

The Curriculum Reform of Supply Chain Management Based on SPOC Mixed Teaching

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Abstract

The mixed teaching mode based on SPOC is a new teaching mode that integrates MOOC and traditional teaching. Its main features highlight students' dominant position, teaching places are more diversified and three-dimensional, curriculum learning space is expanded, and personalized guidance to students is more prominent. This new teaching mode can effectively improve the effectiveness and pertinence of supply chain management, stimulate teachers' teaching potential and students' innovative thinking. The teaching mode based on SPOC has opened a new direction for the teaching reform of supply chain management.

Keywords

Supply chain management, SPOC, Mixed teaching mode.

1. Introduction

Contemporary college students, especially today's post-00 college students, grew up under the network environment. Digital and media technology have become basic literacy. Traditional teaching has failed to attract students' interest and meet their needs, which highlights the basic role of "Supply Chain Management" course in logistics management education. Facing the increasingly complex network environment, the course must be reformed in order to attract students' attention, adapt to their needs and lead their growth. The outline of China's medium and long term education reform and development plan (2010-2020) also points out that "develop online learning courses, innovate teaching modes, update teaching concepts, improve teaching methods and improve teaching effects" [1]. In this situation, SPOC, a new hybrid teaching mode, which integrates the advantages of MOOCs and traditional teaching, emerges as the times require, and also opens a new direction for the curriculum reform of supply chain management.

2. Characteristics of SPOC-based Mixed Teaching Mode of Supply Chain Management

SPOC (Small Private Online Course) refers to small-scale restricted online courses [2]. It is a mixed teaching mode formed based of combining the respective advantages of traditional classroom teaching and online learning. This mode not only retains the traditional classroom teaching in the university study but also adopts the online video in MOOCs to implement the flip classroom, which is a new teaching mode combining the two organically. It is not only an effective and reasonable way to foster strengths and circumvent weaknesses of the massive open online course, but also a sublimation of traditional teaching. Unlike MOOCs on a large scale, SPOC usually controls the number of students in school teaching to be around 30. Its students are selected according to the needs of the school according to the conditions of professional

classes, and the teaching is more targeted. SPOC hybrid teaching combines the advantages of the massive open online course and traditional teaching but also makes up for its shortcomings and deficiencies. It is the direction of teaching reform of "Supply Chain Management". Its characteristics are reflected in the following aspects:

2.1. In the Teaching Concept, Students Are the Centre

In the teaching process, the students' learning experience should be enhanced. The online and offline hybrid teaching mode highlights the students' main position. The whole teaching process is no longer the traditional teacher teaching but reflects the students' main position through classroom flipping. The teacher is no longer the leader of the classroom, but the guide. No matter the design of online teaching video or offline, face-to-face classroom teaching is customized for specific groups of students. It is based on students' independent learning, collaborative learning and experiential learning. The classroom is no longer a teacher's monologue, but an inquiry classroom under the guidance of teachers and students, which is a platform to show students' ability and improve students' ability. SPOC adheres to the teaching concept of humanism. The classroom is always student-centred, giving students more opportunities to learn actively so that students can fully express their demands in the learning process and stimulate their potential. In such a class, students can participate in the learning process to the greatest extent, experience the happiness brought by communication and interaction, and truly internalize and externalize the teaching content of Supply Chain Management.

2.2. The High-Quality and Diversified Teaching Environment and Learning Places Have Greatly Expanded the Learning Space of "Supply Chain Management" and Improved the Effectiveness of the Teaching of "Supply Chain Management"

In the mixed teaching mode based on SPOC, teachers' teaching environment and students' learning places are greatly enriched. Not only the classroom, the traditional teaching place, but also various teaching places such as the massive open online course teaching, classroom teaching and network new media are combined, making online, and offline network entity teaching have complementary advantages. On the online platform, students can learn independently, cooperate and exchange, and share their learning experiences. Teachers can give notices, publish teaching tasks, share curriculum resources and design learning interactions [3]. SPOC online teaching has strong pertinence and accurate statistics of various teaching data. Teachers can know the learning status of students at any time through reading the data, and adjust the classroom teaching design and cut down the teaching content according to the learning data to make the teaching more effective. Some teachers in classroom teaching can carry out teaching design according to the situation of online learning, with the emphasis on checking leaks and making up for deficiencies. Through keynote speeches, debates, discussions and knowledge expansion, they can pay attention to the participation of students and make students internalize what they have learned. Students really listen, understand and use the theories they have learned, thus achieving the effect of improving students' professional quality. WeChat, QQ, Weibo and other online new media real-time online interactive collaboration tools increase communication and communication between teachers and students and build bridges for online and offline learning. Teachers can understand students' problems and perplexities in learning through these new media methods, answer questions and solve puzzles for students' online learning, assign tasks for classroom teaching, consult materials, group and make preparations. The study of students is no longer confined to the classroom and is no longer in a disorderly state with no supervision on line. The whole study process can be conducted in an orderly way under the supervision of teachers. The study environment and study space are more diversified and three-dimensional.

2.3. "Private Customization" Teaching Design and Teaching Methods Reflect the School Situation and Teachers' Situation, Meet the Needs of Students, Highlight Personalized Guidance, and Highlight the Teaching Characteristics and Advantages of Our School

Compared with MOOCS audience's non-compliance with restrictions, SPOC's mixed teaching mode is similar in students' learning level and learning ability due to the fixed learning group and similar majors. In the actual teaching process, according to the existing teaching conditions of the school, combined with the actual requirements of the training of teaching talents in the school, the knowledge accomplishment of students and the characteristics of student groups, teachers can integrate more high-quality curriculum resources and materials that can reflect the humanistic spirit, school characteristics and professional characteristics of the school into the selection of online learning materials, and show the characteristics of the school such as regional environment, school orientation, professional setting, etc. At the same time, carry out targeted personalized education, so that students can get the cultural self-restraint and spiritual edification of our school to the greatest extent, make teaching practice more in line with the characteristics of the school, conform to the ability level of teachers, meet the needs of students, and reflect the unique value and charm of "supply chain management". Of course, this requires teachers to seek ways in teaching design, integrate creativity and inspiration in teaching, adopt teaching modes suitable for the students of the school to teach, fully consider the construction of student knowledge, and thus improve the teaching effect. The "small scale" and "restriction" emphasized by SPOC make the online teaching and classroom teaching practice of "Supply Chain Management" more targeted, concrete and diverse. The learning content on the SPOC platform can flexibly adjust the learning progress according to the student's learning situation and cognitive level, and the learning content is divided into small units of knowledge points to meet the learning needs of students. At the same time, unit test questions are set up for each unit to allow students and teachers to have better control over the learning effect.

2.4. Evaluation Methods Focus on the Evaluation of Students' Learning Process and Adopt A Multi-Dimensional Comprehensive Evaluation Method

The SPOC online assessment consists of video viewing progress, chapter tests, forum postings, and student notes. The platform can use big data technology to intelligently analyze the entire process of students' online learning, and truly feedback the students' degree of knowledge and comprehensive ability. The classroom teaching practice focuses on assessing the student's participation in the classroom and the performance of group cooperation. It consists of student attendance, lectures, group discussion records, and group performance. It mainly examines students' attitudes, participation levels, and overall team performance in the participation process. "The learning process is carried out through the student's practice, and students can learn what they do, not what the teacher does." Through group-based learning and discussion, students can develop a sense of competition and spirit based on teamwork [4]. This evaluation method breaks the traditional "Supply Chain Management" teaching assessment mode, and can more fully and truly reflect the transformation effect of students' thoughts, values and behaviours, and better play the "baton" role of teaching evaluation.

3. The Role of SPOC-based Mixed Teaching Mode in the Teaching of Supply Chain Management

For a long time, "Supply Chain Management" has been criticized for its backward teaching methods, insufficient attraction and weak effectiveness, and has become an optional course for students. Since the "Flip Classroom" was put forward, colleges and universities have made

many efforts in the teaching innovation of "Supply Chain Management", carried out a series of reforms, and explored many teaching modes and methods, but the effect has not been obvious and failed to find a good fit point between teaching and learning. The emergence of SPOC provides a good opportunity to solve the problem.

3.1. SPOC Mixed Teaching Mode Can Promote the Dissemination of the Latest Theories in "Supply Chain Management" in Real-Time and Conveniently, and Better Solve the Timeliness Problem of "Supply Chain Management" Teaching

In the traditional classroom, it is very difficult for teachers to have time to explain some of the latest theories of logistics management speciality to students when they finish the teaching tasks set in the syllabus. If they only let students learn spontaneously as homework, teachers cannot guide and supervise them, and the effect is not obvious. SPOC provides a good way to solve this problem. In this teaching mode, teachers can, on the one hand, screen and analyze the latest theoretical results through big data technology, and combine the actual situation of students to select the contents that are close to life and easy to resonate into the teaching design and upload these screened latest theoretical results to the network platform for students to learn online by making videos. For those parts that students fail to master well, they can explain them through online answering questions and classroom teaching in a targeted way, which not only saves time but also improves efficiency and makes the latest theoretical results of logistics management more easily understood, recognized and accepted by students.

3.2. SPOC Has Promoted the Change of Teachers' Role, Stimulated Teachers' Educational and Teaching Potential and Students' Innovative Thinking Consciousness

The "Supply Chain Management" classroom is full of vitality and has improved the overall teaching effect of "Supply Chain Management". In the traditional classroom, teachers are the leaders of the classroom and students are the passive receivers. This single teaching mode cannot attract students' interest. Therefore, the class attendance rate is not high, the rising rate is lower, and the teaching effect is not ideal. Under the SPOC mode, the role of teachers has changed. Teachers are no longer unattainable preachers, but enlighteners, guides and helpers of students' learning, both teachers and friends. In class, they participate in discussions with students to answer their questions and solve their doubts. Through inspiration and guidance, students can think independently, experience the fun brought by learning, stimulate their enthusiasm for learning and cultivate their innovative thinking. Under the SPOC mode, teachers' teaching potential can be maximized. The flexibility of teaching methods, the extensive participation of students, and the convenience of media resources have stimulated the vitality and enthusiasm of teachers in education and teaching, enabling teachers to incorporate more of their inspiration and creativity into teaching design. For example, discussion learning, open projects and experiential activities are designed in the classroom, and bilateral interaction improves the satisfaction, sense of achievement and achievement of both teachers and students. "Supply Chain Management" is full of attraction and teaching effect is obvious.

3.3. SPOC Promotes the Pertinence of Specialized Theoretical Courses

The teaching mode based on small classes can make teachers return to the classroom. Compared with MOOCs, the group of students it faces is more stable. In practical application, it can provide students with more targeted teaching contents and teaching methods, and teachers of the teaching team can develop targeted teaching videos and other materials according to the learning situation of participating in the course learning [5]. In online and offline teaching, teachers can supplement and solve effectively online and offline according to the students'

online learning, to realize online and offline complementation. As the main instructor of the course teaching, the teacher can truly control the course teaching under SPOC mode, specifically analyze the learning situation of each student, and adjust online resources and solve offline problems according to investigation and analysis. Teachers can use their advantages throughout the teaching process, allowing students to turn over the classroom and control the course themselves. This is incomparable to the massive open online course and the traditional classroom and is also an advantage of teaching.

4. The Construction and Design of SPOC-based Mixed Teaching Model for Supply Chain Management

The essence of mixed teaching mode of supply chain management based on SPOC is to expand traditional classroom teaching activities based of MOOC, to enrich teaching resources and diversify learning situations. Based on the experience of the teaching mode reform of the course of supply chain management and the mixed teaching theory, the author constructs and designs the teaching mode of supply chain management. The teaching mode is a hybrid teaching mode, which is based on the combination of MOOC platform independent learning and classroom teaching. It can be divided into two stages: course preparation stage and course operation stage. The specific mode is as follows:

4.1. Course Preparation Stage

In the course preparation stage, the whole supply chain management teaching and research office and teaching and research team should be fully prepared for the reform of the course. First, the selection of the online learning platform, which is very rich at home and abroad. Therefore, the teaching and research team should have a comprehensive understanding of all kinds of teaching platforms, choose the most suitable learning platform or develop their learning platform. Second, the operation rules of the selected platform should be trained to ensure that every teacher can operate and guide students skillfully on the platform. At the same time, the teaching mode of this course should be explained in advance among the students so that students and teachers can understand it clearly. The third is to carry out the overall design of the reform of supply chain management, the setting of curriculum teaching objectives, and the determination and design of the practical content of face-to-face teaching in the classroom. From the teacher's point of view, we should set up the teaching objectives of each lesson in combination with the professional characteristics of the students we bring. Before class, teachers can also record some videos as needed to supplement the online learning part. Because the learning content of the purchased learning platform is not targeted and timely, teachers can supplement according to the teaching needs. In order to improve the teaching effect, teachers can also prepare learning materials for students to read, such as books, links, electronic materials, etc., and try to give students more directional guidance in the selection of learning resources.

4.2. Course Operation Stage

The course operation stage can be set up as a special topic form, according to the textbook system. The learning of each special topic can be divided into three stages: Online Autonomous Learning, in-class face-to-face learning and after class consolidation and upgrading.

Online Autonomous Learning is a very important part of blended learning. It is a stage in which students are the main part, and teachers are the auxiliary part to master the teaching content of this section through self-study. Teachers should prepare teaching materials and learning videos on SPOC platform. Students log in to the platform for independent learning. Students and teachers have many tasks in this link. The effect of pre-class learning link directly affects the later learning link, which is the decisive link to the teaching effect of supply chain

management. For teachers, it is necessary to set up teaching objectives according to the teaching content of this lesson, and at the same time, it is necessary to understand whether students' learning content on the platform and their own designed teaching content will overlap. Too much repetition will not only affect students' interest in learning but also affect the teaching effect of the whole class. Therefore, when preparing lessons, teachers should integrate textbook knowledge points, teaching contents of the platform and students' learning conditions, supplement some learning materials or learning videos timely and make some effective adjustments at the same time, to guide students to carry out targeted learning. Teachers should also pay attention to the interaction with students, answer questions and solve doubts for students through the network, and master the learning dynamics of students at any time. After all, students have completed chapter learning, including chapter assignments and tests, the teacher can make full use of the big data analysis function of SPOC platform to understand the mastery of knowledge points in this chapter of the class through accurate data, to provide a reference for the teaching design in the next stage. For students, the first step is to complete the registration of online platform under the guidance of teachers, to understand the learning methods, learning requirements, learning objectives, assessment methods and performance evaluation modes of this course. In unit learning, you should watch the specified videos, browse the learning materials and complete the specified tests according to the requirements. Of course, you can also discuss and exchange learning experience with your classmates online, express your opinions through forum posts, discuss learning difficulties and existing puzzles with teachers through the platform, or leave a message for teachers to hope that they can answer in a face-to-face class. All of these are conducive to the improvement of the pertinence of teachers' design in class, and also can improve the teaching effect. In this stage, the activities of teachers and students are interactive, and the activities of teachers should be the earliest and the latest.

Classroom face-to-face teaching is an important link to consolidate chapter knowledge points and improve students' comprehensive ability. In the face-to-face learning environment, teachers should not only let students master knowledge completely, but also take training students' comprehensive ability as the goal. Such as independent problem analysis ability, creative thinking ability and the ability to integrate knowledge inside and outside the class, etc. Classroom teaching is mainly divided into two steps. One is to solve the important and difficult points in this chapter through discussion and clarify the knowledge points so that students can systematically grasp the knowledge points in this lesson and construct a complete knowledge system to better consolidate knowledge. The other part takes the form of activities, including asking questions, thinking alone, determining problems, group discussions, reporting and communication, teachers' solving doubts, summarizing and evaluating and other activities. Students' thoughts collide and diverge in this open learning process. They internalize knowledge points in the process of solving comprehensive problems and improve the ability of comprehensive application of knowledge. In face-to-face teaching, teachers must make sufficient preparations, not only to be able to accurately answer difficult problems encountered by students during watching videos and practising, but also to guide students to discover problems, solve problems, master knowledge and improve their abilities. Students can also raise their doubts and share their learning experiences in-class activities. The time saved by online an autonomous learning helps teachers and students to concentrate on solving problems in the teaching process. Teachers should assign classroom tasks in a targeted way, organize students to carry out autonomous inquiry and cooperative inquiry activities and provide personalized counselling. After completing the class tasks, students will report the results, which will be commented on the teachers. Other students can also put forward their opinions, which will be discussed and exchanged together. Through classroom inquiry learning, the enthusiasm of students is improved, and students' comprehensive abilities in autonomous

learning, problem-solving, cooperative inquiry and innovation are cultivated. The role of teachers has also changed from the speaker to the instructor and facilitator, providing guidance to students at any time, organizing students to discuss in groups, solving difficult problems with students, and comprehensively evaluating students' knowledge.

The after-school stage is the stage of testing the learning effect and consolidating and improving the knowledge of this teaching mode. Students can summarize and reflect on their whole learning process by completing the targeted questions and assignments assigned by teachers and the evaluation of teachers, understand their learning situation and feed back to teachers through platforms or other channels. At the same time, students should also carry out targeted after-school knowledge expansion study based on mastering their learning conditions, actively discuss with classmates and help each other, to achieve the effects of leakage detection, compensation, consolidation and promotion. For teachers, in order to achieve the best results, after-school testing of students cannot rely entirely on the homework and exercises provided by the platform. Because the homework and unit tests provided by the platform are not targeted enough to fit the actual situation of the students in the class, they cannot reflect the students' real learning situation and learning effect. In order to achieve the best test results, teachers should combine the students' learning conditions in the first two stages and formulate examination questions that are in line with the students' actual conditions, focusing on the knowledge points and the ability to apply knowledge, focusing on the students' divergent thinking ability and the ability to analyze problems, etc. Also, teachers can analyze the test results to give personalized guidance to students who do not meet the teaching objectives.

From the above comprehensive point of view, SPOC-based mixed teaching mode of "Supply Chain Management" highly integrates the advantages of modern media technology and traditional classroom, and further promotes the reform of "Supply Chain Management" in teaching philosophy, teaching mode, teaching methods, teaching objectives and evaluation methods. Therefore, the teaching of "Supply Chain Management" is further improved and becomes a course that is popular with students and benefits them.

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