



# Research on the Blended Learning Approach of Military Academy Courses Based on SPOC

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**Abstract:** Military academies are the main battlefield for cultivating high-quality and specialized new military talents, and appropriate learning approach are very important for improving the quality of talent cultivation. Based on the development of current educational technology and the characteristics of military academy courses, this article integrates the advantages of SPOC and blended learning, analyzes the adaptability of blended learning approach based on SPOC in military academy courses, elaborates on the design and implementation of blended learning approach based on SPOC from three stages, and proposes four suggestions for effective implementation, including start with a course introduction, attention to the growth of students, accelerate the construction of SPOC resources and meet talent needs.

**Keywords:** military academy courses; SPOC; blended learning; design and implementation; suggestions.

## 1 Introduction

Military academies are the main battlefield for cultivating high-quality and specialized new military talents. The teaching content, learning approach, and teaching conditions all directly affect the teaching effectiveness. Massive Open Online Course has rapidly developed with the development of the Internet and big data technology. The design of learning approaches has shifted from teacher centered to student-centered, from singularity to comprehensiveness. However, the development of MOOC is subject to certain limitations due to restrictions on internet usage and course characteristics in military academies. How to effectively utilize rich online course resources and form learning approaches suitable for military academy teaching characteristics? It is an important topic that must be deeply researched in the new era to cultivate military academy teachers and teaching managers.

## **2 The Connotation of SPOC and Blended Learning**

### **2.1 The Connotation of SPOC**

SPOC(Small Private Online Course)was first proposed and used by Professor Armando Fox at the University of California, Berkeley, USA <sup>[1]</sup>. “Small” refers to the smaller scale of students and “private” refers to students who meet the admission criteria for the course being eligible to choose SPOC courses. The SPOC is based on the development of traditional massive online open courses (MOOC), which not only achieves a deep integration of online courses and traditional classroom teaching, but also achieves a combination of personalized teaching and refined teaching. It can compensate for the shortcomings of unlimited, no interaction, and no evaluation MOOC approach, and enhance the interactivity and pertinence of classroom teaching<sup>[2]</sup>.

### **2.2 The Connotation of Blended Learning**

Bonk and Graham believe that blended learning is a hybrid of face-to-face teaching and computer-assisted online learning. <sup>[3]</sup>P. C. Sherimon,P. V. Vinu and Reshmy Krishnan believe that blended learning is the combination of traditional face-to-face classroom learning integrated with the emerging technologies like pervasive learning, virtual class rooms, on line training, web based study materials etc. <sup>[4]</sup>Blended learning refers to the mixing of traditional classroom teaching and online teaching to make up for the shortcomings of traditional classroom teaching and online teaching on the single line, and improve teaching effectiveness. The evolution of the connotation of blended approach has gone through three stages: technology application stage, technology integration stage, and technology innovation stage<sup>[5]</sup>. With the emergence of MOOC in large numbers, there has been a blended approach that integrates MOOC with traditional classroom teaching, combines online and offline, and combines in class and out of class.

## **3 Adaptability of SPOC and Blended Learning Approach in Military Academy Courses**

### **3.1 The blended learning approach based on SPOC can effectively solve the problem of internet usage restrictions in military academies**

From the perspective of course nature, most of the courses offered by military academies are classified as secret courses, and it is not possible to carry out blended online and offline teaching on internet platform. From the perspective of teaching conditions, most classrooms in military academies have not yet installed the Internet, and in the blended learning process, civilian MOOC and other teaching resources cannot be used. Only teaching resources on military vocational education platforms can be used<sup>[6]</sup>. By using SPOC, courses can be offered on the internal network teaching platform of military academies, concentrating various teaching resources on the courses, providing

platform support for the implementation of blended online and offline learning approach [7]. Students can have a targeted learning experience, choose basic knowledge, expand knowledge, etc. based on their own situation, and improve learning effectiveness.

### **3.2 The blended learning approach based on SPOC is in line with the characteristics of military academy courses**

Military academy courses have distinct military characteristics, and the teaching content often comes from the military. They are updated quickly, have strong confidentiality and exclusivity, and require high practicality. Students are required to solve specific problems and tasks faced in military positions based on the knowledge they have learned [8]. In the blended learning approach based on SPOC, teachers can dynamically adjust teaching content according to "job requirements" on the online teaching platform, and dynamically update teaching resources according to "content adjustment". Teachers can filter information resources related to courses from different platforms and resources, effectively solving the problem of online teaching without corresponding MOOC, and the relatively fixed and untimely updating of course content corresponding to MOOC.

### **3.3 The blended learning approach based on SPOC can promote collaborative learning between teachers and students**

Many courses in military academies have the characteristics of small teaching objects and strong professionalism. At the same time, some students have military experience. When conducting blended learning approach based on SPOC, teachers can assign targeted teaching tasks before class. Students can self-study, send messages, ask questions, and communicate on the platform in the computer room, classroom, or the laboratory before class. In the class, teachers organize in-depth discussions among students, and let them express opinions, collaborate to complete tasks. Then teachers summarize, which plays an important role in promoting the cultivation of students' self-learning and innovation abilities.

## **4 Design and Implementation of a Blended Learning Approach for Military Academy Courses Based on SPOC**

Teachers create courses on online teaching platforms, construct content frameworks, upload teaching resources, test questions, etc., create autonomous learning environments, and accept members into the course. The whole teaching implementation process can be divided into three stages: students learn independently online according to the guidance of the teacher before class, cooperate with other students and teachers to complete teaching objectives in class, the teacher assigns homework, and students consolidate and improve after the class.

**4.1 Pre class stage - Teachers assign tasks and students learn independently**

Firstly, the teacher arranges the teaching content according to the teaching plan and carefully designs the tasks for each class, with clear logic and moderate quantity, including both low-level and high-level tasks, then assigns tasks on the course platform and guide students to complete autonomous learning; Secondly, teacher can guide students to group according to their situation and teaching content. Thirdly students should receive tasks, clarify the division of labor within the group, and independently learn online teaching resources. The main work and requirements of teacher and student are shown in Table 1.

**Table 1.** The main work and requirements of teachers and students

Identity	Main work	Requirements
Teacher	1.Assign tasks 2.Guiding group- ing	1.Provide guidance plans with clear and specific tasks 2.Provide grouping requirements and suggestions, and a grouping method can be adopted that combines the teacher's designation with students' self-grouping (1)Provide grouping suggestions based on students' knowledge foundation, interests, personality, learning experience, work experience, etc. (2)Requirements for the number of groups and speakers: Taking into account factors such as classroom time constraints and the number of students, each class is divided into about 3 groups, with 1 speaker per group. Other group members can make additional speeches.
Students	Group preparation	1.Group according to the requirements of group composition and clarify the division of labor among group members 2.Study related teaching resources by self

**4.2 In class stage - teacher guide and evaluate, student collaborate and research**

Teacher designs class segments, clarify key and difficult points, create work scenarios, guide students to collaborate and explore, and discuss with each other. Students complete the construction of knowledge through in-depth participation, improve their ability to analyze and solve problems, and continuously improve themselves through self-evaluation and others' evaluation, learning from strengths and complementing weaknesses. Finally, the teacher provides feedback and completes the learning task together. The main work and requirements of teachers and students are shown in Table 2.

**Table 2.** The main work and requirements of teachers and students

Identity	Main work	Requirements
Teacher	<ol style="list-style-type: none"> <li>1.Design teaching segments based on teaching content</li> <li>2. Guide and control the classroom at an appropriate time based on the students' speeches and discussions</li> <li>3.Integrate students' speeches and discussions, and provide feedback</li> <li>4. Sort out and summarize knowledge points, highlight key and difficult points</li> </ol>	<ol style="list-style-type: none"> <li>1. Determine the order of group speeches based on the content and clarify the speakers for each group</li> <li>2. Guide each group of students to speak in an orderly manner, grasp the pace of the classroom, ensure that the key points are highlighted, and overcome difficulties</li> <li>3. Guide each group of students to speak in order, grasp the rhythm of the class, ensure that the key points and difficulties are mastered by student</li> <li>4. It is important to be objective and comprehensive and try to focus on the same issues as much as possible when evaluating students</li> <li>5.Understand whether all students have a complete grasp of the knowledge</li> </ol>
Students	<ol style="list-style-type: none"> <li>1.Explain in groups, ask questions and answer questions to each other</li> <li>2. Listen to others' evaluation</li> <li>3.Evaluatate on others</li> </ol>	<ol style="list-style-type: none"> <li>1. All students participate</li> <li>2.Group speakers shares personal content</li> <li>3. Listen to others' explanations</li> <li>4.Evaluate on others' strengths and weaknesses</li> <li>5. Listen to the teacher's summary and really learned</li> </ol>

### 4.3 After class stage - Instructors assign homework, students consolidate knowledge and improve abilities

Teachers should manage the entire process of each class well, and assign homework after summarizing the main knowledge points. Students should submit their homework through the SPOC platform. Teachers should promptly correct students' assignments, provide grades, and give optimization suggestions. Students reflect on the implementation of teaching tasks, including knowledge and skill mastery, thinking patterns, and collaborative learning with classmates, in accordance with teaching objectives, in order to consolidate knowledge and improve abilities. The main work and requirements of teachers and students are shown in Table 3.

**Table 3.** The main work and requirements of teachers and students

Identity	Main work	Requirements
Teacher	1. Assign homework 2. Ask students to modify and improve their personal tasks and submit them again through the platform 3. Publish a summary of each lesson	1. Timely correct assignments and provide feedback 2. Summarize in detail
Students	1. Review 2. Summarize and reflect on personal performance in collaborative learning, and clarify the direction of effort	1. Complete the task on the same day 2. Make specific reflections

## 5 Several Suggestions for Developing a Blended Learning Approach of Military Academy Courses Based on SPOC

### 5.1 Guided by goals, start with a course introduction

Cultivating talents who can fight and win battles is the soul of the construction and development of military academies. Teachers teach for the sake of fighting, while students learn for the sake of fighting. The teacher should make the students clear about "why to learn", "what to learn", and "how to learn". Firstly, the teacher introduces the basic information of the major and courses, let them to form an overall understanding; Secondly, the teacher guides students to enter the environment of military work positions, and start from their job responsibilities to think about what positions I will be engaged in and what abilities I should need; Thirdly, the teacher helps students sort out the knowledge and skills required for their positions, so that they can strengthen their learning motivation and prepare for learning at the beginning.

### 5.2 Focusing on learning and paying attention to the growth of students

Military academy education is an important component of military education and training, which is an educational, training, and management activity centered on the cultivation of military talents <sup>[9]</sup>. We should implement the concept of learning -centered, highlight the subject status of students, and make them the protagonists. Everything revolves around the learning of students, including four aspects of student development, learning, participation, and learning effectiveness <sup>[10]</sup>. In the process of teaching design, we should pay attention to the needs of the military for students and their personal development needs, pay attention to the comprehensive qualities of students' ideological and moral character, scientific culture, physical psychology, military quality, and

professional ability, pay attention to the changes in students' thoughts, emotions, and behaviors, and pay attention to the degree of students' learning participation and learning effectiveness.

### **5.3 Guided by war, accelerating resource construction**

The implementation of blended learning approach based on SPOC is supported by abundant SPOC online resources, otherwise students cannot engage in online autonomous learning. Firstly, military academy teachers should accelerate the construction of SPOC online resources, including teaching videos, courseware, lesson plans, case base, test question base, etc. that match the teaching content. Secondly, it is necessary to focus on warfare and regularly update SPOC online resources to ensure that they are synchronized with or ahead of the military's combat training and can lead the development of the military. Thirdly, SPOC online resources should be rich, and MOOCs and micro courses on the internet and military internal networks can be selected based on their preferences. They can be divided into basic learning resources and expanded learning resources, achieving simplification and hierarchy. It must be convenient for students to use fragmented time for learning.

### **5.4 Educating people for war and meeting talent needs**

On May 21, 2019, during president Xi Jinping's inspection of the Army Infantry Academy, he clearly pointed out that military academies were born out of and built for war, and must focus on practical teaching and cultivating talents with a focus on winning battles<sup>[11]</sup>. Therefore, in the process of blended learning, it is necessary to closely follow the demand for talents in the development of the military, predict the abilities and qualities required by the expected talents, whether it is teaching objectives or content, teaching methods or teaching resources, so that the supply side of talent cultivation resonates with the demand side of the future battlefield, and ensure that the trained talents can undertake the noble mission of "being able to fight and win"<sup>[12]</sup>.

## **6 Conclusions**

Due to limitations in internet usage and the characteristics of the military academy courses, the selection of learning approaches in military academies is crucial for teaching quality. The application of SPOC based blended learning approach in military academy courses is appropriate and efficient. It is necessary to manage the entire process of teaching activities, including pre class, in class, and post class, with the goal of improving learning ability, mastering knowledge and abilities, learning-centered, and focusing on cultivating talents who can win battles.

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