

Construction of Wisdom Classroom Based on UMU Interactive Platform

Chunsu Zhang

School of Computer Science and Technology
Beihua University
Jilin, China

Yuqi Li

School of Computer Science and Technology
Beihua University
Jilin, China

Abstract—The rapid development of information technology has brought about tremendous changes in the field of education. The generation of wisdom education has made more people pay more and more attention to wisdom teaching. As an embodiment of wisdom education, wisdom classroom is the “Internet +” era. The informatization of school education focuses on the inevitable result of teaching, classroom, teacher and student activities. Using a new generation of information technology to create intelligent and efficient classrooms helps to promote the development of students' wisdom.

Keywords—Wisdom Classroom, Wisdom Education, Teaching Platform

I. INTRODUCTION

With the continuous application of the concept of wisdom education in teaching, more and more teachers have begun to try to change the traditional classroom teaching, to guide classroom teaching activities with the concept of wisdom education, and to build a wisdom classroom. The wisdom classroom has deepened the integration of information technology and subject teaching, which has transformed the traditional classroom teaching environment into an intelligent direction.

II. THE CONCEPT AND FEATURES OF WISDOM CLASSROOM

The wisdom classroom is derived from wisdom education. The word “wisdom education” originated from the concept of “wisdom planet” proposed by IBM in 2008. Afterwards, many scholars at home and abroad have carried out exploration and research on wisdom education. The carrier of wisdom education applied to practice teaching is the wisdom classroom. The wisdom classroom is the basis for the conditions under which wisdom teaching takes place. Wisdom classroom needs to create a digital environment that can guide students to carry out intelligent learning, integrate digital teaching media and teaching resources into teaching, and promote the development of students' wisdom.

III. CONSTRUCTION OF THE WISDOM CLASSROOM BASED ON UMU INTERACTIVE PLATFORM

A. Building a Wisdom Learning Environment

In the wisdom classroom, intelligent mobile terminals are needed to support teaching. For smart learning environments, mobile phones are the most convenient mobile learning devices. The establishment of a wisdom learning virtual environment is to establish a learning platform. Here, taking the UMU interactive platform as an example, before developing smart learning, teachers need to log in to the UMU interactive teaching platform, register and log in, and create a course. Teachers need to understand the platform operation methods, master the use of platform functions to create micro-courses, initiate check-in, discussion, questionnaires and other functions, and share the course QR code with students, and bring students into the curriculum platform to carry out wisdom teaching.

B. Develop Wisdom Teaching Resources

In the wisdom classroom, teachers designate teaching resources according to the teaching objectives, including all types of resources that need to be used before, during and after class. Wisdom teaching resources can be divided into several categories: micro-curricular resources, rich media resources, and test questions. Micro-courses are the current popular curriculum resources, namely micro-teaching videos. Teachers use micro-video as a carrier to teach knowledge. Video content is usually based on a knowledge point or a teaching session, mainly to help students complete the learning and understanding of a knowledge concept. UMU interactive platform has the function of making simple micro-courses. Teachers can select a few slides and explain the audio to form a micro-course video uploading platform, which is convenient and quick. Rich media resources refer to various types of learning materials such as electronic documents, pictures, movies, Flash, voice, PPT, etc. transmitted through the network. Teachers can create rich media resources based on the teaching content and upload them to the UMU interactive platform. Students can select the content to learn according to their needs. The test questions are platform resources set up to examine the learning outcomes of students before, during, and after class. The teacher builds test questions around the learning objectives, and the wisdom classroom emphasizes the students' self-constructed knowledge meaning. Therefore, the design of test questions can be carried out in various forms, making full use of the smart platform to motivate students to participate in the evaluation. Teachers can summarize and analyze the test results of students through the evaluation platform of the smart platform, grasp the student's learning status in real time, and constantly adjust the teaching content.

C. Design Wisdom Teaching Activities

Teaching activities are the sum of teacher and student behaviors to achieve a specific learning goal. The wisdom classroom teaching activities can be roughly divided into three parts: before, during and after class, each part needs to be completed by

teachers and students.

① Preview before class. Before the teacher conducts the classroom teaching activities, according to the teaching objectives, the pre-study materials are produced in a targeted manner, uploaded to the UMU interactive platform, and distributed to the students, and the students carry out pre-class study. Pre-class preparation in the traditional classroom, single information, single form, etc., so they cannot achieve the desired results. For the preparation of the wizard classroom environment, the teacher needs to produce special preview materials, and the preview materials are various in form and rich in content. Teachers can choose to make micro-classes, record sounds, design animations, or choose online boutiques, etc. Students can choose pre-study materials for pre-class preparation from multiple angles. The teacher can also prepare pre-test questions for the pre-study content. After the class is pre-study, the students can conduct self-preparation test and carry out targeted supplementary learning according to the test results.

② In-class teaching. One of the advantages of the wisdom classroom teaching is the strong interaction. This kind of interaction is not only the interaction between the teachers and students in the classroom, but also the multi-personal interaction between the teachers and students through the UMU interactive platform. Teachers can create teaching situations through interactive platforms according to the teaching objectives, and teaching can be carried out in a variety of ways. Teachers can also use the teaching platform to carry out task pushes, carry out student inquiry activities, class discussion, real-time evaluation and other activities. The wisdom classroom activities are richer in content than traditional classrooms, so students' learning enthusiasm is greatly improved.

③ After-school tutoring. In the traditional classroom, the teacher will arrange assignments for the students after the teaching. The students will submit the assignments to the teachers in the next class, the teachers will correct them, and the students will be able to give feedback to the students in the next class. The feedback is not timely, the teacher can't grasp the student's learning situation in time, and the student can't receive the teacher's feedback information in time, which is not conducive to the improvement of learning efficiency. In the face of the wisdom classroom, these problems are solved. Teachers can use the UMU interactive platform to push personalized after-school review resources and after-school exercises for students. After completing the homework, the student submits the assignment using the platform, and the teacher can view the student's job submission in time and use the platform to give feedback on the student's homework. This method is convenient and efficient, greatly improving the learning effect of students, and is also conducive to mobilizing students to learn initiative.

D. Carry out Wisdom Teaching Evaluation

Teaching evaluation refers to the process of collecting relevant data and information generated in the teaching process according to certain teaching objectives and quantitatively analyzing them, so as to make value judgments on teaching effects, learners' learning attitudes and learning behaviors. The purpose of teaching evaluation is to examine the results of learning activities on the one hand, and to motivate learners on the other hand. In the context of wisdom education, teaching evaluation must truly reflect the subjective status of students. Based on the overall development of students, it is necessary to reform the traditional teaching evaluation. The idea of wisdom teaching evaluation is to evaluate the teacher's "teaching" by the students' "learning". In the wisdom classroom teaching mode, students' learning is divided into in-class and extra-curricular, that is, offline and online learning. Therefore, our evaluation is also carried out from the online evaluation and the offline evaluation.

① Online evaluation. Students usually use their mobile phones to participate in online learning of the course. In the learning process, the smart teaching platform records various learning behaviors, learning preferences, learning habits, etc., that is, individual learning information of each student. Teachers can use this information to evaluate students' online learning, such as students' pre-study and participation in the classroom.

② Offline evaluation. Offline evaluation refers to a series of evaluations of students' learning behavior in the physical classroom. Offline evaluation is an important part of the evaluation of the wisdom classroom teaching, which mainly includes the students' classroom learning status, self-evaluation and learning outcomes. Through the evaluation of students' attention in the classroom, learning participation, students' evaluation of their own learning status and the evaluation of students' homework, works and tests, the teacher will give an overall assessment of the students' offline performance.

IV. CONCLUSION

The exploration of the teaching of the wisdom classroom in the information age is still in its infancy, and both theoretical research and practical application need further discussion. It is necessary to build a wisdom teaching mode based on the wisdom classroom, optimize the teaching environment of the wisdom classroom, make full use of the wisdom teaching platform, carry out personalized wisdom education to adapt to the differences of students, and promote the optimization and development of classroom teaching.

ACKNOWLEDGMENTS

This paper is the 2018 annual education and teaching research project of Beihua University, "Building and Practical Research of Wisdom Classroom Based on UMU Interactive Platform" (Project No.: XJZD2018020) and "Modern Educational Technology" Course under the Vision of Creativity Education Exploration and Practice (Project No.: XJQN2018100) and one of the research results of the 2014 Education and Teaching Research Project of Beihua University, "Building and Practical Research on the Core Literacy Training Model of Applied Undergraduate Students in the Studio Environment" (Project No.: XJQN2017024)

REFERENCES

- [1] Liu Bangqi. Research on Teaching Design and Implementation Strategy of “Internet +” Wisdom Classroom [J]. China Electro-chemical Education, 2016(10)
- [2] Chen Ting. Design and Application of the Wisdom Classroom Teaching Mode in the Context of “Internet + Education” [D]. Jiangsu Normal University Master Thesis, 2017(05)
- [3] Zutshi, S., O' Hare, S.(2013). Rodafinos A.Experiences in MOOCs:The perspective of students, American Journal of Distance Education,46(4), 218-227.
- [4] Veletsianos, G., Collier, A., Schneider, E.(2015). Digging deeper into learners' experiences in MOOCs:Participation in social networks outside of MOOCs, notetaking and contexts surrounding content consumption, British Journal of Educational Technology,21(3),570-587.
- [5] Tucker, B. (2012).The flipped classroom, Education Next, 23(1), 82-83.
- [6] Osguthorpe, R. T., Osguthorpe, R. D., Jacob, W. J., Davies, R. (2003). The moral dimensions of instructional design, Educational Technology, 43(2), 19-23.
- [7] Munoz-Merino, P. J., Ruiperez-Valiente, J.A., Alario-Hoyos, C., Perez-Sanagustin, M., Kloos, C. D. (2015). Precise Effectiveness Strategy for analyzing the effectiveness of students with educational resources and activities in MOOCs, Computers in Human Behavior, 47(SI), 108-118.
- [8] Kang, Y. Q. (2014). An Analysis on SPOC: Post-Mooc Era of Online Education, Tsinghua Journal of Education, 35(1), 86-93.
- [9] Kaplan, A. M., Haenlein, M. (2016). Higher education and the digital revolution: About MOOCs, SPOCs, social media, and the Cookie Monster, Business Horizons, 59(4), 441-450.