

Mobile Learning and Evaluation in College Teaching

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Abstract. For traditional classroom teaching, it is difficult to adapt to a large class. The emerges of smart phones and the improvement of mobile learning systems bring about great changes in college teaching in large classes, such as students' desires to communicate, a large amount of useful information to assist teaching, fast and convenient materials transmission, and no time and space restrictions to teachers' teaching and students' learning. When students have mobile learning as their assistant, their interests in independent learning become increasingly intense and their attention becomes more concentrated in class, forming a virtuous circle.

1. Introduction

Smart phones subversively changed the traditional classroom. It promotes the development of college teaching and involves in students' classroom learning and their whole process of independent learning. It has changed teachers' traditional way of teaching and students' traditional learning mode. It makes the communication between teachers and students and that between students and students faster and easier, which enables students' regular study more open. Various mobile learning systems enter into college classes, such as Rain Classroom, Cloud Classroom, etc. A growing number of mobile learning systems are developed in recent years, which play an irreplaceable important role in mobile learning.

2. Phases

There is a process in the development of mobile teaching.

2.1 "No cell phones in class" phase

Smart phone is one of the devices that attracted and widely used among young people especially students. With the development of a system combined with mobile Internet technology, smart phones are used by teachers and students to assist them teaching or learning. Twenty years ago, Internet was used mainly for searching something they needed to look up for reference just like they did in the traditional library. In China twenty years ago, there was even no chance for students to look up a thing on Internet that they urgently need to know in the classroom, because it is forbidden at class, even at college. Almost all the parents and teachers believed then that Internet would distracted students' attention from their studies and absolutely prohibited in the study time. If a research was required at that time, one of the major challenges of conducting classroom experiments in large classes is the complexity of collecting feedback and reporting it to students. Mobile phone was hardly regarded as a teaching resource and teaching method in China, but mostly used SMS to collect teaching feedback from students.

2.2 "Ideological contradiction" phase

With the popularity of Internet applications, 4G, and 5G network technology become more and more mature, making mobile teaching get strong technical support and methods, network teaching way more popular, and the application of network teaching is more widely. The new communication

technology provides more ways to transmit the latest teaching information and knowledge, and provide teachers and students with interaction. The network teaching application system provides a platform for teachers and students to conduct teaching activities in and out of class through the network. At the same time, teachers are more complaining that students use mobile phones in class to distract their attention from study, and at the same time affect teachers' teaching and other negative discussions. This kind of article that mobile phones affect teaching results can be seen everywhere in 2010 [1].

For some general education courses in colleges and universities, such as public political theory course, public foreign language course, public physical education, public mathematics and so on, most of them are taught in large classes at colleges in China. This kind of large class has the characteristics of large space, large number of students, unfixed seating arrangement and great difficulty in interactive teaching between teachers and students. Due to the large class size, a series of factors that are not conducive to teaching organization. It provides a realistic opportunity for electronic mobility tools to infiltrate into large classroom teaching at colleges and universities. Meanwhile, mobile surfing on Internet is a double-edged sword for large classroom teaching, which has both positive and negative effects. It not only brings a rare opportunity to improve the teaching quality, but also brings challenges that cannot be ignored [2].

2.3 “Mobile learning revolution” phase

Mobile learning poses an almost subversive challenge to school education. With instant messaging, social networking services and video communications all transplanted to mobile phones. Mobile learning has become a big challenger to traditional college education. For example, when a student suddenly comes up with a new question, he can not only immediately consult the teacher through his mobile phone, but also share his knowledge with his classmates on teaching APPs. If he is working on a vertical geometry problem, he can also use his 4G or 5G video phone to show his ellipse or cone. Students can take out their mobile phones on the bus or metro and whips up her compositions. She sends one of the compositions to her teacher as a writing exercise. The teacher receives compositions from many students in his class. He selects the best one with his own comments and sends them to all his students. It is easy for people to write on the road, as long as inspiration strikes. This alternative teaching method is quite popular among students. “Palm study”, “mobile classroom” is a school that people carry everywhere.

2.4 “Internet plus” phase

The development of the Internet and intelligent technology is a great change in education. Ma huateng, CEO of Tencent, first proposed the concept of “Internet plus” in a speech in 2013. What does it mean to add a traditional industry to the Internet? In fact, it represents a kind of ability, or a kind of external resources and environment to improve the industry. Internet plus is the use of the Internet platform, the use of information and communication technology, the Internet and all walks of life including traditional industries together, in new areas to create a new ecology. Internet education in China has been developing rapidly since 2012, and it has swept the whole field of education and is in continuous fermentation. The essence of Internet education is a new form of education implemented by teachers and students in the state of separation with the support of network and technology for the effective implementation of teaching and learning activities. MOOCs, smart education, flipped classrooms and other models are all part of that [2].

Now the mobile learning systems used by teachers and students, such as cloud class, classroom pie, rain class and learning knowledge, completely subvert the traditional teaching and learning model. Before class, teachers upload and push the text words, recording, translation, listening audio, text, homework files and teaching unit related teaching materials to students' mobile phones. In the teaching process, mobile phones are used to assist English word pronunciation teaching and listening training. At the end of the course, students can consolidate their own independent learning according to the digital learning materials they receive. It is very suitable for our era of big data, teaching effect is better.

3. “Students’ independent learning” phase

Highly intelligent mobile phones inspire students to study independently. Smart phones with independent operating systems allow users to easily install software programs to expand the functions of the phone itself, and can rely on the mobile communication network to achieve wireless network access. In our age of big data, unlimited information is continuously input, and freshness and interest can be satisfied at any time. In such a network environment, a small mobile phone can stimulate students with a strong thirst for knowledge and curiosity to do a lot of independent learning. Due to its high popularity, portability and individuality, mobile phone has become the most ideal mobile learning terminal device for students. Students surrounded by mobile Internet not only use mobile phones to achieve their needs of entertainment, recreation and communication, but also become an important tool for them to achieve their learning goals.

Within the limited classroom time, teachers can only talk about the key points, difficulties and necessary knowledge points. After class, a lot of time is left for students to learn independently. For the massive information sources, teachers should only guide students properly and arrange the tasks of independent learning well. Taking college English class as an example, the teacher can inform students to download the learning APP in advance, and leave homework contents in the APP set, asking them to listen to English listening, watch English video, and at the same time add the courseware of the last lecture. Teachers can also assign discussion topics for full research and discussion after class, or assign group tasks to increase the interaction of students’ independent learning, which always makes them full of energy when learning all together.

4. Data teaching decisions and instant evaluation and feedback

Instructors often alter their methods according to feedback from students. However, when conventional teaching techniques are used, the amount and quality of feedback is limited. Teachers typically have difficulty monitoring the learning progress of all students when classes are large, and interaction between students and teachers is largely superficial (e.g., posing questions by raising a hand), impersonal (e.g., answering questions as a class) and delayed (e.g., take-home assignments and exams). Teachers spend considerable time grading students’ work. Worse, such delayed feedback may not impact students’ learning. Teaching efficiency is thus reduced.

In the conventional classroom, various obstacles limit interaction between students and teachers. Limited class hours, fixed seating, and inadequate time for after-class discussions are just a few obstacles. With the introduction of multimedia feedback techniques, teachers can receive instant feedback from each student in a class [3] and record the whole teaching process with accurate and scientific data analysis.

Smart classroom for mobile learning is always supported by school-building information technology platform, based on dynamic study of data collection and analysis, digital presenting students’ learning process and effect, which makes the teaching process from being dependent on the teachers’ teaching experience in the past to relying on the teaching objective data. This new kind of classroom make it possible that students learn accurately on data and teachers make proper decisions based on data. That is convenient for teachers to arrange and adjust the teaching. Dynamic learning evaluation in classroom teaching through dynamic learning diagnosis and evaluation of classroom teaching, including preparation before class, classroom assessment and feedback on testing evaluation and immediate feedback, homework evaluation and tracking feedback [4]. It finally achieve the true “teaching students in accordance with their aptitude”.

5. Summary

Mobile learning enables people to use of fragmented time to work and study. In the future teaching process there will certainly be more mobile intelligent learning systems for teachers and students to use. The flexible, portable, personalized and interactive characteristics of mobile phone make it one of the indispensable teaching tools in the era of big data. The freedom of time and space gives it to its

great extent development space. Teachers should not hesitate to keep pace with the times, and should constantly learn and explore new things in order to serve the education career and teaching work.

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