

Practice of Library Resource Construction to Support Higher Education in University of Electronic Science and Technology of China

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Abstract. University of Electronic Science and Technology of China (UESTC) and its library set the goal of cultivating students “New Four Abilities”, guiding them to form independent personality, and educating them to adjust to society. The UESTC library build resource system with curriculums and other teaching materials. We reviewed these resources and found excellent usage records under current measure criteria. We plan to develop more efficacious implementations and introduce accurate evaluation system in near future.

Introduction

Universities shoulder the responsibility of fostering students’ growth with abilities of critical thinking and self-learning. Strengthening the construction of campus culture is an important way for contemporary college students cultivating skills and attitude. The nature of delivering knowledge ensures that university library is not substitutable in building vigorous campus culture. Library’s specific functions are as follows: guiding orientation of culture, propagating ideas behind campus culture, and cultural behavior developing education. Therefore, more attention should be paid on the construction and development of university library. The university library should have its full potential in the process of constructing campus culture, with well-educated students.

Survey

UESTC takes series of measures to train students ’New Four Abilities’, improving students’ general and professional literacy, which ultimately aiming at leaders and elites.

“New Four Abilities” requires comprehensive abilities. First, listening requires students understanding others’ meaning and emotional interaction; second, speaking requires students are able to quickly sort out their idea, and express it through a proper way. Third, reading requires students are able to read under the circumstance of mass information, form their own knowledge system. And fourth, Writing is an ability of logical combing and rational arrangement.

Ultimately, the New Four requires students have scientific speculation ability, strong verbal/written communication ability, and great integration capability to the interdisciplinary. At present, UESTC has created a comprehensive education system (CES)with “General Curriculum System”, “Professional Curriculum System”, “Classic 60”, “MOOC” and so on.

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Rich literature resources, various retrieval tools, modern computer equipment, professional librarian in information literacy teaching etc., since all of these libraries has, create a good learning environment and strong learning atmosphere, the library should become the first classroom of general literacy education and the second classroom of professional education for the students.

To cope with the construction of UESTC's CES, and broaden the perspective of students, the library spends much effort to sort out the relevant teaching materials, and provide good references to help students. The system divides into two parts, curriculum resources and other resources.

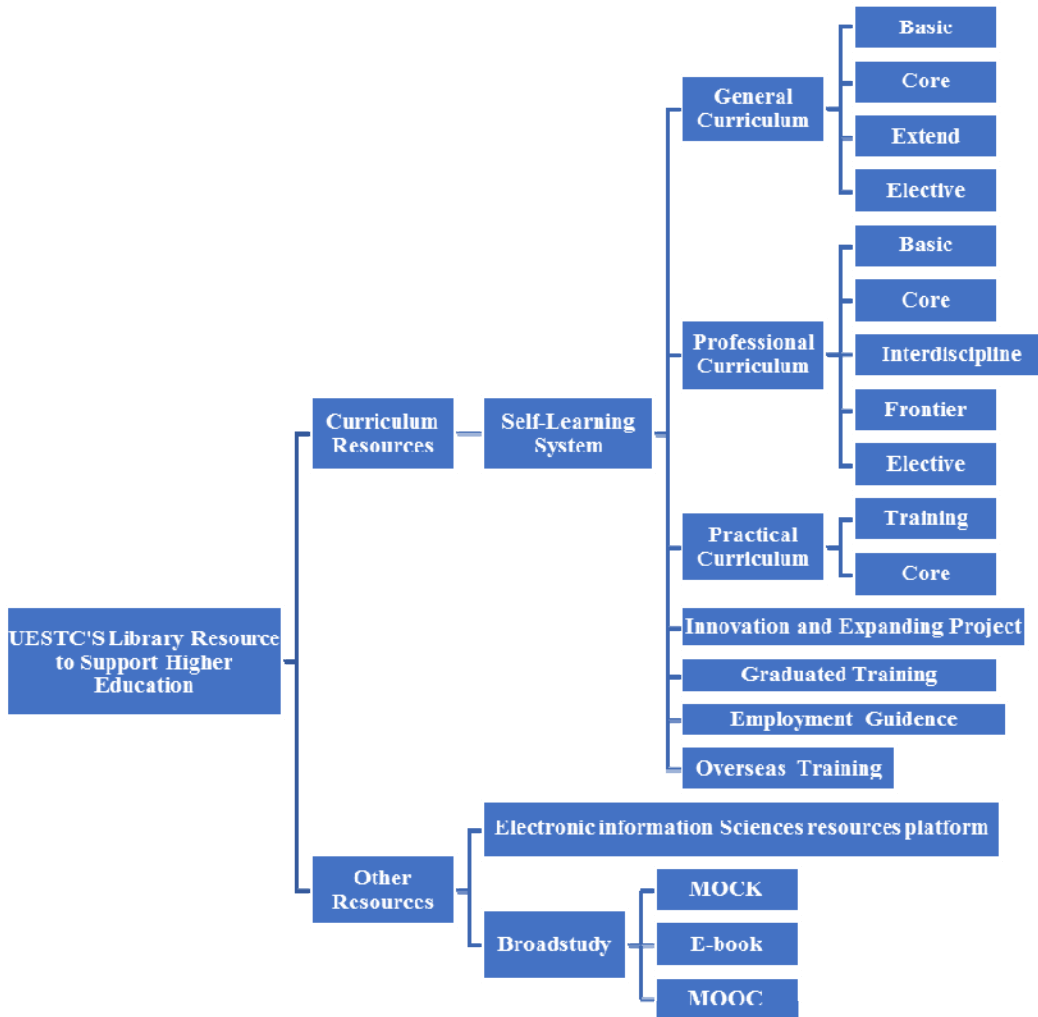


Figure 1. UESTC'S library special resource to support Higher Education.

Curriculum Resources Construction

As the essential quality of people in 21st Century, self-learning generally refers students lead the learning process on their own, which means students can set clear learning goals, make reasonable learning plans, choose scientific learning methods, and control the learning process effectively according to their own situation.

Due to the impact of examination oriented education, many college students show the maladjustment in self-learning after entering the University. In order to make higher education more effective and graduates more in line with the needs of society, cultivating students' self-learning ability becomes the key point. As one of three pillars in university, library plays an important role in deepening the reform of higher education and cultivating college students' self-learning ability.

Self-Learning System [1] is a platform jointly set up by the Dean's Office and the Library. It provides online course from UESTC's teachers. It can divide into six parts, General Curriculum, Professional Curriculum, Practical Curriculum, Innovation and Expanding Project, Graduated

Training, Employment Guidance and Overseas Training. These six parts provide respective guidance for different learning stages and needs.

General Education Resources Construction

As one of the most important educational mode in the system, general education is quite different from professional education. It originated from nineteenth Century. Since many European and American scholars were moved by the modern university academic division which is too fragmented, general education had been created to help students integrate different subjects. Then it became a compulsory subject for European and American universities in twentieth Century. And it has been highly valued and promoted in recent years. It's a kind of humanities and social education beyond utility and practicality. Regarding students as free spirits rather than products, the objective of general education pursuit's independent personality and spiritual temperament ultimately.

Library has open serial topics of courses to the students. The course of Information literacy aims at bring up the student's skills at searching, analyzing and using information in scientific study and research. The course of Reading, as Adler, American famous philosopher and educator said, is recognized as the treasure accumulated with insight, understanding and wisdom. The course, Appreciation of Ancient Chinese Poetry, is an inheritance and development of traditional Chinese culture.

Classical works contain rich aesthetic elements both in language and content. Reading classics can bring readers aesthetic enjoyment, improve the readers dyed. Reading classics, those great works beyond its history culture and nation, not only bring readers challenge and test for wisdom, but also provide readers effective training on the depth of thought and the way of thinking. Reading classics also help readers encounter with the great mind, find the meaning of existence, experience the value of life, and seek understanding and self-understanding. Relevant responsible hopes, UESTC students would open the door of thinking through reading from Plato to Rousseau, from Confucius to Mao Zedong.

Classic 60 [2] is one of the most important measures for General Education in UESTC.

The recommended bibliography has finally formed by means of widespread investigation and repeated discussion that made by experts of UESTC General Education Committee, as well as the experts from various departments of the university. It includes 60 kinds of classic works, covering wild areas as literature, history and philosophy, social science, art, mathematics and natural science etc. It is now incorporated into the "UESTC Revised Guidance Scheme of Undergraduate Talent Training (2016, 10)".

To co-operate with 'Classic 60', the library plays a topic book fair to recommend these classic works to the readers in Bo Yue House, a characteristic reading area in the library. And digital reading activity is also launched. There is a variety of ways to obtain the book on the list. Readers can borrow P-books, or read E-books on the network platform.

Other Resources Construction

This part includes all the resource except UESTC curriculum ones. It divides into the UESTC's key discipline resource and other relevant resource.

Electronic information Sciences Resources Platform [3]

The platform of Electronic Information Science is based on the key and characteristic disciplines of UESTC. Through combing the library scientific collection, screening the electronic information resources, integrating the bibliography, the database establishes a resource sharing platform of Electronic Information Science that faces Chengdu, radiates southwest and nationwide.

It covers fields of physical electronics, electromagnetic, microwave technology, circuits and systems, microelectronics and solid electronics in the 1st phase. And now, the phase of 2, it expands to fields of computer science and technology, automation, communication, mechanical and electronic engineering, etc.

The platform runs a classification management for resources sharing with compliance of Intellectual property laws and regulations. The social users are accessible to the bibliographic record while UESTCs enjoy the full open access to the library collections. There are three ways to meet the demands of the socials for the full-text, reading in the library, asking the particular librarian for the document delivery or interlibrary loan.

Broad study

Broad study [4] is a platform that contains course/text resources in different disciplines on a variety of carrier.

E-book usually comes from world famous publishing. For e.g. IOP eBooks, which divide into two parts. One is Expanding Physics, which provides reference to postgraduates and doctor graduates. The other is Concise Physics, which introduces the development and the theme with simple words. It helps undergraduates to get into physics and related subjects. SPIE eBooks divide into three types, covering seven areas on Optics. First, Monograph, includes reference books and manuals. Second, independent Texts Tutorial, cover the basic and intermediate level of Optical Science and technology, help students and researchers to enter the latest areas. Third, Field Guides, present important definition, formula, specification, application, precautions, methods and suggestions in experiments and practical work to students and trainee engineers concisely. WILEY eBook is a set with the most frequently used course book and test book in China.

What's more, there are Massive Open Online Courses, multimedia resource on the platform.

Summary

The online and offline of Classic 60 won the high praise from both the university's teaching administrative department and students. Electronic information Sciences Resources Platform receives more than ten thousand usages just after the platform's opening for several months. The usage data seen in the Broad Study Platform shows excellent result. The library presents its' first successful step on promoting quality of higher education. We suggest collaborations between relevant staffs among library, colleges and administrated departments. On the other hand, the evaluation and implementation of Resource Construction is not thorough. At present, we usually use data as simple as frequency of usage for evaluation. The future work is to design sets of criteria such as citation, usage factor etc. to evaluate the academic effects between resource construction and student's usage.

Acknowledgement

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