Cross-university Study and Credit Mutual Recognition in the Context of “Internet + Education”: Reform and Analysis of Teaching Mode

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Abstract. Cross-university study and credit mutual recognition is derived product of the new teaching mode reform which relies on "Internet + education" in the new period of rapid optimization and upgrading. The implementation of this project is of great significance to realize the sharing of education resources, promote the fairness of education, and advance the innovation of the teaching system. As the first batch of cross-university study and credit mutual recognition pilot colleges in Liaoning Province, Dalian Polytechnic University has achieved good results in the teaching mode of accounting, which takes teachers as the main direction, the students as the main object, combines online teaching with offline teaching, and integrates knowledge transfer and internalization. Moreover, the problems existing in the implementation process will be analyzed from different aspects, propose solutions and share experiences, provide a useful reference for the sustainable development of the teaching model of cross-university study.

Introduction

In recent years, the pace of curriculum reform in China has accelerated and the teaching mode has been constantly innovating. The concept of "Internet + education" has gradually gained social attention. According to the working framework of "offering open-courses, promoting resource sharing, reforming teaching methods and training students' abilities", the Education Department of Liaoning Province has already started to implement the teaching mode of cross-university study credit, which has promoted the innovation of talent training mechanism and the development of teaching system reform. At present, the courses of cross-university study credit have gradually arisen among universities, and the support of national policy has made the curriculum develop more rapidly. In this context, universities should seize the opportunities of development, actively use the informationization methods to expand the effective mechanism of education resource coverage and promote the sustainable development of the courses of cross-university study credit.

Research Background and Significance

With the upsurge of Internet technology updating iteration, MOOCs (Massive Open Online Courses) has sprung up all over the world. The development and construction of video open-courses and resource sharing courses in Chinese universities are unfolding. Up to August 2014, there were more than 300 online open-courses offered by the Liaoning Province Undergraduate Teaching Network (www.upln.cn) [1]. In September 2017, a new round of the pilot projects for the courses of Cross-university study and credit mutual recognition are also carried out. As one of the first pilot courses, the construction team of accounting is Dongbei University of Finance and Economics, the using team are Dalian Polytechnic University and BOHAI University. The author as a member of Dalian Polytechnic University Course Team, accounting was settled in September 2014, so far have completed six semester teaching reform attempts, successfully implemented and completed a series of teaching tasks for a total of 1,052 undergraduates who are from five major disciplines: Business Administration, Logistics Management, Human Resource Management, International Economy and Trade, Information System and Information Management of 2014-2016 grade in the School of Management.
Cross-university study and credit mutual recognition is an important way to realize co-building and sharing of teaching resources among universities. Its essence is based on the exploration of "Internet + education" teaching model. As the catalyst of traditional industries, "Internet +" uses information technology and network platform to make traditional industry create a new ecological, fast optimization and upgrade traditional industry in the new era. Education itself is a traditional industry, so Cross-university study and credit mutual recognition, which is based on the third party network teaching management platform, uses Internet technology and platform advantage to choose courses according to agreement between universities, complete study and mend credits after being recognized[2-3]. Firstly, this kind of teaching mode can break down the intercollegiate barriers, effectively alleviate the shortage of teaching resources and reduce the school running cost; Secondly, teachers need to discuss the teaching content about syllabus, learning process and the inspection way. It can promote teachers to share teaching experience and achieve complementary advantages; Especially for students, not only can come into contact with the quality of curriculum resources and teaching system, but also can broaden the students' learning space and field of vision, improve students' learning autonomy and flexibility.

Reform and Innovation

Accounting course, which is based on the Liaoning University Open-Course Network Learning Platform (https://uoc.upln.cn), is a new kind of teaching mode. (refer with: Figure. 1)

Teaching Environment Across Space-Time: Online Teaching Platform and Entitative Classroom

Accounting course, a total of 54 class hours (online remote video teaching period 37 hours and off-line auxiliary teaching 17 hours), can make the teaching process no longer be limited to a fixed time and space (in the traditional classroom). Online open-courses teach in Liaoning University Online Learning Platform, which is established exclusively by the Chaoxing Company for Liaoning Province, all kinds of functions fully meet the need of teaching and learning. The network platform expands the teaching space and teaching time, enhances the students' independent learning flexibility.
Distance Learning and Flipped Teaching: Knowledge Imparting and Knowledge Internalization

The accounting course is taught by the teachers of the construction team (Dongbei University of Finance and Economics). They use the Internet platform to record remote videos, and the students can arrange the study time independently, watch video repeatedly and complete corresponding exercises to deepen the memory. The teachers of the using team are responsible for assisting the teaching. On the one hand, online participation in discussion, correcting students' work, checking the progress of study and monitoring the whole learning process; On the other hand, offline organizing classroom teaching, mainly about leading, discussing, answering questions and knowledge application. Different from traditional classroom teaching, after completing knowledge through the network teaching by construction team, using team's classroom teaching is flipped teaching with mainly discussion and exchange, in order to promote knowledge internalization.

Knowledge Build and Ability Improvement: Independent Study and Cooperative Exploration

The accounting course of cross-university study is centered on students' self-learning objectives. The closely related online learning process requires the students to participate fully and restore the essence of "learning" so that the students can gradually build up the knowledge system and improve their autonomous learning ability. The offline flipped teaching aims to improve the ability of knowledge application and cooperate with others. Grouping form is adopted to analysis cases in the teaching process and hold knowledge contests, fully mobilize the students' enthusiasm for learning, promote the students to exchange and cooperate with each other in learning, solve problems together, and cultivate students' teamwork ability.

Diversified Curriculum Assessment: Process Learning and Evaluation

The results of accounting assessment include: (1) online learning (60%) -- video, homework (practice, test and case), online discussion, and online time; (2) offline learning (10%) -- discussion, attendance, etc. (3) final exam results (closed test, 30%). The final examination implements a system separating teaching and examination. The diversified assessment method makes students pay more attention to the normal process study, students can achieve more ideal and fair grades, and the average eligible rate of the six term study is 98.34%.

Experience and Improvement Suggestions

In essence, this kind of teaching mode can liberate students from passive education, make its access to good education resources, enjoy more freedom of learning time, depend on the individual consciousness and interest to complete the course. With the development of the accounting course, we also constantly keep track of student feedback, and in the form of the questionnaire (a total of 24 measure items was designed, using the five-level Likert scale), the course satisfaction survey is carried out for undergraduate students from 2014 to 2016 grade. (refer with: Figure. 2)
The following conclusions can be concluded from the feedback investigation:

1. This kind of learning mode facilitates students' learning time and improves their autonomous learning ability.

2. The network video can be repeated optionally and match the corresponding homework, which helps better master the learning content and improve the learning efficiency.

3. The open mode of curriculum setting can urge students to learn, and the problems raised online can be solved timely. However, the following problems are also present in specific practice:

**Lack of Motivation**

Although the video plays the anti-drag and anti-switch function, some students still do other irrelevant things when they play video, which is beyond the control of teachers. Some students with less self-control can't keep up with the progress of the course and submit their homework on time. Therefore, it is necessary for students to train a spontaneous learning motivation and active exploration in order to achieve good results. It is precisely what most students lack. On the one hand, the main reason is that most students are accustomed to the training mechanism of education, pay more attention to passive acceptance of learning and neglect active inquiry learning, and lack the enthusiasm of independent learning. On the other hand, students lack a holistic understanding of the curriculum and study motivation.

The learning concept of students directly affects the effect of learning mode transition, and in the following teaching process, teachers should first guide students to establish the concept of autonomous learning and self-management. In addition to pay attention to the process of learning assessment incentive, mainly from the following several aspects: Firstly, teachers should pay attention to teaching skills, more vivid interpretation of the teaching contents, emphasis, periodic construe positively for knowledge. Secondly, before the class begins, the offline guide first presents the framework and important knowledge of the accounting to the students through the narration of the story, so as to remove the confusion that the students have just started. Thirdly, the setting of teaching situations in offline teaching activities is enlightening, exploring, stimulating students’ interest in learning, and fully mobilizing students' enthusiasm for participation.

**Further Improve the Teaching Resources**

On the one hand, teaching video is too long, the students have a heavy workload and can't concentrate on their studies. Video teaching is the main way to impart and accept knowledge, and in the subsequent teaching process, the video recording shall be carried out according to the knowledge fragmentation, the content of the section is divided into several small unit, each unit around key knowledge recorded 10 minutes micro video, students can not only reduce the cognitive load, but also
improve the learning quality and efficiency, facilitate again in the future for different professional, different students of different knowledge, personalize and stratified teaching. It is convenient for students to learn different knowledge points and conduct individualized and stratified teaching.

On the other hand, the consistency of homework leads to plagiarism. For objective problems, the system automatically scores and error-correction, which can lead to the occurrence of plagiarism and unfair scoring, which is also a reason for the delay of learning progress. The answers aren't published until subjective questions are reviewed, but students tend not to focus on homework after finishing and leads to the literal guidance and explanation of the answer is meaningless. Therefore, the number of problem sets should be increased to form a library, and randomly generated to publish the work, so as to avoid the consistency of homework. The subjective questions can determine the detailed standard of the evaluation assignment in advance, adopt the way of students' mutual assessment work, and strengthen the accurate understanding and mastery of knowledge.

Technical Problems Affect Learning Efficiency

This kind of teaching model has higher requirements to the network, network and platform technical problems will affect students' learning experience and learning efficiency, mainly displays in: one is the platform, students cannot login, the second is that video is not flowing smoothly and the buffer is slow. The third is a functional error, such as an uncommitted job. In order to solve the technical problems in time, we have established the communication group of accounting in the implementation of the curriculum, and the technical service personnel of the Chaoxing Company can solve the technical problems encountered by students at any time. Video post-production can decrease the bit rate, allowing students to choose according to their own network speed video resolution and playback modes[4], improve the hardware facilities in school network teaching and ensure the smoothness of network speed.

The cross-school study and credit mutual recognition system not only achieves the excellent education resource sharing, but also promotes education fairness, the reform and innovation of teaching methods and management system.

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References