

Reference of Open Education and Resource Sharing of American University

Xue-guang LI^{*}, Shu-kun WANG, Yi GAO and Ying XU

College of mechanical and electrical engineering

Changchun University of Science and Technology, Changchun 130022, P.R.CHINA

^{*}lixueguang@cust.edu.cn

Keywords: American University, The open education, Resource sharing, Rconomic base, Superstructure.

Abstract. Taking the Michigan Technological University as an example, this paper describes and illustrates the concept of open education and resource sharing from the perspective of personal experience, and analyzes the various aspects of the classroom, laboratory, library, gymnasium, personal campus email and ID card. Based on the analysis of the construction of MOOCs and open course in China's Ministry of Education. Open education and resource sharing in Colleges and universities is the trend of the development of higher education in the future, but also a long-term process, whether from the basic facilities or the ideological and spiritual aspects, we need to continue to improve and reform, the relationship between the two aspects and the impact on the development of universities, such as the economic foundation and the superstructure of the social form.

Introduction

The idea of innovation is the soul of a university, the idea of higher education directly affects the quality of the students. The current higher education should be internationalized, along with the development of economic globalization become increasingly obvious. This also requires that the domestic colleges and universities in the development process should follow the pace of the development of higher education in the world, and continue to innovate. The essential characteristic of higher education decides that the higher school must take the open road in the development process. The development of modern higher education in China, Europe and United States has proved that the essential characteristic of higher education, which is the basic law of the development of higher education [1]. University is a subsystem of the whole social ecosystem, and it is necessary to open up to other social systems to get the energy needed for survival and development, which is determined by the law of ecosystem circulation [2]. Many foreign universities have achieved great success in the world since the construction of Open Course, and have made important contributions to the quality of open education resources, the dissemination and sharing of social knowledge, and promote the globalization of higher education [3]. Under the background of globalization in present education in China, quality education resources "open sharing" concept has become the inevitable trend of education development [4]. In this paper, taking Michigan Technological University where the author stayed as a visiting scholar as an example to illustrate the higher education in United States. Universities in the United States, whether it is private or public, have open ideas, which may be worth as our reference. Michigan Technological University was founded in 1885, according to 2014 US News, ranked 57 in United States public universities.

Open Ideas and Resource Sharing

The author observed and experienced the various aspects of the daily teaching of Michigan Technological University During his stay, from the classroom, library to the laboratory, from apartments, dining restaurant to the stadium, from the living area, learning area to the leisure area, from the community to the campus, open atmosphere exist everywhere, students can obtain knowledge from many channels. This open environment, on the one hand, reflects the idea of the University, let the students learn knowledge, not only from classroom, but also including knowledge from other aspects, on the other hand, reflects the University service for the community, so that people can share in the school's resources, from this aspect, it is also a greater level of social university, open to the community. We often talk about improving the quality of the whole nation, but without good platform, there is no open environment, how to make a considerable number of people in the community to benefit, so that such university is only built for students, no service for other common people.

Learning Inside and Outside of the Class

The author has attended the relevant professional courses, 50 minutes for every single class, the most effective time for every class should be in the range of 30-40 minutes. At the beginning of the class, students can focus attention, so the teacher should talk about something about important knowledge around the theme of the content. After the effective period, students become fatigue to the knowledge acceptance and response, then the teacher will arrange students' homework, leave some exercise each time. Meanwhile, encourage students to preview in advance. On the whole, 50 minutes of classroom learning can make the students more impressed by the knowledge points. Second, the students are learning more by doing homework before and after class. We often can see many students in the library to do homework or group discussion, if there is no good preview, then directly attend the lecture, will significantly increase the difficulty of listening.

Teaching activity outside the classroom is very rich, various types of discussion classes, discussion group could be able to mobilize the enthusiasm of the students to participate in, inspire students to think independently and learn from each other. A variety of club activities, content to meet the development of personality development needs to be lively and vivid, and personal interests.

In addition, there are also some ordinary tests in every semester, the test results will influence the level of the final score. Finally, each semester, there is a performance evaluation for students to evaluate the teachers, the university pay attention to the feedback of the students very much. Every term, the students have to give their teachers teaching score, if the majority of students are not satisfied with the teacher, will lead to the teacher out of this position directly.

Open Resources of Library

I used to find two academic papers in the school library website, but because of the papers published in 1988, the publication time is much longer, no electronic files can be downloaded online directly, but the link will automatically prompt readers to send requested e-mail to the library staff.

One day later, I received a reply e-mail in which shows that the library has collections of papers, the location of the papers was described in detailed. The author went to the library and found the collection of essays according to the message tips, the library provide printers, scanners, computers and other tools, you can scan the paper directly and the electronic files

can transport to your e-mail box online or USB flash drive directly, the operation process is very simple, you do not need to know much about computer and scanner, the system will automatically scan the documents and sent it to the USB flash drive. Moreover, the library is open to the community, to anyone who maybe not belong to the students and teachers. This gives the people opportunity and access to find and share more resources. The library website also could be a place for learning, library management system as shown in Fig. 1.

For the teachers and students who can use their ID card to book rooms online for group study, every room can accommodate 8-12 people. You can see the detailed schedule of rooms and whether each room is available or not on line. In addition, you can see the pictures and environment of the room so that you should know if the room you book is proper for you. In addition, the library has some open space which can be used to study and discuss for teachers and students. The library is open all the day and night to ensure that students have a good learning environment to meet the needs of different levels of students.

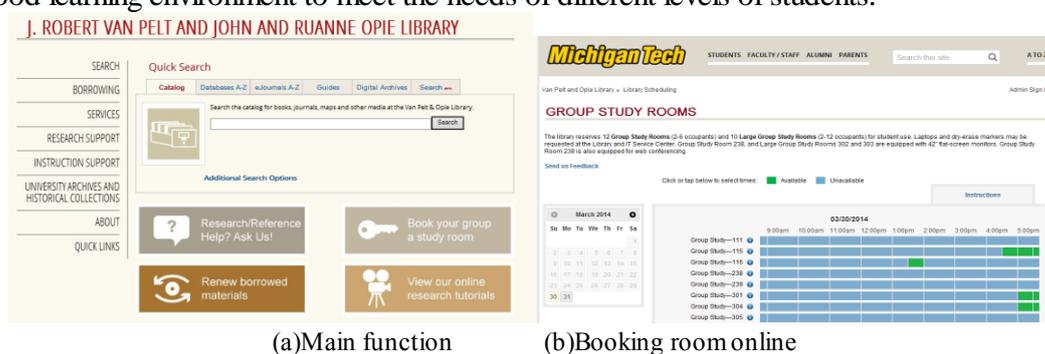


Fig.1 Library management system

Secondly, rich resources of the library network. Almost all three retrieval system and other important retrieval journals could be found, even if there are some resources cannot be founded, but by the interlibrary loan protocols, the library will help you to find the resource in other university library.

Opening of the Stadium

American university gymnasium opens for the whole people, so ordinary people have chance to use the convenient equipments and conditions in the gym, people have more opportunities to exercise. We often stress to improve people's physical condition, but, without proper environment and conditions, how do people do? Secondly, the gym is free for all the students, the United States Michigan Technological University gym which I had ever stayed, it includes a multi-functional hall, which is proper for playing basketball, volleyball, badminton, table tennis, skating, swimming, gym, aerobics, etc., all of these are free for students, what you need to do is showing your ID card to the staff of gym. The multi-functional hall is free open to the community also, swimming pool and ice skating ground are open for charging.

Opening of Public Resources

Any public place in the campus, as long as the computer is provided, you can log in at any terminal network and obtain your own desktop by using your own ID card, enjoy free printer services, all of the public printers and scanners are open to students, for other people, you need providing a dedicated user name and password to log in. So no matter who you are, you can use computer to find and retrieve resources.

Various experimental resources are shared and open, and the equipment is not only open to the students belong to one college, but also can be shared among other departments. For a variety of experimental instruments and equipment, if the students have been trained, pass the examination and achieved credits, you could apply for using it independently. You can reserve the laboratory equipment in advance by email the lab administrator who will email you the specific date and time information that you can use it.

Application of ID Card

Some places are open, but not open for everyone, some places are restricted to non-school people. On one side, the campus is open, on other side, the safety must be ensured. Some places, such as library, gymnasium are open, but like some office district, apartment, students and teachers must enter with the card, other people cannot directly enter it. Fig. 2 shows the ID card used by the teachers and students, different cards have different permissions. Students should carry the card at all times, you should use it for dining, entering control places, searching library resources, booking study room, participating in activities in gym, using public printer to print, even buying things, etc..



Fig.2 ID card

Application of Network and Campus E-mail

Each student has e-mail address in accordance with their own ID card number, a variety of teaching management and activities notification, usually sent to students by email, e-mail is most important way for communication like cell phone. The campus network resources are very rich, especially for some service administration, its website information update in time, students can found what they need on the webpage, students can choose course online and can inquiry other information. The examination results should be sent to students by email on time. The wireless network is available all over the campus, student can log on with their own user name and password.

Weekly Meeting

There is a meeting on every Wednesday morning from 10 to 12 o'clock, no specific subject for the meeting, the department provide such a chance for every teacher to communicate each other, the atmosphere is relaxed and harmonious, they can exchange some ideas and talk something in their research field, for participating or not is entirely voluntary, only depend on yourself, the target is to communicate and share something each other.

Results and Discussion

From analysis and description above we can see that the university should open the campus so that more people can share and enjoy the resource and information, the university has the responsibility to share resource to everybody but not limit to the students. The university

campus is the best place for people to obtain information and knowledge, even for those people who have no chance to be students, have no chance to go to university to study. Especially, with the development of computer and internet, internet is available anywhere, the university should provide access for people to obtain resource online. Open education and MOOCs in Colleges and universities is the trend of the development of higher education in the future, the university should open not only for the domestic people, but also for the people all over the world.

Reference

- [1] Li Qingquan. To promote reform is the only way for the development of higher education in our country. *Higher education in china*, 2011 (04): 1-6.
- [2] Liu Wenxia. On the open running of the University. *University (Academic Edition)*, 2012 (08): 21-25.
- [3] Yang Jinzhong, Zhang Jianping. Research on the open curriculum platform and curriculum development model in foreign countries. *China audio visual education*, 2012 (04): 80-87.
- [4] Wang Jingai, Su Jun, Yu Han. Sharing of national excellent resource construction and thinking - class “in Beijing Normal University Chinese geography” as an example. *Chinese university teaching*, 2013 (11): 10-15.
- [5] Hu Lailin. Research on the construction strategy of quality resource sharing [J]. *Journal of distance education*, 2012 (06): 80-85.