

Application of Online Micro-lecture in Case Teaching

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Abstract: Case teaching is a kind of situational teaching method which is highly valued in business education. The focus of the research is to combine traditional classroom teaching with the emerging online micro-lecture in university teaching. Taking case teaching as an example, a complementary teaching platform and a more diversified learning system to the traditional classroom learning have been established. According to the systematic teaching design idea, through the following processes: the analysis of the teaching objectives of case teaching, the content selection of the online micro-lecture in the case teaching, the media design of the network micro-lecture, the application of the online micro-lecture, this paper has carried out exploratory teaching design for the application of online micro-lectures in case teaching. Through these designs, we try to use the network platform to increase the sense of acquisition and usefulness of case study, so as to improve the effect of case teaching and realize the mutual benefit of teaching and learning.

1. Introduction

In 1993, Professor McGrew first proposed a 60-second course. The Introductory Course of Organic Chemistry he was responsible for was very long and required a whole block of time for formal study. However, Professor McGrew wanted to make organic chemistry more common, so he offered a 60-second course. In order to learn in an informal setting, he divided the 60-second course into three parts: concept introduction, theoretical explanation, and vivid examples. Professor McGrew believes that teaching in other fields can also adopt the 60-second course [1].

In 2008, the instructional designer David Penrose proposed the concept of Micro-lecture. Penrose believes that in conjunction with appropriate assignments and discussions, the micro-lecture will provide a platform for students to do some knowledge mining related resource searching work according to their learning goals. This learning mode allows students to have more initiative in their own learning. Penrose holds the idea that micro-lecture teaching has the following three prominent advantages. Firstly, micro-lectures with concentrated themes can effectively save learning time. Secondly, targeted learning makes learning objectives easier to achieve. Finally, the self-exploration of required knowledge brings students more active learning.

Whether Professor McGrew's 60-second course or Penrose's micro-course, its essence is a new teaching model different from traditional classroom teaching. This model does not need the whole piece of teaching time or fixed teaching environment, even formal classroom teaching form. It is designed for a more flexible, effective, and purposeful delivery of knowledge. Learning tools for online learning and online testing through a variety of online social tools can provide learners with a global even a free way of learning, and that is a kind of learner-oriented teaching mode.

2. Design Principles of Online Micro-Lecture

Characteristics and Promotion of Online Micro-lecture.

The core resource of the online micro-lecture is micro-video. According to the learners' attention and the characteristics of the micro-lecture, the design time of the micro-video is controlled in 10~15

minutes long, and text, audio, animation can be assisted. They are all knowledge points that are inducted and summarized by the teachers on the business case. Each knowledge point is relatively independent and can be a learning unit of independent learning. Instructional design is to guide the entire micro-lecture teaching activities for specific knowledge links. Teaching courseware is a multimedia resource to show knowledge points in the online micro-lecture. The case materials are relevant and vivid cases are used to illustrate knowledge points. The practice examination is a test topic that is specifically designed according to the content of the online micro-lecture, and focuses on the deep thinking of the students. The teachers' comments are their evaluation of students' learning status, which can trigger students' further thinking. The feedback of the students is the learner's summary evaluation of the current learning. The reflection of the teaching is teachers' perception and experience in the practice of online micro-lecture. Micro-lecture is a new course form of online, open, real-time and interactive. Online micro-lecture is different from traditional classroom. Firstly, compared with the 45-minute Chinese traditional university classroom teaching, the time of micro-lecture is generally limited to less than 10 minutes. Short class hours is good for learners to keep their attention and efficient learning in a short time. Secondly, micro-lecture content is miniaturized, and designed compactly around a specific knowledge point, making it easier for students to achieve their learning goals. Again, the use of micro-lecture is flexible, which is very suitable for network devices, especially mobile devices, to achieve learning anytime and anywhere. Finally, micro-lecture is highly targeted and has more prominent themes, which is conducive to the improvement of students' thinking ability.

3. Design Idea of Online Micro-Lecture in Case Teaching

Case teaching is a basic teaching method in business schools of various universities in China. It takes cases as materials, texts, video and other media means used, to introduce real management scenarios into the course teaching, so as to guide students to conduct in-depth discussion, analysis, judgment and decision-making of cases. Through the establishment of micro-lecture-based case platform, hardware equipment and regulatory system supporting system, colleges and universities standardize the case platform operation, case compilation and case use, and establish extensive school-enterprise cooperation network with other colleges and enterprises, so as to realize diversified supply of cases. Decomposing teaching objectives, selecting knowledge points, and refining them into one knowledge point according to precise teaching objectives, constitute the main content of micro-lecture. After each online micro-lecture, the learners put forward their own views and problems in discussion, and the teachers dynamically combine the subject system of micro-lecture according to the completion of students' homework, difficult problems of learners and new ideas proposed.

3.1 Analysis of Teaching Objectives in Case Teaching.

Traditional cases teaching is often designed based on teaching theory and teaching content. The lack of investigation of the background information of the enterprise and the detailed study of the process makes the case analysis and discussion bogged down in the interpretation and verification of basic management theories, which fails to effectively activate students' thinking and cultivate the quality of solving practical enterprise management problems. Therefore, in the content design of the online micro-lecture, case teaching should be carried out as much as possible from the case materials of enterprise management practice.

This can not only overcome the disadvantages of the traditional case base to some extent, but also stimulate the participants' enthusiasm for curriculum participation through detailed supplementation and tracking feedback. They increase the sense of acquisition and usefulness of case learning, and then improve the effect of case teaching, so as to realize the mutual benefit of teaching and learning. The dynamic compilation of teaching cases by teachers combined with the practical problems of enterprise management can improve the fit between cases and the real needs of enterprises.

Case teaching is a basic teaching mode of business schools at home and abroad. By reading and

studying from the real case of the enterprise, the students are guided to discover the problems in the economic activities of the enterprises. That helps students think actively, further exploration, to think and explore in-depth, and discuss strategies to solve the new problems, thus cultivating students' ability of system thinking about managerial problems and comprehensive practical skills. Due to the close connection between case teaching courses and business economic transactions, students should take the early preparation of courses very seriously and spend more time after class. According to this feature, online micro-lectures have a good foundation for implementation in case teaching courses. In addition, the popularization rates of students' computer and smartphone are very high. These college students with a good level of computer application, are very familiar with the network, proficient in using the network teaching platform for online learning, and also very skilled in using smartphones. It is convenient to accept online micro-lecture or mobile micro-lecture.

3.2 Content Selection of Online Micro-lecture in Case Teaching.

As for case teaching, the knowledge content must first be selected and then the knowledge points miniaturized to make online micro-lecture. In terms of content selection, the online micro-lecture focuses more on specific knowledge points, and each micro-video can independently complete the dissemination of knowledge content, without the pursuit of systematic content. Then, the teaching content of micro-lecture is miniaturized, and the course is divided into tiny knowledge points as far as possible, so that learners can complete the learning in a short time. In addition to using micro-video as a core teaching resource, the micro-lecture should also involve the introduction of context before class, the summary of after-school and the corresponding evaluation of learning. Therefore, in addition to recording micro-video, micro-lectures also need to carry out corresponding teaching, including the analysis of student needs and the development of micro-videos suitable for micro-lectures, and the subsequent evaluation of the course that requires a series of supplementary teaching resources.

3.3 Media Design of Online Micro-lecture.

Media design is the final form of online micro-lecture, which is mainly divided into two categories: classroom recording video and content presentation video. The filming of micro-lecture recording in class is similar to that of traditional classroom teaching video, but there are some differences. Considering the short time of micro-lecture video, teachers need to introduce each teaching content at a fast pace when shooting. The content presentation video is often produced by relevant screen recording software in practice. When making micro-video, first open the screen recording software, and then play the prepared PowerPoint courseware. With the courseware playing, the teacher explains each knowledge point, and the audio signal is collected with the headset and recorded synchronously with the PowerPoint picture. After recording, the teacher edits the content presentation video through relevant software. For the characteristics of the case teaching course, students need to receive and process a large amount of information in a short period of time. Accurate information hinting is very necessary. Therefore, although the classroom recording video is flexible and easy to use, the content presentation video with PowerPoint hinting has more advantages.

3.4 Application Mode of Online Micro-lecture.

The following online teaching links to the teaching practice of case teaching must be added. First, the teacher will make a 10-15 minute essential video lecture for each class, and put it on the school network platform for students to download and review. Secondly, the teacher will publish the discussion related to the course from time to time on the school platform on an irregular basis, which can be their own observations or comments on hot issues, triggering students to participate in the special topic discussion, and the participation rate and contribution rate are calculated according to the online statistics. In addition, a widely used third-party chat platform is used to set up a discussion group in units of teaching classes. Students can freely discuss with each other. The teacher will arrange a fixed time every week to answer students' questions or participate in the discussion. Finally, a test system for the learning effect of online micro-lecture should be established, taking a traditional

classroom lecture as the unit to conduct the online test and timely feedback. Through various teaching modes such as online micro-lecture, colleges and universities can break through the limitations of time and space, cultivate students' awareness and ability of self-learning, self-management, self-service, and improve learning efficiency and teaching quality.

4. Discussion and Conclusions

The core process of case teaching is teaching communication, which is actually the process of teachers passing knowledge to students through languages, texts, video and other media. In this process, the teacher is the sender of information, while students act as the receiver of information. After sorting out the knowledge information, teachers deliver it to students through online micro-lecture. At the same time, in the process of case analysis, the teacher will introduce the real social environment and the enterprise economic business into the classroom, so that students experience a series of real management events and problems that need to be solved, and contact with various organizational scenarios. By doing so, they can be guided to explore, analyze and solve problems using the management theories and methods they have learned. This will enable students to gain a vivid understanding of the management knowledge information, thereby increasing the interest in participating in the course teaching, stimulating the fun of active learning and excellent thinking, and effectively improving the ability to solve management problems.

Case teaching relies on case teaching materials and case descriptions, which are not about the practice of enterprise economic business itself, but the highly concise and abstract "reportage" of practice. The introduction of online micro-lecture into case teaching can enhance students' intuitive feeling of case background and make abstract business theories, principles and methods closely connected with enterprise practice, so as to consciously apply theoretical knowledge to decision-making practice. The method of case teaching combines the basic principles, theories and methods of business education with real management decisions, exposes real decision-making problems to students, and allows students to think about problems and events, thus promoting students' understanding and application of knowledge points.

5. Summary

Traditional case teaching is mainly in the form of classroom teaching, which limits the cultivation of students' active thinking and comprehensive ability. With the emergence of online micro-lecture, especially mobile micro-courses, traditional classrooms are facing challenges. As a new type of teaching resource, micro-lecture can be an effective supplement to traditional classroom teaching. The micro-lecture has some advantages that cannot be matched by traditional teaching methods. It is mainly designed for a certain knowledge point, and then recorded as a video with duration of no more than 10-15 minutes. At the same time, supporting learning materials are provided to help learners study quickly anytime and anywhere. In the face of the online micro-lecture, a cognitive misunderstanding is likely to occur in the teachers' peers. Either the traditional classroom teaching will be replaced by the emerging online micro-lectures, or that will not be a way to become a formal teaching model. In fact, they are not in conflict with each other, just different teaching modes. Therefore, only by integrating and making full use of the advantages of the two modes, can the significance of teaching be maximized and at the same meet the direction of future education development.

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References

- [1] McGrew, Leroy A. A 60-second course in organic chemistry: *Journal of Chemical Education*, Vol. 70 (1993) No7, p.543.
- [2] W.J. Wen. Research on the college micro-lecture system design mode in the wave of MOOC: *Modern Education Science*, (2015) No3, p. 53-56+88. (In Chinese)
- [3] W.S. Wang, X.Y. Yu and J.Q. Cong. An empirical study on influencing factors of case teaching effect from MBA students' perspective: *Heilongjiang Researches on Higher Education*, Vol. 36 (2018) No11, p. 139-144. (In Chinese)
- [4] X.G. Li, Y.W. Wang, D.J. Ma and S.L. Jin. Design and instructional application of miniature video course under the perspective of the micro-learning: *Modern Educational Technology*, Vol. 23 (2013) No10, p.31-35. (In Chinese)
- [5] L.M. Liang, Q.Q. Cao and B.H. Zhang. Research on a micro-lecture design model through comparative case study: *Open Education Research*, Vol. 19 (2013) No1, p.65-73. (In Chinese)
- [6] D. Shieh. These lectures are gone in 60 seconds: *Chronicle of Higher Education*, Vol. 55 (2009) No26, p.1-13.
- [7] F.L. Fan, Y. Zhang, Q.Y. Bai and L. Lin. Research on the teaching model based on interactive micro-video resources and the application effects analysis: *Modern Educational Technology*, Vol. 22 (2012) No6, p.24-28. (In Chinese)
- [8] H.N. Le, Tran. What hinders teachers from translating their beliefs into teaching behaviors: The case of teaching generic skills in Vietnamese universities? *Teaching and Teacher Education*, Vol. 64 (2017) p.105-114.