

Research on the Functional Requirements of Mobile-end in Hybrid Teaching Based on Mobile-end

Qiang Jin

Xijing University, Xi'an 710123, Shaanxi Province, China

Keywords: Mobile Terminal, Hybrid Teaching, Functional Requirements

Abstract: The information society has promoted the development of society, while the contemporary teaching mode is constantly updated. The diversification of teaching means has increased the channels for students to receive information and made teachers' teaching more convenient. However, the new teaching mode has broken the original teaching mode, and the renewal of technical means has also made education connect through man-machine, changed the original direct relationship between teachers and students, and brought new challenges. In this study, classroom teaching is carried out by using mobile terminal. Three mobile terminal teaching modes are compared: WeChat and two-dimensional code webpage links, Jiuzhu course platform and Super Star Learning Course Platform. It is pointed out that the functional requirements of mobile terminal, which have an impact on classroom interaction, are helpful to the improvement and perfection of the course platform.

1. Introduction

Today is an information society, the network and multimedia are very developed, and the corresponding high-tech technology is constantly applied to education, breaking the traditional teaching environment and mode. Contemporary advanced teaching methods have been continuously promoted and greatly developed, which not only improves the teaching efficiency, but also brings some problems and challenges. Nowadays, it is very common for college students to use mobile phones and other mobile terminals in class. How to let students use mobile phones for learning instead of entertainment is an important research topic. By comparing the application of mobile terminal in classroom teaching, the functional requirements of mobile terminal, which has an impact on classroom interaction, are worked out in order to promote the improvement of mobile terminal teaching platform and the high integration of information technology and classroom.

2. The Change of Teaching Ideas under the Information-based Teaching Model

2.1. The focus of teaching purpose is from "mastering knowledge and imparting skills" to "learning to learn and survive".

In the information society, people have more and more channels to receive information, and information technology is more and more used in the field of education and teaching. How to introduce network resources into the classroom and how to use mobile terminals to realize the application of information technology in the classroom has attracted more and more attention of front-line teachers. The emphasis of classroom teaching has also shifted from the traditional "mastering knowledge and imparting skills" to the "learning to learn, learning to survive" quality education.

2.2. The theme of teaching process changes from "passive acceptance and domination of learning" to "independent construction and creative learning".

Teaching in the information environment is not only a teacher's one-sided task, but also students should always pay attention to their own learning. Under the guidance of others, students can also gradually retrieve and acquire effective learning information, so as to achieve autonomy in learning.

Learning is no longer a passive acceptance process. In this way, we can not only achieve the learning objectives, but also play a guiding role in future learning. Moreover, through the active knowledge construction of learners, we can find more suitable learning methods and achieve more creative learning results, so as to truly achieve individualized learning and teaching according to aptitude.

2.3. The center of teacher-student relationship is from "dominance and subordination" to "interaction and cooperation".

Teaching activities not only reflect teachers'teaching, but also learners' learning. Only when they cooperate with each other, can the teaching effect be maximized. In fact, the classroom interaction between teachers and students has been greatly increased than before. Technically, one-to-one or even one-to-many two-way interaction between teachers and students has been achieved, which greatly promotes the communication and collaboration between the two sides. In the new classroom, the relationship between teachers and students is changing from "dominant, subordinate" to "interactive, collaborative".

3. Model comparison of Hybrid Teaching Based on different mobile terminals

3.1. Teaching mode based on WeChat and two-dimensional code web links

Through the use of Wechat or QQ to push links to students in the course of teaching, or through PPT to provide two-dimensional code webpage links, so that students can get network resources (articles, pictures, videos, etc.) from mobile phones, the network resources can be quickly linked into the classroom, but the shortcomings of this way are also obvious. This method can not determine whether the students are linked to the curriculum resources required by the teachers, whether the students are looking at the pushed articles and how much content they see, and how long they can not track the viewing time. Easy to cause teachers in front

3.2. Teaching mode based on Jiuzhu curriculum platform

Jiuzhu Course Platform is a curriculum platform system developed by Jiuzhu Company in Singapore. It is the official curriculum platform system of Xijing University. All officially recognized curriculum resources are used on this platform. Therefore, the platform is also one of the comparative objects of this study.

Jiuzhu Course Platform is mainly used on the PC side. The platform is developed based on HTML5. Previous mobile end uses browser mode. The website adopts browser self-adaption, but the display effect is good. Later, the mobile terminal of Jiuzhu curriculum platform was developed, which only supports the learning function of curriculum and the simple auxiliary function of curriculum, but lacks the support of mobile learning in classroom.

Through this platform, teachers can effectively use the course resources such as courseware and test questions uploaded on the course platform to avoid repetitive construction. However, due to the lack of support for classroom learning activities, the platform is mainly used in the online learning part of flipping classroom teaching, homework submission and online examination, and relatively few classroom applications.

3.3. Teaching mode based on Superstar Learning Link

Superstar Learning Tong is a mobile learning professional platform for mobile terminals such as smartphones and tablets. Users can complete library collection borrowing and inquiry, electronic resources search and download, library information browsing, study school courses, conduct group discussions, view the school address book, and have electronic books, newspaper articles and Chinese and foreign literature metadata, providing users with convenient and fast mobile learning services.

In the traditional classroom attendance, roll call takes a long time, and it is difficult to achieve full coverage by using the method of spot checking. Combining Superstar Learning Access APP with mobile-based attendance check-in, we can adopt various forms of attendance, such as gesture

check-in, location check-in and dynamic two-dimensional code check-in. The new check-in mode can improve the enthusiasm of students, promote the interaction between teachers and students, greatly reduce the cost of attendance time, and effectively solve the attendance problems existing in previous teaching. What needs to be improved is that there is overlap between the students'code-sweeping entry meeting and the pre-entry personnel, which causes the number of students to be checked in to exceed the number of classes. In practice, we need to pay attention to such problems.

The mobile course is presented to students directly through the projector through the projector through the projection function of the learning link, which solves the problem that teachers must stand on the platform to teach. In the past, if you want to shoot the screen by mobile phone, you need to equip TV or projection equipment to support the function of shooting the screen. Now you can realize mobile teaching in the classroom by inputting the web address in the browser. Teachers can share video and knowledge related to teaching directly on the big screen for students to learn and communicate, which can achieve rapid feedback and improve the efficiency of the classroom. Online courses can be presented to students in advance by chapters. Students can preview through mobile terminals to achieve flipping classroom teaching and mixed online and offline learning.

Through comparison, we can see that the mobile terminal can play a good role in assisting teaching in classroom teaching, but the effect will be very different with different tools and means. For the two-dimensional code mode, it is only the most primitive means to combine paper media or PPT with electronic media, and it can not monitor students'learning process well. For Jiuzhu curriculum platform, although students can access the contents of courseware, videos and test questions uploaded by teachers in the classroom, the current functions do not support enough classroom activities and can not support rich and effective classroom teaching tasks. In addition to completing online courseware learning and submitting homework, Super Star Learning Tong can also support teachers'classroom teaching activities by means of screen-casting, check-in, voting and answering, enhance students' classroom participation, enhance students'learning enthusiasm, and strengthen teachers' control over the classroom.

By comparing the three mobile teaching modes, we can find that Super Star Learning is the most comprehensive in function and can better assist the development of mixed teaching activities. Through the corresponding teaching design, we can create more active and efficient university classroom by abundant classroom activities.

4. Functional Requirements of Mobile End Influencing Classroom Interaction

Classroom interaction has many types, including teacher-student interaction, student-student interaction and Student-resource interaction. Each type of interaction contains different interaction behaviors. In order to support the corresponding interaction behavior in the classroom, mobile terminals need to provide corresponding functions. The main functions of mobile terminal for classroom interaction are as follows:

4.1. Requirements of Teacher-Student Interaction on Mobile Function

The interaction between teachers and students is the most important part of classroom interaction. It is also the main means for teachers to implement curriculum design and carry out classroom activities. The interaction between teachers and students includes teaching organization, knowledge imparting, task assignment, activity implementation, evaluation and so on. These contents can be achieved through the corresponding functions of the mobile terminal, including the use of mobile terminal check-in to achieve statistics of students'attendance to classes, the projection function to achieve the presentation of course teaching content and students' feedback, the selection function to achieve fixed-point questions and scores, the voting and answering function to participate in the participation of students in classroom teaching, strengthen classroom interaction, through brainstorming, grouping. Tasks to achieve student inquiry, cooperative learning, through questionnaires and tests to obtain student feedback.

4.2. Requirements for Mobile Terminal Function in Student-Student Interaction

The classroom interaction between students and students is mainly cooperation, discussion, mutual questioning and evaluation. Through grouping for inquiry, discussion and cooperative learning, we can accomplish the complex tasks assigned by teachers together. In the links of "examining you" and "helping me" in the classrooms, we can deepen and consolidate the knowledge content learned by asking each other questions, check each other's omissions and fill in the gaps, answer questions, and then achieve mutual help and mutual promotion through reporting, uploading and evaluating the answers among the groupings. .

4.3. Requirements for Mobile Terminal Function in Student-Resource Interaction

Teachers have prepared a large number of systematic learning resources for students before class, including video, audio, animation, text, exercises and so on. Students can construct their own knowledge system through network resources in the stage of solo learning and help learning in class, and also can search Internet resources through search engines as a supplement to platform resources. Complete the learning tasks assigned by teachers.

Through a variety of classroom interaction, activate the classroom atmosphere, improve students'enthusiasm and participation, promote the development of students' higher-order thinking, and use the platform to accumulate teaching data, facilitate the monitoring of learning process and students'learning analysis, and contribute to the accumulation of resources and the development of teaching and research work.

5. Conclusion

Nowadays, with the increasingly widespread use of mobile terminals, teaching activities have broken through the traditional teaching methods, and new teaching interactive means are constantly emerging. Educators should follow the trend, not only grasp the theoretical knowledge reserve, but also grasp the corresponding technical means, through the use of fully functional mobile terminal equipment, constantly improve classroom teaching, enhance classroom interaction. In this way, it can not only achieve a high degree of integration of information technology and classroom, but also enhance students'information literacy and learning enthusiasm; it is conducive to the improvement of classroom teaching effect, but also conducive to the development of more mixed teaching research.

References

- [1] Dong Lia. Micro-study of classroom teaching interaction in middle schools [D]. Yangzhou University, 2013.
- [2] Zhu Lianzhao. Interactive Teaching Design and Practice Research in Future Classroom Environment [D]. East China Normal University, 2015.
- [3] Wang Lixin. Analysis of the Successful Elements of "Flipping Classroom" from the Perspective of Symbolic Interaction Theory [A]. International Research Association of Information and Computer Science. Proceedings of 2014 3rd International Conference on Information, Business and Education Technology (ICIBET 2014) [C]. International Research Association of Information and Computer Science: Beijing Xin Yongshun Cultural Communication Co., Ltd., 2014:4.
- [4] Ma Fang. Research on classroom teaching interaction and optimization strategies of courier delivery [D]. Central China Normal University, 2017.
- [5] Huo Taotao. Research on classroom interaction mode supported by feedback technology [D]. Capital Normal University, 2009.
- [6] Chen Lijuan. Forming a Benign Interaction Towards a Harmonious Classroom: A Brief Analysis of the Benign Interaction Elements in Geography Classroom under the New Curriculum

Standard [J]. *Geography Education*, 2008 (02): 8-9.

[7] Lei Chengyong, Sun Zewen. Components and supporting factors of classroom interactive teaching [J]. *Journal of Hubei Second Normal University*, 2008 (01): 114-116.

[8] Li Fang'an. Information Literacy: Necessary Quality for Contemporary Teachers [J]. *Contemporary Education Forum (Macro Education Research)*, 2007 (01): 94-95.