When we talk about mobile internet technology, we have to talk about network technology and information technology.

Mobile Internet Technology and Network Technology Teaching

In the concept of advanced education, we have a profound understanding of network teaching technology. Broadly speaking, network teaching technology includes two parts: hardware facilities supporting network teaching and software system supporting network teaching. From a narrow view, network teaching technology refers to a system that is based on Internet technology and provides comprehensive support services for network teaching. In general, a whole network for teaching support platform requires three systems of network course: development system, teaching support system and teaching management system. These three systems respectively provide the functions of network curriculum development, network teaching implementation and network teaching
These are the components of the traditional network teaching technology. Although the network teaching mode has expanded and updated the traditional classroom teaching mode, and has achieved some great effects in some professional fields. It also provides rich contents and foundations for the mobile internet teaching mode, but the network teaching mode has not subversively innovated and emphasized the traditional teaching mode. Constructions, which merely supplement the resources and materials of traditional teaching modes, are the extension and expansion of classroom teaching mode. It do not form serious conflicts and challenges with traditional teaching mode.

**Mobile Internet Technology and Information Technology Teaching**

There are also significant differences between the application of mobile Internet technology and information technology in the teaching process. In current teaching process, traditional educators have different attitudes towards the integration of mobile Internet technology and information technology in curriculum. Educators constantly emphasize the information products of classroom teaching and introduce information technology with its products into the traditional teaching process. However, they prefer to exclude the mobile Internet technology in the traditional teaching process studying in classroom. It is emphasized that students should master a whole system of subject and professional knowledge, but neglected that the way of learning knowledge has changed dramatically in the era of mobile Internet technology.

**The Current Situation of Teaching in the Era of Mobile Internet Technology**

At present, more colleges and universities are building the digital campuses. It become the main way for most students to learn and work with the aid of Internet technology. Especially with the progress and development of mobile Internet technology, students learn new knowledge from the Internet, which become more popular than ever. Meanwhile, there are more micro-lessons or micro-video materials on the network, such as mooc. These network resources can be easily to be viewed and synchronized through mobile internet technology. In future, as colleges and universities move from digital campus to intelligent campus, the application trend of mobile internet technology in students will become more and more frequent in learning process. Faced with the unexpected impact of mobile Internet technology on all aspects of social life, the traditional teaching mode working in classroom as the main way is also facing the invasion and impact of mobile Internet technology. Therefore, the content of knowledge taught in the teaching process can no longer be confined to the scope of textbooks and syllabus, but continue to ignore the phenomenon that students can easily access information and knowledge through mobile Internet technology.

**The Impact of Smart Phones on Traditional Teaching**

In the era of mobile internet technology, the representative symbol should be a smart phone. The emergence and popularity of smart phones are posing the most severe challenge to the classroom teaching activities of the traditional teaching mode. Smartphones currently become an inseparable part of all adults, as if they were one part of the human body. In addition, with the decrease of the cost of smartphones and the progress of science and technology, smartphones are also rapidly popularized among college students. In particular, the emergence of large-screen smartphones has made the process hot. Meanwhile, the status of notebook computers in the network and information tendency is declining rapidly. It can be seen that the popularity and application of smart phones with mobile internet technology makes notebook computers less important. Smartphones have more advantages than other portable electronic devices such as iPad, laptop and so on. They are characterized by instant interaction and portability, which bring convenience, rapidity and practical value that can hardly be rejected. However, unlike the rapid popularity of smart phones among college students, most colleges and universities in China still prohibit students from bringing mobile phones into the classroom. We
find that although many colleges have realized wireless network accessibly, managers and administrators working in these colleges and universities prefer to close the network accessibility rather than let students use mobile phones to access the network. Even in some universities, there are many teachers who oppose the installation of WIFI in the classroom, which allows mobile phones to access the Internet. Nevertheless, these restrictions still can not prevent smartphones from entering the traditional classroom, which has become the biggest challenge of traditional teaching mode.[3] In essential, the conflict between smart phones and traditional classroom is essentially the challenge of mobile Internet technology to traditional teaching mode.

The Impact of Wireless Technology on Traditional Teaching

With the rapid popularization of smart phones, the development of network technology has entered a more rapid trend. A new generation of network access technology, Li-Fi, is being developed. It is different from the traditional WIFI that uses radio to transmit data. By using light wave to transmit data, Li-Fi technology can predict that in the near future, as long as there are lights, wireless network access can be carried out.[4] In future, as advanced education workers, it will be very difficult for us to prohibit students from using smartphones for online activities in the classroom. Therefore, we think that it is only a matter of time for smartphones to enter classroom teaching activities in schools. Facing the challenge of the rapid development of mobile internet technology, instead of passively letting it enter the traditional education field, we should fully understand the characteristics of mobile internet technology; actively prepare for reconstructing and innovating the traditional education teaching mode; gradually absorb and digest the convenient and abundant network resources brought by mobile internet technology, explore and study mobile internet training technology and transmission. The coexistence and development of unified teaching mode.

Problems in Teaching in the Era of Mobile Internet

In the era of mobile internet technology, we first need to fully understand the two problems we are facing.

Changes in Knowledge Carriers and Organizations in the Age of Mobile Internet

The problem of knowledge fragmentation brought by Internet technology becoming the main carrier of information. Before the network age, the main carrier of knowledge is paper material. With the advent of the network age, the main carrier of knowledge gradually transforms into the network digital media. Meanwhile, the way of human acquiring knowledge is also transferred from various printed matter to various network resources and materials. After knowledge was transferred from books and periodicals to network, the structure of knowledge changed obviously. Traditional books are assembled according to linear structure, and their media form is text-based. In the era of books as the main carrier, their knowledge system is a linear, static and hierarchical structure. Knowledge system is usually organized according to the classification of disciplines. However, the basic system of the network is a network, dynamic, non-hierarchical structure, which can be organized in any way. Therefore, knowledge on the Internet is quite different from that on paper media in structure and expression. Because of the distinct characteristics of network and paper media, great changes will take place when knowledge is transferred from books to network. The subject knowledge system with linear structure as its basic feature will no longer become the mainstream form of knowledge dissemination, and the traditional knowledge structure of volumes, periods, pages, chapters, sections and points will also decline. On the contrary, network information with network non-hierarchical structure can form many forms based on different requirements. Every web page or video material can be regarded as a fragment of information and knowledge. Using these fragmented knowledge, the whole knowledge system can be reconstructed based on individual requirements.
The Influence of Mobile Internet Era on Learning Habits of Students

The attention time limit of students in the learning process. According to the law of human learning, under the traditional teaching mode of 50 minutes, attention of human can not always be in a state of high concentration in the process of classroom teaching, which usually presents a curve of attenuation. As shown in Fig. 1, attention of students is highly concentrated at the beginning of class, then shows a downward trend with the passage of class time. At the end of class, attention of students begins to improve again. Therefore, as advanced education workers, we need to consider how to design and adjust the teaching methods and methods of curriculum content in the traditional teaching mode based on student-centered character.

Figure 1. Distribution curve of attention of students and learning time during classroom learning. At the beginning of the class, the attention is focused, then drops rapidly, and finally improves only at the end of the class.

To explore the coexistence and development of mobile internet technology and traditional teaching mode, to cope with the impact and challenge of mobile internet technology on traditional teaching mode, and to solve the problem of unsustainable and high concentration of students learning attention, we combine the characteristics of knowledge fragmentation of mobile internet technology and the relationship between attention of students and learning time to study the use of paragraph-based teaching method. As shown in Figure 2, paragraph teaching divides the time of classroom teaching into different segments according to the content of knowledge or the way of teaching. In order to motivate students to improve their attention, teachers teach knowledge at intervals for students to think or discuss. During the time of classroom teaching activities, we study how to use the advantages of mobile Internet technology, even interactive, convenient and fast, to introduce network knowledge and information into classroom activities, adhere to novel principles to improve learning initiative and enthusiasm, and achieve the goal of improving learning attention. The teaching content should be freshed, rather than propaganda according to the textbook, in order to teach the process of learning knowledge experience, unique insights. And we can open the web page to explain the knowledge, or directly use of teaching resources on the Internet to assist teaching. Knowledge learning process is no longer cramming passive learning, but will add micro-videos, cartoon animation, question discussion, case analysis and other means in the learning process, encouraging students to form their own understanding and views on knowledge with the aid of searching supplementary materials through the network for specific problems in the learning process, so that students always maintain a great attention.

Figure 2. The attention curve of the students in the paragraph teaching process. Using mobile Internet technology, classroom teaching time is divided into different periods according to knowledge content or teaching methods. Some of the time is given to students to study independently or interactively, so as to improve students sense of participation in classroom teaching and promote their attention.
Application of Mobile Internet Technology in Teaching

How to apply mobile Internet technology to specific educational and teaching processes? We believe that there are six applications as follows:

(1) Reading. In the process of teaching, we can make mobile Internet technology to help students expand their reading range, watch knowledge-related video materials such as micro-lessons and micro-videos online, and also read digital books such as electronic textbooks. Besides classroom teaching activities, this fragmented learning can also effectively use fragmented time such as queuing and waiting for cars;

(2) Recording. In the classroom, students can use smart phones to take pictures of teaching content, record important content on the blackboard or computer screen conveniently and quickly, also record education and teaching activities and learning process instantly, and also record inspiration and thinking instantly by using marking function;

(3) Communication. Smart phones can instantly use the Internet to send and receive notifications, communicate or discuss via Wechat or QQ, or even make timely calls through video, for short-term extracurricular guidance. In addition, it can also communicate with students in depth and non-real-time through e-mail;

(4) Homework. Smart phones can use mobile internet technology to implement roll call, voting, assignment and homework submission activities in the classroom through two-dimensional code function;

(5) APP application. There are many app applications that can be used for learning, such as time management, vocabulary memorization, programming, motion, star recognition, etc.

(6) Search. By using the search function of mobile Internet technology, we can query the information we need to know at any time and anywhere, and improve the efficiency of learning, such as the retrieval of names and places, the interpretation of nouns, the translation of foreign languages and so on.

In the current trend of rapid development of mobile Internet technology, we believe that in the near future, more teachers will be willing to take the original lecture time for students to carry out exchanges and discussions, will also slowly accept students to access to information and knowledge through mobile phones and Internet, and even willing to let students share in the classroom what they have learned from the mobile internet. At present, some far-sighted teachers will encourage students to use mobile phones to watch microclasses, find information, do homework, call names in class, participate in voting, exchange documents, and conduct social exchanges, and so on.

Summary

In the era of mobile internet, using the characteristics of mobile Internet technology to supplement and improve traditional teaching mode has a very broad application prospect, which will lead to earth-shaking changes in traditional teaching mode. As University teachers, we will explore the methods and modes of peaceful coexistence with mobile Internet technology in traditional education and teaching activities, give students appropriate methods and concepts, teach students to use mobile Internet technology in classroom timely and reasonably - find information, do exercises, watch micro-lesson videos, exchange information, send micro-messages, record and video, live classroom teaching, and so on. In the coming era of mobile Internet education, the use of mobile Internet technology to achieve mutual benefit in teaching, Student-centered mobile Internet technology teaching mode will update the traditional education teaching mode and explore the coexistence and development of mobile Internet technology and traditional teaching mode will become a new trend of school curriculum reform.

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