A Novel Case Teaching Method based on MOOC

Fang Qiqing¹

¹Air Force Early Warning Academy,
Wuhan 430019, China

Liu Gen¹

¹Air Force Early Warning Academy,
Wuhan 430019, China

Huang Qingxian¹

¹Air Force Early Warning Academy,
Wuhan 430019, China

Liu Qinghua¹

¹Air Force Early Warning Academy,
Wuhan 430019, China

Hu Yamin¹

¹Air Force Early Warning Academy,
Wuhan 430019, China

Abstract

In this paper, we detail our efforts on the case teaching designed for the students in the MOOC. First, we propose a three-step model to improve the quality of case teaching. Then, we incentive the enthusiasm and initiative of MOOC, real-time track the students' learning dynamic. Finally, we evaluate their own learning effect.

Keywords: MOOC; Case Teaching ; Model

1. Introduction

Case teaching is a typical teaching method including guiding students' study, solving their problems, expanding their abilities with evaluation to achieve the teaching purpose. Compared with the traditional teaching mode, case teaching is more focused on improving students' abilities of command decision-making, vicarious experience, perfect character accomplishment, etc.

But there is no uniform and clear teaching process specification can follow in case teaching at present. With the boom of MOOC and the help of many years practical teaching experience[1-4], we propose a novel case teaching model, which is Three-step based on MOOC model. And our method has carried on the bold exploration and achieved the good results in practice.

2. Three-Step based on MOOC

In this model, we divide the whole teaching process into three stages: teaching preparation, teaching implementation and teaching evaluation

2.1. Teaching preparation

With the survey of the learners' motivation and background in [5,6](shown in table 1 and table 2), teaching

preparation is in the front of the case analysis according to the teaching goal, the characteristics of students, refining teaching goals, selecting and compiling the teaching case, teaching plan, etc. It is a heavy work load and high difficulty stage, which need a certain amount of time and plenty of information as guarantee.

Table. 1: Survey of the learners' motivation

Survey of the learners' motivation

Table. 2: Survey of the learners' background

Survey of the learners' background

1) Teaching goals

Teaching goals mainly include three aspects: knowledge goals, quality targets and capacity. In particular, we should grasp the following several aspects mainly: (1) Feasibility, which is to take students activities as a starting point, give full consideration to the students' cognitive level; (2) Practical application, which is to meet the needs of army positions, give full consideration to the student ability quality of ascension; (3) System, which is to consider the case of the teaching goal of complementary between classes with the rest of the class time.

2) Compling the teaching cases

According to the teaching goals or writing teaching cases, we mainly focus on the cultivation of the ability with a clear purpose, profound enlightening and outstanding practicality to improve the comprehensive practical ability of students. Then we make decisions to guide students to the perspective-taking, give full play to their participation and active model. And we can clear multi-clues with the time series or events series to promote the analysis ability of problems step by step.

3) Scheduling the teaching plan

Scheduling the teaching plan is based on refining the faculty teaching targets and teaching cases, the arrangement of teaching time, homework requirements, the discussion plan on the class, etc. to ensure that the case teaching can be carried on smoothly.

2.2. Teaching implementation

Teaching implementation refers to the teaching on the basis of teaching preparation stage of teaching objectives, planning, etc., around the cases for autonomous exploration, group discussion, class discussion and other activities.

We must be familiar with the case and the research question. Students need to be suitable for the case situation, analyze the role of case, widely collected literatures, explore the subjective initiative, and form a strong and united team[7,8].

With the help of MOOC, we request the student to hand in their research report, comments in real time. And we make a strongly comprehensive, many-sided checking way which gathers many kinds of knowledge and ability together including multiple MOOC stages appraisal practice and class discussions.

2.3. Teaching evaluation

Teaching evaluation is to evaluate effect of case teaching with a variety of ways, such as classroom observation, which mainly observes the enthusiasm of the students participating in group discussions. Class final survey, another method of evaluation, mainly observes whether participants still discuss the case with interest, and with the faculty for further discussion. In addition, it is necessary to listen the advice of teaching inspection section.

Teaching reflection is also the important part of the evaluation, including teaching content, teaching behavior, and the result of the review and analysis. For example, this class is expected to solve the problem of what, whether achieve the target. And in the discussion, we also consider whether students are enthusiastic, which experience is worth learning. All of the above problem, we should be timely fill out teaching journal, hold the meeting of the teaching summary.

3. Conclusions

Given all of this, we believe that general teaching requirements can be standardized for coherent and purposeful three step based on MOOC, which will help teachers and students to grasp the characteristics of case teaching, help teachers do the teaching process of precise control, help students in the role of each section of the whole teaching process. In addition, also help teaching managers on case teaching process effectively monitoring and guidance. Our method can effectively improve the quality. And MOOC will help train and motivate students to do a good job grading subsequent assignments.

Acknowledgements

Sponsored by Fellowship for: 2013ZDJC0101

References

- [1] Ashton Anderson, Daniel Huttenlocher, Jon Kleinberg, and Jure Leskovec. Engaging with Massive Online Courses. *Proc. Of WWW*, pp. 687–698, 2014.
- [2] Rupert G Miller. Simultaneous statistical inference, volume 196. Springer, 1966.
- [3] J. Dunlosky, K. A. Rawson, E. J. Marsh, M. J. Nathan, and D. T. Willingham. Improving students' learning with effective learning techniques: Promising directions from cognitive and educational psychology. *Psychological Science in the Public Interest*, 2012.
- [4] Ashton Anderson, Daniel Huttenlocher, Jon Kleinberg, and Jure Leskovec. Steering User Behavior with Badges. *Proc. Of WWW*, pp. 95–106, 2013.
- [5] Team of PKU MOOC Teaching Research. 2013 first MOOCs of Peking University: People, crowd and network course investigation and analysis report[R].
- [6] Jiang Zhuoyan, Zhang Yan, Li Xiaoming. Learning behavior analysis and prediction based on MOOC data[J]. *Journal of computer research and development*, 2015,52(3):1-14.
- [7] Yang Yuting, Shi Yuhui, Xia Shunren. Based on discussion of mechanism of brainstorming optimization algorithm [J]. *Journal of zhejiang university of technology*: 2013,47(10):1705-1711.

- [8] Li Daxiao, Wang Zheng. Case teaching in the professional education [J]. Continuing education, 2013(12):57-59.