Research on Application of Microlecture to Teaching Reform of Higher Normal Education

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Abstract. The progress in computer sciences and information technology provides more teaching modes. Recently, the microlecture has drawn extensive attentions, which could make the knowledge points clear in a shorter teaching time than traditional ways. In addition, it is not limited by time and space. This study makes some explanations and discussions on microlecture in order to apply it to higher normal education. First, the basic concept of microlecture is presented to explain the background. Afterwards, the teaching mode and advantages of microlecture are discussed. Accordingly, its potential in higher normal education can be inferred. Finally, some feasible ways are suggested to apply microlecture to the higher normal education. Conclusions are drawn based on all these analyses. And it is promising that microlecture could make contributions to the teaching reform of higher normal education.

1. Introduction
The rapid development in information technology and Internet provides easy accesses to large volume of multimedia resources. In this situation, the way of teaching and learning is also changing rapidly. Researchers seek to design more scientific ways to perform teaching works with the aid of high-technology products, among which microlecture is a typical representative [1-7]. The microlecture uses videos as the primary carrier for teaching in short time. Compared with traditional teaching modes, the microlecture conveys less contents and smaller capacity with clearer knowledge points. Therefore, the teaching and learning are no longer limited by time and space because the online videos are always accessible. Also, it is much easier for the students to get contact and interact with their teachers, which could effectively strengthen the learning.

Nowadays, the higher normal education plays an important role in culturing highly skilled workers [2, 3]. Therefore, the higher normal education should be developed and refined using information technologies. The microlecture can be a good way to promote the reform of higher normal education. Therefore, this paper introduces the basic idea of microlecture and its detailed teaching mode. Furthermore, the potential advantages of microlecture in higher normal education are discussed. Finally, some suggested ways are provided to promote the reform of higher normal education via microlecture.

2. Concept of Microlecture
Microlecture is a new kind of teching mode developed from modern online courses [1], which is mainly carried by videos. In comparison with traditional class teaching, microlecture has several outstanding characteristics. First, microlecture has much less teaching time. Generally, it is finished in 5 to 8 minutes while the traditional class may last for more than 40 minutes. Second, there are less contents in microlecture. The theme is highly concentrated and the contents focus on this theme. Third, microlecture provides flexible ways for the interaction between students and teachers. The low-capacity videos are easy to be shared through the Internet and the online teaching can be started.
anytime and anywhere. Therefore, the space and time can be sufficiently used to strengthen the teaching and learning performance.

3. Advantages of Microlecture in Higher Normal Education

In the former section, the basic concepts and relevant characteristics of microlecture are explained. In the special case of higher normal education, microlecture also has its potentials, which may effectively promote the education reform. In detail, the advantages are summarized as follows.

3.1 Rich learning resources for both students and teachers

Microlecture is carried by videos transmitted on the Internet. Nowadays, the Internet resources are notably enriched. Then, the students could get access to much related data to their subjects. Meanwhile, these data includes theoretical and practical ones. So, they could work cooperatively to strengthen the knowledge points. For the teachers, they are no longer the dominant roles as the traditional classes. In the microlecture, they are more like guides or helpers. So they must learn together with the students in order to properly resolve the problems raised by the students.

3.2 No time and space limits

Microlecture no longer needs fixed classrooms but the massive Internet. Also, the teaching does not happen at fixed time. The students could watch the videos anytime. Therefore, there are little time and space limits in microlecture. So the students could fully make use of their spare time to study on their subjects. In this way, microlecture effectively promotes the self-learning of students, which help grasp the knowledge points.

3.3 Learning with theory and practice

The traditional classes mainly focus on the theories. However, in the higher normal education, the practice seems more important because the students will be the workers for production. Microlecture provides a feasible way to learn with theory and practice. The videos online could not only present the basic principles of a certain technique or machine but also intuitively show its working process and relevant problems. Therefore, by combining theory and practice in microlecture, the students could learn more comprehensive knowledge about their subjects.

3.4 Flexible sharing and commutation

The Internet provides an easy and high-speed way for people to share data and communicate. And this merit is maintained in microlecture. So, students, who may be far from each other, could share their data with one another. They could talk and discuss together to solve a certain problem. Therefore, microlecture could promote the learning efficiency through mutual help.

4. Suggested Ways to Apply Microlecture to Higher Normal Education Reform

In order to improve the quality of present higher normal education, some reforms should be performed using the modern technologies. Owing to the advantages of microlecture, this study suggests some possible ways to apply it to higher normal education reform.

4.1 Design of appropriate microlecture

Microlecture in a higher normal college should be carefully designed to consider its practical situations. Because the main objective of higher normal education is to train highly skilled workers. Microlecture should put more attentions on the practical teaching. In addition, the time and capacity of the lecture should also be proper to make sure that the knowledge points are clearly presented.

4.2 Popularize microlecture gradually

It is unwise to totally replace all the traditional classes with microlectures when the designed scheme is not fully evaluated. So, microlecture should be popularized gradually. First, a few courses could be
designed and applied. Then, more courses are reformed. During the process, the found problems should be handled and the original scheme should be improved.

4.3 Evaluate the performance of microlecture
The performance of microlecture should be properly evaluated during the whole process of its application. It is inevitable that there are some problems. They should be found out in time to optimize the courses. Surveys should be conducted among the students and teachers to obtain the true feedbacks on microlecture. In this way, microlecture could be adjusted and improved to achieve its objective.

Fig. 1 gives a concise illustration to explain the relationship between the three suggestions. They are implemented sequentially. Also, at each stage, the results are influenced by other stages. By analyzing their relationship through scientific surveys, more suitable microlectures can be designed to enhance the teaching and learning performance.

5. Conclusion
This study discusses the potential of applying microlecture to higher normal education reform. The basic concept and characteristics of microlecture are described. Then, the potential advantages of microlecture in higher normal education are analyzed. Accordingly, some ways are suggested to apply microlecture in a highly normal college. As a summary, owing to all these advantages of microlecture, it could be adopted to promote the reform of higher normal education is properly used.

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