

The Advantages and Suggestions for the Development of University Microcourse Construction

Qiong Kang

School of Computer Science, Jingzhou 434023, China

Abstract: Microcourse has become a hot topic in the construction of universities in China. This paper expounds the concept and connotation change of microcourse in the mobile interconnect era, summarizes the advantages and disadvantages of microcourse construction, and puts forward some suggestions for the development of microcourse in the new stage

Keywords: Microcourse, mobile interconnect.

1 Introduction

With the rapid development of mobile Internet technology, the Internet has entered into the "microera" of Web 2.0 mobile interconnections: the concept of "microblogging", microblogging, microfilm, microinterviewing, micromedia, microcivilization, microlearning is rapidly permeating people's lives, work and learning. With the rapid development of mobile Internet technology, the Internet has entered into the "microage" of Web 2.0 mobile interconnections: the concept of microblogging, microblogging, microfilm, microinterviewing, micromedia, microcivilization, microlearning and so on is rapidly permeating into people's lives, work and learning. microteaching is a hot topic of educational reform in recent years, which has been followed by the reform of the blog, microblogging, microblogging, and other social software programs Gradually introduced into the university teaching class.

1.1 Definition of microcourse

According to its use mode and teaching content, micro-course can be divided into two kinds: knowledge point micro-course and topic micro-course. The topic microcourse refers to a series of logically related microcourses organized around a specific teaching topic or subject. There are 3 to 7 sessions of special courses, which are suitable for students 'independent learning, collaborative research and relatively complete knowledge construction. "1" refers to the core resources of microteaching: microteaching video(microvideo, elementary and middle school microteaching is usually 5-8 minutes, college microteaching is about 15 minutes), "4" refers to the teaching design(microteaching/microstudy / guide), teaching courseware(microcourse/microstudy and related extension materials), practice test(micropractice/exam/thinking test, etc.), teaching reflection and after-school review(teacher's microteaching reflection, suggestions for use and post-microlecture comments). It is worth explaining that even a single knowledge point is not a random "stack" or a simple combination of the above resources, but a semi-open, contextualized and dynamically generated virtual learning and communication environment with a certain structure and presentation.

1.2 Current status of microstudies

The successful application of microcourse abroad is the introduction of online video course in the application of reverse classroom, mixed learning, electronic schoolbag and so on. The microvideo courses of Khan Studies, Flip Classroom and Murong Classes are typical application methods.

Khan College leads online video teaching

Sal-man Khan[1], an Indian-American youth, founded Khan College in 2007, a nonprofit educational organization that aims to provide high-quality learning services to online learners around the world. At present, the microteaching video of Khan College includes mathematics, physics, chemistry and astronomy. In the teaching video of Khan College, the professor uses an electronic Blackboard to display, divide the educational content according to the difficulty level, and design and produce the corresponding course practice. Khan college applied a new organization management model and microvideo to network curriculum teaching, and changed the traditional curriculum teaching system to match the learning characteristics of network learners, thus increasing the learner's interest and efficiency.

Flip the classroom and change traditional teaching patterns

The Flipped Classroom model emerged in 2007. Flip the classroom teaching model The learner has more freedom. In order to make full use of the classroom time to promote the knowledge internalization of the

learners, teachers put the knowledge transfer process outside the classroom, so that teachers and students or students to cooperate in exploring learning, resulting in more thought collision. The teaching content of micro-course has the characteristic of pertinence, it is the important carrier of "flip-over classroom" teaching mode to preview or review after class.

MOOC Globalization

MOOC[3] is called a large-scale online open course, and microcourse is its important resource carrier. Compared with the previous quality courses, MOOC can provide learners with the opportunity to organize teaching and share the resources of the courses. The teaching process is more complete and can provide learners with learning evaluation in time. At present, the online education website has the Coursera, Udacity, EDX, the platform has the extremely rich course resources, the learner can register free, each course has the prescribed course assignment time and the course time, the learner only needs according to the prescribed time study and passes the examination, can pass the platform certifies and obtains the certificate of honor, this kind of teaching method has been approved by many foreign universities.

1.3 Current Situation of the Application of Microcourse in China

In the domestic microcourse application mode mainly carried on the following two attempts, has obtained the good achievement.

A microcourse competition

In 2010, Foshan Education Bureau launched the first "Microcourse" resource-building campaign for primary and secondary schools, which collected more than 2,000 quality microcourses. After that, Guangdong, Shenzhen, Tianjin, Wuhan, Shanghai and other major universities have also begun to try "microcourse." In October 2012, the Chinese Educational Technology Association, the National Institute of Higher Education's Modern Distance Education Cooperation Group and the China Joint Committee on Learning and Development decided to jointly hold the first National Microcurriculum Contest, which is open to colleges and universities, vocational colleges, basic education and industry-wide educational institutions, educational television stations, educational and video publishing houses and individual microcurriculum enthusiasts nationwide. In 2013, the National Network Training Centre for University Teachers of the Ministry of Education hosted the National Microcourse Teaching Competition.

Issue a special micro-learning window for learners to find

The National Development University, adhering to the concept of "openness, responsibility, quality, diversification and internationalization", operates inThe "5-minute course construction project" was launched in late 2012. The project is mainly available to autonomous learners in the form of a 5-minute microcourse presentation. It is an important measure for the National Open University to promote the deep integration of modern information technology and education, and to promote the building of a learning society with universal learning and lifelong learning. The school plans to build 10,000 five-minute courses through the adaptation of existing resources, self-construction and cooperation. Within three years, 30,000 educational and non-academic education resources have been built and completed, covering hundreds of subjects in the 5-minute curriculum.

1.4 Advantages and disadvantages of microcourse construction

In recent years, a growing number of educational departments, schools, universities, educational enterprises and educational research institutions have recognized the importance of microcourses in teaching and learning, and a nationwide upsurge in the development, application and research of microcourses has developed[4]. The technology of microcourse development is becoming more and more popular, and the number of microcourses is increasing. The author thinks that microcourse is not only a new "classroom" expression, but also a new "curriculum" resource form. More and more microcourse practice and research show that micro-course production is not only a technology development process, but also a creative work under the guidance of advanced educational idea and fine and creative teaching design, and the final determining factor is "person"(teacher).Without the support of the teachers 'careful teaching and design philosophy, the most you can count is the microcoursework It's a beautiful "video class" with a gorgeous look, Still cannot get rid of the traditional classroom "copy" or "bondage"[5]. Current micro The main problems in the course of course production are as follows:

The first is that quite a few teachers do not know enough about the nature of microcourses, only recognize the "appearance" of microcourses (Micro, short, small) [6]and do not master their "essence"(a kind of on-line course that supports students 'independent personality to learn efficiently). For example, some teachers develop microcourses that are basically equivalent to "lesson examples"(Intercept a passage from a traditional

class example), "microvideo"(short but divergent content, unfocused subject), "microlecture"(an infusion of lectures based on a large head of the teacher that does not take into account students' cognitive and learning patterns), or "condensed class"[7](40 or 45 minutes).The traditional curriculum is compressed to 10 minutes of microlectures, content and links a lot, just without thinking, self-study and interaction time).

Second, many teachers put more emphasis on microteaching technology and neglect the innovative teaching design and teaching implementation process. Second, many teachers have focused more on micro-course making technology than on the innovative design and implementation process of microcourse. For example, video shooting focusing on classroom activities(with emphasis on double-or multi-machine shooting, even the use of expensive automated video recording systems, video technology), attention to the delicacy of video sounds and images, late editing time and effort, and even the need to subtitle the teacher's lectures and the full dialogue between teachers and students. But the whole captioning will increase the student's reading burden and disperse the thinking on the teaching content), but the core links such as the content selection, the teaching design, the teaching strategy and the implementation of teaching activities are not paid enough attention to, resulting in the teaching effect and the learning effect of the microteaching is not good.

Third, the existing microcourse resource is a single one, which only provides video clips of a single knowledge point teaching, and does not provide the corresponding supporting educational resource, which is not conducive to the study, observation and research of teachers and students. Although microcurriculum "micro", but "sparrows although small and dirty", "process is short but complete structure." Therefore, in the course of microcourse construction, it is necessary to embody the integrity and structure of microcourse: in addition to focusing on the construction of "microvideo", it is necessary to provide or perfect the "microteaching resources"[8](such as microprogram, microcourseware, microexercises, microreflection, microcomment, micro-feedback), which can make a complete microcourse more effective.

Fourth, the lack of systematic planning and top level design[9], resulting in the construction of micro-courses separate from each other, the phenomenon of repeated construction is serious, the quality of good and bad, there is no thematic or systemic microcurriculum system. The microcourse platform is relatively backward and is a resource collection, management and distribution system that does not support learners enough to personalize and effectively learn(such as learning process documentation, learning foundation diagnosis, learning effectiveness evaluation, resource personalization, online quizzes, etc.), far from the "one-stop" [10]platform based on big data and smart services at the Khan Institute. In addition, the learners use the existing microcourses in a single way, most of which are viewed or observed by users only on demand, and fail to give full play to the comprehensive effectiveness of microcourses. Although the number of microcourses is many, but scattered distribution, does not match with the teaching material, the type is single(mainly with the teaching type or the solution type, the experiment type, the inquiry type, the activity type and other kinds of microcourses are few), does not form the special type, the theme type, the series kind of microcourse system, based on the microcourse mobile learning, the turn over classroom, the new type of learning method such as mixed study is far from universal.

1.5 Suggestions for Microcourse Development

First, we should attach great importance to the innovative teaching design of microcurriculum. Good teaching design is helpful to guide the development of teaching resources of microcurriculum. At present, it is necessary to promote the "student-centered" microcurriculum: the students are the target of the curriculum, and the students' independent and efficient learning is the center [8]. First of all, we should attach great importance to the innovative teaching design of microcourse. Good teaching design can help to guide the development of the teaching resources of microcourse. At present, we should vigorously promote the development of "student-centered" microcourse. Students are the object of the microcourse. In addition, the design of microcourse. The key point of microcourse is to design from the aspects of teaching target setting, learner analysis, content needs analysis, and choice of teaching media, so that we can make the appropriate teaching strategies and methods for teachers in short teaching time. To enable students to fully grasp and understand a valuable knowledge point in the shortest possible time according to their own learning, "microcourses ensure that microcourses are adapted to meet the immediate needs of learners who are practical, easy to use and want to use.

The second is to pay more attention to the development of microcourses for individual knowledge points, and more attention to the construction of microcourses for a certain discipline serialized, thematically structured and integrally, encouraging teachers to set up relatively complete, serialized microcourses according to their own teaching style and characteristics. Only in this way can students not only learn according to their knowledge points, but also choose certain discipline / topic to study in a coherent and complete constructive microcurriculum, instead of just getting scattered and disorganized knowledge, which is the important development direction of the current construction of microcurriculum in China.

Third, we should strengthen the development of the application environment platform for micro-courses, integrate and pool the resources of microcourses in the whole region to produce agglomeration effect. Because an isolated microcourse based on knowledge points cannot work, it can only be widely used in regional and national microcourse application platforms/systems (e.g., the Centre of Inspiration at East China Normal University <http://www.c20.org.cn/>); Third, it is necessary to strengthen the development of the application environment platform of microcourse, integrate and pool the resources of microcourse in the whole region, and make it produce agglomeration effect. Because an isolated microcourse based on knowledge points cannot play a role, it can only be widely used by learners in the application platform/system of regional and national micro-course feedback, such as the online learning and learning application center <http://www.c20.org.cn/>. To form a "one-stop" service environment for the production, management, learning, application, communication, evaluation and research of large data-based microcourses.

References

- [1]. Academy K. Photosynthesis: Light Reactions 1[J]. Khan Academy, 2010. Author, F., Author, S.: Title of a proceedings paper. In: Editor, F., Editor, S. (eds.) CONFERENCE 2016, LNCS, vol. 9999, pp. 1–13. Springer, Heidelberg (2016).
- [2]. Gavriel J. The flipped classroom [J]. Education for primary care : an official publication of the Association of Course Organisers, National Association of GP Tutors, World Organisation of Family Doctors, 2015, 26(6):424. Author, F.: Contribution title. In: 9th International Proceedings on Proceedings, pp. 1–2. Publisher, Location (2010).
- [3]. Mackness J, Sui F J M, Williams R. The Ideals and Reality of Participating in a MOOC[C]// Networked Learning Conference. 2010.
- [4]. Huang Y, Huang J. Construction of Micro-Course Module Based on Moodle Platform[C]// Eighth International Conference on Measuring Technology and Mechatronics Automation. IEEE, 2016:167-170.
- [5]. Li L. Research on micro course construction from the perspective of integration of Internet+ and education [J]. Wireless Internet Technology, 2017.
- [6]. Wang H Y, Luo J. Construction of Diversity Textbooks for "Data Structures" Based on Micro-Courses [J]. Education Teaching Forum, 2017.
- [7]. Luo N. A Study on the Construction of Micro Course Resources in the Context of MOOC [J]. Education Teaching Forum, 2017.
- [8]. Wei C. Research on the Construction of Information Technology Classroom Teaching Model Based on Micro Course [J]. Computer & Telecommunication, 2017.
- [9]. Hongliang Y U, Zhang Y. Construction of the Teaching Method on the Micro-Courses Based on Flipped Classroom [J]. Chongqing Higher Education Research, 2017.
- [10]. Feng J, Zhao S. Research on Development Countermeasures of the Micro Courses Construction in Colleges and Universities[C]// International Conference on Education, Management, Information and Mechanical Engineering. 2017.