Exploration of New Blended Teaching Reform under SPOC Mode -- a Case Studies Public Crisis Management as an Example

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Abstract. This research is the formation of autonomous learning ability is an important characteristic of self development, self-development is one of the core qualities of students in China. Students form autonomous learning ability, which means that students can have more learning awareness, more diverse and suitable learning methods, more effective assessment and regulation of learning progress. It is an inevitable choice for college students to strengthen their self-learning, which is an inevitable choice for the development of the times and their own development, help students with more learning attitude, with more good learning strategies, with more reflection to promote skills. SPOC is the teaching media and resources adopted by many universities. How to use SPOC to promote college students' autonomous learning has become an important research topic of educational technology.

Keywords: SPOC Mixed type, Reform in Education Public, crisis management

1. Introduction

With the continuous innovation of information technology level, our society is developing steadily. Multimedia technology of information is also gradually applied to all walks of life, from the teaching law, teaching mode, teaching content and teaching tools of information technology based on network, in training, improve students' autonomous learning ability and other advantages. Information technology has changed the students’ consciousness and form of learning knowledge. It is an important supporting role in modern education. It helps to cultivating students' autonomous learning ability and providing sufficient and abundant resources for autonomous learning. Lifelong learning has grown up to be an inevitable trend. In the new era of information technology, knowledge is rapidly updated. In order to master actual knowledge, college students must realize independent learning. Chapter 19 of the National Program for Medium and Long-term Education Reform and Development (2010-2020) states that "students should be encouraged to use information means to study independently and improve their ability to analyze and solve problems with information technology". College students' autonomous learning mode will present a major breakthrough, and ultimately realize the information technology multimedia autonomous learning centered on College students. Therefore, contemporary college students must cultivate and improve their ability to learn
independently, so that it becomes their own vital skills and survival requirements. SPOC is particularly fierce in the last three years, is the main focus on the various functions of MOOC platform, is a personalized learning means of MOOC curriculum, is the inheritance, development and Transcendence of MOOC. The concept and application of SPOC are constantly being interpreted. Its memory is based on MOOC, analyzes and solves the problems of MOOC, and proposes a new online learning from. In terms of theoretical value, this study explores the application strategies of self-regulated learning supported by SPOC from the perspective of the problems existing in the course of self-regulated learning of Public Crisis Management. On the one hand, this study provides fresh ideas and methods for promoting the application of SPOC in basic disciplines, on the other hand, this study from the perspective of SPOC resource support. To explore the application of College Students' autonomous learning ability provides a new theoretical perspective for promoting autonomous learning. On the one hand, this study provides a reference case for SPOC to support self-regulated learning, on the other hand, it helps to cultivate and improve students' self-regulated learning ability. Based on the above analysis, the effectiveness of SPOC in promoting education informationization and satisfying students’ autonomous learning cannot be ignored. In order to comply with the development of the time and the requirements of the new curriculum reform, we should combine the proper application of SPOC with the application strategy of students' autonomous learning ability. This will be one of the most economical and effective ways. This study will start from the current situation of College Students' autonomous learning ability, analyze its main problems, firmly grasp the problem of autonomous learning ability in SPOC, take the public crisis management course as an example to analyze its relevant cases and put forward implementation strategies, through the strategy to verify the effectiveness of the new hybrid teaching reform under the SPOC model.

2. Concept definition

2.1 SPOC

SPOC is a form of classroom teaching to achieve students' psychological expectations, complete the assignment of learning tasks and generate strong interest in learning, aiming to promote students' autonomous learning and personalized teaching. SPOC has the characteristics of small scale, openness, unlimited learning space, extensive content, full learning, free discussion and dynamic learning evaluation. It is helpful to open up students' learning thinking, help improve students' autonomous learning ability, and make students independent and productive in learning methods, learning content and learning space. In the specified time, we should accomplish the learning plan and arrangement, and free and all-round development.

| No | Project        | MOOC                  | SPOC                                      |
|----|----------------|-----------------------|------------------------------------------|
| 1  | Curriculum nature | Network course       | Using MOOC to optimize and improve teaching resources and methods. |
| 2  | value orientation | Best quality educational resources | Online test, machine evaluation, peer review and classroom evaluation. |
| 3  | Evaluation method | Online tests, machine reviews, peer reviews | Restrictive, mostly for students who meet the conditions within or around the world. |
| 4  | Curriculum openness | Completely open and wide audience. | The cost is relatively high (including tuition fees, etc.). |
| 5  | Learning cost    | Low cost              | Online and offline blended learning, flipped classroom |
| 6  | learning style   | Online self-study     | immersive |
| 7  | Learning experience | Defect                | Immersive |
| 8  | teaching effectiveness | difference           | good |
| 9  | Technical support | Powerful, rich in structure, support for large-scale | Low requirements, using MOOC or self built platform, do not need large-scale. |
2.2 Autonomous Learning

Self-regulated learning is a work of self-regulated learning. Each learner should have independent learning space, free learning style and completely self-regulated learning in the planned time. This paper expounds and analyzes self-regulated learning from the perspectives of constituent elements and process elements, focusing on the objectives, strategies, processes and methods of self-regulated learning, in order to optimize the strategies of self-regulated learning, stimulate students' motivation for self-regulated learning, generate interest in learning, and promote students' cognition of self-regulated learning. It is good for students to give full play to the time and space of autonomous learning.

According to the research survey, scholars at home and abroad have unhealthy levels of theoretical and practical research on Autonomous learning. On the definition of autonomous learning, scholars at home and abroad have slightly different explanations. The representative has:

Foreign representative: the definition of Chi Mo man. He believes that when students are actively involved in metacognition, motivation and behavior, their learning is autonomous. He also proposed a systematic framework for the study of autonomous learning, explaining the essence of autonomous learning from six aspects: the motivation of autonomous learning is intrinsic or self-driven; the learning method is planned or has been proficient to the degree of automation; and the arrangement of learning time by autonomous learners is regular and self-driven. Effective; they are aware of the consequences of learning; they are sensitive to the material environment of learning and can adapt to it; they are equally responsive to the social environment of learning.

Domestic representatives: the first is the definition of Yu Vinson. He thinks that self-regulated learning is a way of learning that students themselves dominate their own learning and are opposite to other-regulated learning. Self-regulated learning can be divided into three aspects: first, the planning and arrangement of learning activities; second, the monitoring, evaluation and feedback of their own authentic learning activities; third, the regulation, correction and control of their own learning activities. Second, Dong Qi and Zhou Yong analyzed the characteristics of autonomous learning, and put forward that autonomous learning has the characteristics of initiative, feedback, regulation, transfer and effectiveness.

3. Analysis

Through research and investigation, application strategies of SPOC can be analyzed from three aspects: the strategy design of promoting learning motivation, the strategy design of promoting cognition and the strategy design of promoting learning time management.

In this paper, the definition of autonomous learning is performed from two angles: horizontal and vertical. From a transverse perspective, it relates to the comprehensive definition of autonomous learning from all aspects or dimensions of learning. If the student's learning motivation is self-driven, the learning content is his choice, the learning strategy is self-regulated, the learning time is self-planning and management, the student can actively create material and social conditions conducive to learning, and can make judgments and evaluation of the learning results, then his learning is Fully autonomous. [9] To define autonomous learning from a longitudinal perspective is tantamount to explain the essence of autonomous learning from the whole process of learning. If students set their own learning goals, make learning plans and prepare for specific learning activities. They can make self-monitoring, self-feedback and self-regulation on learning progress and learning methods in learning activities, and can self-examine, Self-Summarize and self-regulate learning results after learning activities. Self-evaluation and self-remedy, or his learning is autonomous; if in the process of learning completely dependent on the guidance of teachers or others, his learning is involuntary.

The advantages of both horizontal and vertical perspectives lie in the fact that horizontal definitions provide a basis for teachers to determine the staged objectives of cultivating students' autonomous learning ability, and to teach students in accordance with their aptitude according to their different learning characteristics: vertical definitions help teachers to make clear when and when students need
supervision and guidance in the process of learning activities. Less guidance and assistance. Both have functions and complement each other.

### 3.1 Strategy design for promoting learning motivation

The stimulation and maintenance of learning motivation need the following steps: analyzing the requirements of learning tasks; defining the standards of learning behavior performance; and exploring the autonomous learning strategies needed to complete the learning tasks. Therefore, each step will be applied to the design of the application strategy.

**Table 2 Learning motivation strategy design**

| Policy name            | Strategy description                                                                                                                                 |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Task strategy          | Using SPOC to create task flow to support the learning process, students get real tasks from the classroom, with tasks to learn. For example: watching micro-lesson video, students get the real task, students on the knowledge of the subjective feelings of knowledge. |
| Task anticipation strategy | SPOC provides abundant scaffolds to promote students to form their own expected learning strategies, and students construct task expectations and design their strategies. |
| Process log strategy   | Students learn about their learning progress by using SPOC notes, notes and other functions. It helps students to grasp knowledge, analyze problems, feedback information and improve themselves. And other aspects of learning ability. |

In the design process, we use SPOC to create learning task situations, obtain tasks, form strategies for acquiring tasks, play short-sighted micro-videos, students acquire tasks and perceive them, and then use SPOC to provide support, students constantly look for their own task expectations, form task expectation strategies, discuss online, and learn. Students list the selection criteria for strategy mastery and corresponding selection, and finally through SPOC process records and analysis of the problem, the formation process records the strategy, students use notes, notes in class to record self-learning evaluation and reflection, complete the analysis of successive strategies.

### 3.2 Promoting cognitive learning strategy design

The main steps to promote cognitive learning strategies are as follows: according to the actual teaching content, students analyze the possible application of those learning strategies; analyze and classify, express and evaluate the learning strategies; and focus on which strategies can be used in this study.

**Table 3 Cognitive learning strategy design**

| Policy name                                      | Strategy description                                                                                                                                 |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Group and online discussion strategy             | Using SPOC to discuss the message function, teachers guide students to discuss in groups and discuss online. On the point of view. For example, click on the online discussion area, and students can learn content and knowledge by using this function. In the course of discussion, students should deepen their learning contents and improve the two reinforcement of knowledge contents and essentials. |
| Learning interaction strategy                    | Use SPOC function in online discussion, peer review, help function to complete learning and interaction. Interactive methods can include peer review, class discussion, and online peer review. |
| Timely evaluation and                            | Feedback strategies are based on students' different problems and understanding of learning content, students' timely evaluation and feedback on the implementation process of learning, teachers' help and guidance, internalize learning and consolidate knowledge points. |
3.3 Learning function design

SPOC learning is shown as different learning modules, including electronic classroom notes, classroom cloud notes area, comprehensive discussion area, download information area, help and reflection area, learning process record sheet and self-learning evaluation and other functions. Electronic notes are mainly for students to do in-class analysis of learning content and comb the main points of knowledge and content; classroom cloud notes area is mainly for teachers in the classroom to explain and self-study process of knowledge difficulties and key points and learning confusion in the process, at any time to take electronic notes to record the way; Zone function is more comprehensive, students can not only ask questions about the knowledge they are about to learn before class, but also ask questions about the confusion caused by the differences in learning in class. They can also put forward the concept of self-combing for this course in the discussion area after class and express their views and opinions on this course, and discuss online in real time. On peer review, download information area students can download information, after class to find out the missing, consolidate knowledge learning; help and reflection area students to ask for help in learning difficulties, teachers online and offline through students' feedback, to give students learning help and answers. Through the coordinated use of various functions, the application of autonomous learning strategies for college students can achieve the best results and display the best learning results.

Students will be grouped and recorded in order to stimulate students' autonomy in learning and achieve the intended learning goals. The learning record sheet generally presents the progress of the learning in a form manner, paying more attention to the recording of the learning task process. The design idea is as follows Figure 1.

![Figure 1: Autonomous learning process](image)

SPOC stresses that teaching should be built on students' personalized characteristics and provide students with a small-scale and personalized online learning environment. It is a kind of online course from which can satisfy the students' personalized characteristics and manage and control them pertinently. Exploration of SPOC mode has appeared since 2014, and the number of articles published today is extremely limited. Some of them have explained the concept and characteristics of SPOC research, and some have expounded the new characteristics of SPOC. At present, the application of SPOC courses in Colleges and universities has been enhanced, which has been widely recognized by university students. It takes the form of students' participation in Colleges and universities or the alliance of colleges and universities, introduces high-quality learning resources to promote the completion of auxiliary classroom teaching in Colleges and universities, at the same time closely links online and offline teaching activities, thus realizing mixed teaching, deeply integrating information technology and subject teaching, cultivating and training students' learning Ability. Secondly, in the theoretical research of SPOC, SPOC is a kind of network teaching. The characteristics of network teaching directivity are obvious. SPOC puts forward the restrictions and conditions for admission. The purpose is to subdivide students' basic levels and professional types, and carry out hierarchical teaching. At the same time, SPOC can standardize students' learning behavior and help optimize the learning structure of SPOC students with high dropout and low completion. SPOC has the scale of primary school learning, which cannot only improve the participation and interaction between teachers.
and students, but also be more targeted. Teachers' teaching methods, students' Throughput and the depth of understanding are constantly increasing. It completely solves the problem of "teachability and education" in peer review, and because SPOC has the characteristics of personalized learning. Students successfully pass the application. Produce a sense of learning pride, enhance the value of knowledge resources and use, so as to stimulate students to find out, enhance learning drive.

Due to the lack of SPOC-related technical support, strong limitations of Online Autonomous Learning and low attention to SPOC in autonomous learning, application-oriented local colleges and universities cannot promote the effectiveness of autonomous learning supported by SPOC. Taking "Public Crisis Management" as an example, the latest hybrid teaching reform under SPOC mode is explored to optimize and perfect students' autonomous learning. Strengthen the cultivation of students' professional skills, integrate theoretical teaching into case analysis, and change "teaching this course will be "into" improving students' ability and overall quality". To fully mobilize students' learning enthusiasm and initiative, encourage students to explore hard, enhance the sense of integrity, and develop a good style of study.

4. Conclusion
The application strategy of SPOC to support college students' autonomous learning ability is feasible, and has achieved certain results in practical application, but there are also problems. First of all, this study on the factors that SPOC supports college students' autonomous learning, SPOC supports college students' autonomous learning process strategy design dimension, basis and so on are based on combing and integrating the relevant research results, combined with the status qua of College Students' network-based learning put forward, some views are not mature, but also need to rely on the Internet. Teaching practice and time is evident.

Secondly, due to the limited number of participants, the design and implementation of the experiment process is relatively simple, the test of various indicators in the process of the experiment is relatively vague, the experimental time is short, and the experiment should be improved to control, carefully consider various types of content variables and combined with experimental data for effective analysis. Therefore, the application and implementation of the strategy need us to improve the level of analysis and verify its actual effect. Based on the SPOC function, this study takes "Public Crisis Management" as an example to conduct in-depth study and analysis of the impact strategies of College Students' autonomous learning, and has made progress. However, it is necessary in order to improve the level of research on the details of autonomous learning, and increase the learning function in the SPOC function, so that college students can learn independently. The effect of learning is more meaningful. In the future study, I will further deepen the study of constructivism, multiple intelligences and the theory of information technology and curriculum integration, and then continue to deepen the teaching practice of SPOC, constantly improve the research level of SPOC support for college students' autonomous learning strategies, in the survey with the staff, select more widely. Student content survey and comparison; combined with the combination of individual learning ability and SPOC function for strategy design, the development of a SPOC course of student autonomous learning platform, so that the vast majority of college students experience in the SPOC subject teaching curriculum autonomous learning, using learning strategies to complete the learning process. Enhance the learning effect and realize the charm of autonomous learning. On your CD, please indicate the format and word processor used. Please also provide your phone number, fax number and e-mail address for rapid communication with the publisher. Please always send your CD along with a hard copy that must match the CD’s content exactly. If you follow the foregoing, your paper will conform to the requirements of the publisher and facilitate a problem-free publication process.

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