

Application and Practice of SPOC Platform in Teaching and Formative Evaluation of "Educational Psychology"

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Abstract

The reform of teaching evaluation methods is the key to improving the teaching effect of courses and the quality of talent training. Educational psychology relies on the small private online course (SPOC) teaching model to carry out teaching, focusing on improving students' innovative ability, independent learning and independent thinking ability, and the quality of teaching evaluation and teaching feedback is implemented in this teaching model. The effect has a significant impact. The SPOC platform in MOOC is a new teaching model integrating information technology and teaching resources, and it plays an important role in promoting teaching reform. Relying on the MOOC to carry out formative evaluation can not only achieve standardized evaluation, but also greatly reduce the workload of teachers. This article takes the special course "Educational Psychology" of a university SPOC as an example, and explores and summarizes the design and implementation process of the three stages of formative evaluation, as well as the practical effects of pre-class preparation, in-class teaching and after-class review. The reflection provides references for the implementation of formative evaluation in professional basic courses, the effective achievement of student teaching feedback, the cultivation of students' autonomous learning ability and the teaching reform of evaluation methods.

Keywords

Formative evaluation; SPOC online course; Teaching feedback.

1. Introduction

Small-scale restricted online courses are a small-scale, restricted mixed-desk teaching model that combines online courses and offline physical courses [1]. SPOC was first proposed by Professor Armando Fox of the University of California, Berkeley in 2013. The purpose is to introduce high-quality MOOC resources into physical classrooms to expand classroom knowledge, deepen teacher-student face-to-face communication, and improve teaching quality. This online and offline hybrid teaching model was quickly introduced into China. Tsinghua University, Zhejiang University, Shanghai Jiaotong University, etc. successively launched SPOC platform online teaching, opening the exploration and practice of the online and offline hybrid teaching model [2]. "Formative evaluation" was first proposed by the famous American evaluator Scriffin in the book "Evaluation Methodology". A systematic evaluation of the degree of mastery of the learned knowledge" [3]. Formative evaluation is a procedural and developmental evaluation carried out in the teaching process, that is, according to the teaching goals, a variety of evaluation methods and forms are used to track the teaching process, feed back teaching information, and promote the overall development of students. This is a timely and effective test for learners' knowledge mastery and ability development in the process of education and teaching. It pays more attention to the student's learning process, not just the results, but also pays more attention to the advantages and disadvantages of students in each stage of learning. This is also a future-oriented evaluation. Its purpose is to promote the healthy

development of students, improve the teaching system, and seek teaching methods suitable for the characteristics of the subject, so as to improve the teaching level of teachers and achieve mutual benefit in teaching [4]. Formative evaluation methods include immediate evaluation, performance evaluation, test evaluation, portfolio evaluation, etc. [5]. Based on a teacher's application of the SPOC platform to the teaching status of "Educational Psychology", the author explored a new formative evaluation mechanism and found that the formative evaluation effect has been improved to a certain extent and the teaching quality has been improved. The following introduces some experiences in the exploration process. It provides a reference for the development of online and offline hybrid teaching of professional basic courses, and the cultivation and improvement of students' autonomous learning ability.

2. Case Analysis

This article takes a university public course "Educational Psychology" as the research object. Due to the epidemic situation, the course adopts online teaching in the early stage: SPOC platform + QQ group + Tencent conference; later back to school adopts online and offline mixed teaching: SPOC platform + classroom teaching. The educational psychology course is a public course in the teaching plan of this major, but educational psychology is an important basic course with a complete theoretical system. The content of this course includes 12 parts including introduction, attention, memory, thinking, children's psychological development theory, development of children and adolescents, learning psychology, learning motivation, learning and strategies, teacher psychology and student psychology. The goal of the course is to enable students to master the basic concepts and principles of educational psychology, understand the relevant laws of educational psychology, and lay the foundation for learning other courses.

2.1. Related Data

SPOC's teaching model is divided into three stages. Before class, class and after class, combined with formative evaluation, teachers and students can learn in order under this teaching model, which effectively improves learning efficiency. The SPOC teaching method can fully display the teaching content before class, class and after class, deepen students' understanding of knowledge, improve students' enthusiasm for learning, and create a good classroom atmosphere.

2.1.1. Pre-class

The preview effect is one of the key factors for the high-quality implementation of classroom teaching, and the formative evaluation is an effective guarantee for the quality of the preview. First of all, teachers conduct careful and detailed lesson preparation, formulate scientific teaching content according to the syllabus, and determine teaching goals. In order to improve the enthusiasm of students, teachers should guide students to understand and self-study the content of the course before class when selecting teaching materials. Secondly, the teacher controls the playing time of the SPOC video to no more than 15 minutes to fully attract the students' attention within a limited time. Then, teachers complete the production of SPOC videos before the start of each class and upload them to the school's SPOC server. Finally, the teacher puts forward the teaching content and teaching objectives of this lesson to the students before class, and arranges questions related to the course to deepen students' understanding of SPOC videos. The learning data obtained by the teacher in the background can be quantified: the number of videos watched, the number of video views, the length of time the video is watched, the number of topics in the discussion area, the number of comments in the discussion area + the number of replies, and the teacher can get a general understanding of these data. When it comes to student learning, students can also make further plans for their own learning.

2.1.2. Mid-class

Online teaching is a new teaching mode, and the convenience of teacher-student communication is unmatched by traditional education modes. A certain drawback of online communication is that teachers cannot fully understand the level of knowledge of all students, and cannot effectively reflect the authenticity of students' learning results on the Internet platform. When teachers and students use the SPOC model for teaching exchanges, they make full use of the time in the class to describe the overall knowledge framework for students, systematically explain the knowledge, and regularly check the students' learning results, and master the students' knowledge in time through tests. The degree of mastery. In the classroom, the teacher will list the questions raised by the students in the discussion area of the spoc platform, discuss and answer with the students in the Tencent meeting or offline classroom.

2.1.3. After Class

Teachers set up topic posts in the discussion area of the SPOC platform, which are usually topics related to the application of knowledge in this section to deepen students' understanding of knowledge and consolidate classroom knowledge. Topic discussion mainly focuses on the key points and difficulties of teaching. Students solve problems in combination with literature or life cases; good homework can expand their thinking and cultivate students' autonomous learning ability [6]. Students' scores are composed of four parts, and mind maps account for 40%; compare the whole content of this MOOC course with at least one other educational psychology textbook in the form of diagrams or tables, and extract the similarities between the two. The content, at least compared to the three-level headings of each chapter, accounts for 20%; the final exam accounts for 40%.

3. The Application and Practice of Formative Evaluation Based on Spoc Platform in Teaching

3.1. Relying on the Evaluation Mechanism of Online Open Courses

The SPOC course of "Educational Psychology" for graduate students of grade 19 in the spring semester of 2020 in a university is carried out using MOOCs. On the MOOC platform, in addition to the micro-class videos and ppt materials for students' independent learning, unit tests are established according to the teaching units. Unit tests are objective questions. In addition, the teacher requires that each unit and every lecture must make their own mind map and class time. The teacher organized a Tencent meeting to answer questions about the contents of the MOOC last week. The content of the course is regularly released every week and the deadline for submitting unit tests and assignments is set, and students are required to complete them on time. Students' grades are composed of four parts, with a mind map accounting for 40%. Compare the whole content of this MOOC course with at least one other educational psychology textbook in the form of graphs or tables, and extract the similarities between the two. content. At least compare to the three-level headings of each chapter, accounting for 20%; final exams account for 40%. The unit test has 2 chances to answer the questions. The students will answer the questions by themselves, and the system will automatically determine the grades, and the students can make self-evaluation based on this. In addition, teachers can make a comprehensive evaluation of students based on their performance in course discussions and homework, and can appropriately increase or decrease the final grade. The evaluation mechanism is composed of multiple aspects. Because the curriculum based on the SPOC model divides the course teaching into three stages in detail before class, class. More than 60% of the evaluation proportion. This is completely different from the evaluation method of the traditional education model. The focus of the summative evaluation of the traditional education model is to reflect the authenticity of the students in the learning process. The formative evaluation includes many aspects. The pre-class stage mainly evaluates students' self-study

situation and group discussion situation, and students can evaluate and score each other. The classroom stage is mainly to evaluate the common performance of teachers and students, and teachers and students can evaluate and score each other. The after-class stage is mainly to evaluate the completion of students' homework, and the teacher will evaluate and score. The evaluation mechanism is based on the SPOC platform, and the entire process and results are open and fair, as shown in Figure 1.

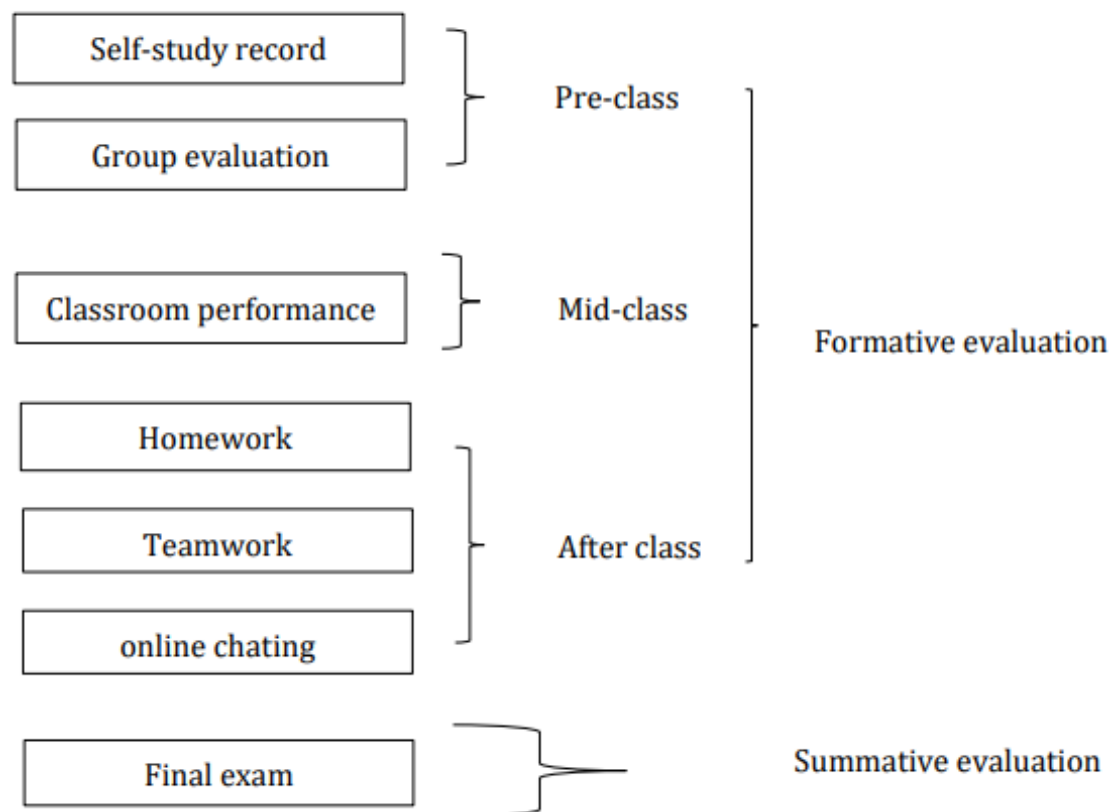


Figure 1. Evaluation mechanism of SPOC model

3.2. Formative Evaluation Method

The course has two aspects of evaluation, one is evaluation through offline classroom teaching, and the other is evaluation through unit testing and discussion on the MOOC platform. The data generated by the formative evaluation program, on the one hand, can reflect the learning effect of students throughout the learning process, on the other hand, can expand and consolidate students' knowledge.

In the classroom, PBL teaching methods are used to guide students to think independently and improve their ability to solve problems. The teacher organizes and guides the classroom in the role of the host, allowing students to fully demonstrate the results of individualized learning and independent thinking. Through the interactive teaching of Tencent conference, the key and difficult problems are solved, and the entire classroom activities are recorded to form teaching data. After class practice is improved, the teacher assigns more complex tasks according to the results of class discussion and analysis. Let students collaborate in groups and share their thoughts and learning experience through classroom explanations. Teachers put forward higher requirements for students' ideas and combined with students' actual conditions, allowing students to expand. In summary, constructing the SPOC teaching process requires teachers to conduct dynamic analysis and design with students' individual learning and thinking as the main body. At the same time, the SPOC platform covers the data of the entire teaching process, which can realize the formative evaluation of the entire learning process of

students, solve the problem of determining the universe in one test, and provide a basis for teaching reform and research.

3.3. Effects and Advantages of Formative Evaluation Relying on the Evaluation Mechanism of Online Open Courses

Using the Chinese University MOOC platform, students' usual formative evaluation scores can be derived from the system, using computer software to analyze each student's learning situation and results, and feedback the results to teachers in a timely manner. Teachers can adjust their teaching plans and improve based on the results. teaching method. Compared with traditional formative evaluation methods, teachers can quickly grasp the learning situation of students, and the workload is greatly reduced. At the same time, the MOOC discussion area also increases the opportunities for communication and interaction between students, and the discussion questions also give students more thinking space and opportunities for mutual cooperation. Therefore, the online formative evaluation of students using this platform has reached a standardized Evaluation did not increase the workload of teachers. I think that through the use of a formative evaluation system, students' daily learning, active learning, and continuous learning can be strengthened, and students' understanding and memory of the course can be increased, instead of relying on the two or three weeks before the final exam to seduce the content that may have to be tested. Rote memorization, this short-term assault-strengthening memory method that does not usually study, temporarily clings to the Buddha's feet, may be effective in the short term. After the exam, it can pass the exam smoothly and even get a good result. But the students don't If you don't understand and remember what you've learned from a fundamental level, you will forget it soon after the exam, and students will not be able to use relevant knowledge proficiently in subsequent studies and work. Therefore, the application of formative evaluation will lay a good knowledge reserve for students' future study and work, and will also benefit students throughout their lives.

4. SPOC Platform's Application Deficiencies in Formative Evaluation Case Analysis

There are many advantages in using MOOC to carry out formative evaluation, but there are also disadvantages. First, although the MOOC platform records each learner's video viewing, discussion forum speech, unit tests and unit assignments, reflecting the participation of online courses, it is unavoidable to concentrate on "swiping lessons". In order to make up for the shortcomings of this approach, corresponding measures should be adopted. Second, the current formative evaluation based on online open courses is only a supplement to classroom teaching, and it has not yet achieved the true integration of in-class and out-of-class. Some students still use traditional learning methods due to various reasons, and cannot adapt to the new evaluation methods for a while, resulting in the inability to complete the tests and homework within the limited time, and may also bring many problems to the final course evaluation.

5. Conclusion

SPOC controls the number of students in the course within the teacher's ability, and allows teachers to flexibly design the course, plus its support for learning analysis technology, and use it to conduct teaching activities that meet the learning style of students and meet the needs of students. Through the SPOC platform, teachers can provide students with integrated high-quality and hierarchical teaching resources [7], create a good information-based teaching environment, and give full consideration to the dominant role of students while playing the leading role of teachers. Our school's "Educational Psychology" SPOC course teaching relies on

the online open courses of the Chinese MOOC platform for formative evaluation, which can promote students' active learning and continuous learning, and improve students' course performance, increase the interaction between teachers and students, and between students and students. The communication and interaction between students and the promotion of students' innovative thinking have achieved certain results. In the future, it is necessary to further strengthen the understanding of students, deeply integrate online and offline teaching, and promote students to effectively use the platform for active learning, to have a deep understanding and grasp of knowledge, and to make better use of online open courses in formative evaluation. effect.

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