A Study on The Construction of Blended-learning System under the Perspective of Multiple Subjects

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Abstract. It has become a hot topic in teaching reform to combine classroom teaching with information technology. Blended-learning has made the new definition of teaching, and build a new "teachers leader-students body" teaching relations, and put forward new requirements for the education relation of subjects including students, teachers, managers. Paper discusses the multiple-body perspective of blended-learning system construction, containing the class distribution of internal and external learning, pre-class teaching materials, design of autonomous learning task, design of problem feedback mechanism, design of class learning activity, after-class homework and auxiliary learning resources construction, and the way of evaluating multiple links. Paper claims that the blended-learning reform of colleges and universities is an inevitable trend. The multiple subject perspective of blended-learning can promote students' autonomous learning, improve teaching effect, enrich and develop the existing single type of online and offline teaching mode.

1. Introduction

Blended-learning is a more flexible, open and interactive learning mode which combines classroom teaching and informationization teaching. With the deepening of education informationization, more and more attention has been paid on the blended-learning. The hybrid learning model which mixes the traditional learning style (face-to-face classroom teaching form) and the remote education means (digital or e-learning) is the product of the information technology rapid development and application in the field of education[1][2]. It can incentive and ensure the student's study enthusiasm, cultivate the innovation ability of the students[3]. In how-net retrieval teaching according to the keywords "blended-learning", you can see its academic attention and spread degree has continued to grow. The number of Chinese articles published increase rapidly in recent years, five articles reached 891 from 2000 to 2016. Blended-learning which developed by the E-learning, is the education practice reflection on the latter, and provide a continuity of innovative new ideas for the current reform of classroom teaching[4]. Traditional classroom teaching lacks resources, the single process and method, and easy to ignore the student body. The online learning that has been hot also lacks interaction, control, and the examination is inconvenient. The blended-learning which combines the two methods organically breaks the limitation of classroom teaching and online learning, so as to make the two advantages complementary, thus achieving better teaching effect. Hybrid learning can effectively utilize the quality teaching resources, cultivate autonomous capacity, stimulate learning interest. It also preserves the advantages of the interactive, instructional and learning atmosphere of traditional teaching, and provides a sustainable innovation path for teaching reform.

Blended-learning reform has redefined teachers, students, administrators, etc. The definition of means for teaching involves multiple subject from the content and the method to form. It is the basis
to ensure the classroom teaching quality evaluation accuracy and fairness[5]. For learners, blended-learning requires students to have greater learning motivation and consciousness, and also provides environment and space for learners to improve their autonomous learning ability. For teachers, blended-learning challenges the teaching level and concept of teachers, and requires teachers’ teaching methods, teaching centers, teaching roles and so on. For managers, construction of information platform, blended learning balance "teaching" and "learning", build relations in line with the new forms of teaching, etc., are needed to promote the teaching reform of the hybrid. To this end, the paper will discuss the challenges of blended-learning in the context of the introduction of blended-learning and its development, cases and existing problems.

2. The problems of education promotion of blended-learning in colleges and universities

2.1 The teachers' understanding of blended teaching is not enough and the motivation is insufficient

Although some colleges and universities and teachers have been carried out to explore and try, but many teachers for blended-learning has not really understand, also did not make full use of network teaching platform and resources to promote real blended-learning, related mechanism of evaluation and examination did not keep up with. The true blended-learning is not simply to use information platform to publish notices, to give students some online information, but also to integrate online and classroom teaching activities. Insufficient software and hardware level, unclear blended-learning reform effect in a short time, the teaching way and the center shift inadaptation, and so on. They all make some teachers to promote blended-learning underpowered.

2.2 Students lack the necessary autonomous learning ability and low online participation

Blended-learning’s demand of the learners' autonomous learning ability is high, at least the outside-classroom learning time, learners need to grasp the learning process and rhythm by themselves, and at the same time also need good control to ensure the learning efficiency. But on the one hand, students in the education system have less ability to cultivate this ability, and on the other hand, the lack of institutional mechanism makes students lack motivation. These make learners unable to achieve the desired learning effect and thus affect learning participation.

2.3 Lack of available quality teaching resources

Blended-learning is the combination of classroom teaching and network learning; therefore, the online education resources are important for blended-learning[6]. Education use information means development means for a long time, in terms of international, amount and type of network teaching resources are very abundant, but due to differences in language and culture, the teaching resources are not suitable for our country's higher education classroom. In contrast, the large number of education people in China and the unbalance education resources and technology demand more and more excellent online teaching resources. In this respect, our country still has a big gap.

2.4 The platform and mechanism of blended-learning are not perfect

The promotion of blended-learning means that the boundary between colleges and universities is weakened and the teaching is more open and shared. It is inevitable to construct open and share information platform, reasonable and practical evaluation mechanism. And the mechanism which pushes forward the reform of teaching and the existing education mechanism can be combined to serve teaching. Tongji university's teaching practice and research show that although the students give blended learning a certain recognition based on MOOC, but most of the students said they won't choose this mode, they think the model waste time, reduce the learning efficiency. They think there is not helpful to the promotion of examination results. This is because the blended-learning mechanism
is not perfect, and there is a distance from the existing classroom teaching, which makes learners think that blended learning is "inefficient" or "unnecessary".

3. Construction of blended-learning system under the perspective of pluralistic subjects

Under the multiple-body perspective, blended-learning system construction building reform and innovate the traditional teaching of teaching structure and teaching mode, teaching effect, in early implementation of the "flip" model have further mode innovation, make full use of the online and offline mode, to learn as the center, breakthrough in the past to "teaching" as the center, achieve the effect of wind "+ study" double progress, really achieve win-win "teaching" and "learning". This paper focuses on the research and specific design of the following "blended-learning elements" under the perspective of multiple subjects.

The distribution of learning in and out of class. "Blended teaching" allows students to learn, and leave more free time for students to interact and answer questions. This way of teaching combines the advantage of traditional mode of teaching and learning advantages of the Internet, it requires teachers blend the information technology and the classroom teaching in the process of designing course teaching and transferring knowledge, mix online (network teaching) and offline (face-to-face teaching) organically, and according to the characteristics of the students will be reasonable allocation. The task of teachers, students and other social subjects that may participate in teaching will be allocated carefully before, during and after class.

Pre-class teaching materials. The research uses the tools in the pan-ya platform to carry on the online teaching. Make a presentation of courseware or animation video and make it into a teaching material database. Building knowledge-centered knowledge system, and elaborating according to various knowledge points, finally put the curriculum content refinement, database, and then through the network platform for the transmission of high efficiency, so as to achieve the aim of guiding students to active learning.

Self-learning task order design. Teachers with the meaning of autonomous learning task list is: one is to help students in learning key and shortcuts and get twice the result with half effort, thus get a sense of accomplishment and establishing learning confidence. So, day after day, year after year, students will be among the osmosis comprehension, all things can have methods, thus conservation encountered a difficult thing is study the method of resolving the good habit of, this is quite beneficial to the student life development. In addition, through the existing teaching practice, we can find that some students who finish the ordinary homework not-standard, will adopt learning methods according to the teacher suggested after using the "task list". The list includes learning guides, learning tasks, problem design, and testing.

Problem feedback mechanism design. Include both online and offline modes. Online mode through blended-learning specialized platform, WeChat platform, QQ, E-mail system, etc. students raise questions which they don't understand, teachers or other teaching main body answer timely, and through the interactive communication deepen students understanding of the problem. After the offline feedback mechanism is completed, the teacher will comment and discuss the problems and difficulties in the speech, so as to help students improve their learning effect.

Design of classroom learning activities. Aimed at professional required courses and elective courses, in a traditional classroom model, using the class activities, the scene of the scene simulation, group discussion and other forms of analysis and solutions, thus deepening understanding, strengthen quality management, improve the students' personal accomplishment and professional skills.

The construction of extracurricular homework and auxiliary learning resources. The implementation of the extracurricular homework and the auxiliary learning resource data centralized management. Ensure teaching courseware, teaching video, and animation demonstration, links material, electronic books and other scientific storage and utilization of teaching resources, achieve high quality learning resources sharing, autonomous learning for the students and teachers teaching.
resources between communication possible. In addition, the disaster recovery system should be established to provide a stable and secure system platform for the mixed courses.

The evaluation method of evaluation. The traditional assessment mainly focuses on final exam results, and students pay attention to pre-examination preparation. As a new teaching strategy based on network, the hybrid fusion of traditional classroom learning and network learning advantage, adopt diversified evaluation system is the best way to solve the teaching evaluation under the blended-learning mainly make comprehensive examination[7], which mainly includes the individual report, achievement presentation, group discussion, network, or in the classroom communication activity assessment criteria, makes the evaluation more objective and accurate to the student.

4. Summary

The organic combination of classroom instruction and online learning blended-learning not only bring change, also brought the development of the teaching innovation road, along with the continuously promote the development of globalization and the network teaching, teaching reform is the inevitable trend. Blended-learning needs the support of the plural teaching, such as the participation of ascension requires that students and teachers work together, build, pay attention to process evaluation system and diversified needs joint efforts of teachers and management subject, and so on. Only by enhancing the ability of autonomous learning, promoting the transformation of teaching mode and building a stable platform and so on, can we improve the teaching efficiency and promote the reform of blended-learning.

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