

Reconstruction of Practical Training System for Equipment Course Teaching

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Abstract

Equipment courses are the core courses for military equipment and equipment support majors, which play an important role in cultivating high-quality equipment support talents and building a professional new type of military equipment talent team. This article proposes a teaching reform system for equipment courses with the teaching goal of meeting the practical needs of carrying out tasks and job competency requirements. The system is optimized, reconstructed, and explored in practice from the construction of a new type of practical training teaching platform, optimization of practical training course content, and innovation of practical training teaching methods. The new teaching and training system further stimulates students' sense of experience and comprehensively improves the teaching quality of equipment training courses.

Keywords

Equipment course; Practical training system; Position appointment.

1. Introduction

Equipment courses usually refer to courses related to military equipment, aimed at teaching students knowledge and skills in the design, operation, maintenance, and management of various military equipment. These equipment mainly include weapons, equipment, vehicles, ships, aircraft, and other materials and technologies used by the military to carry out missions and engage in war. The performance and quality of these equipment are directly related to the combat effectiveness and effectiveness of the military.

With the continuous development of technology, the updating speed of equipment is also getting faster, and new technologies and equipment are constantly emerging. At the same time, the technological content of equipment is also increasing, requiring mastery of various professional knowledge and skills to operate and maintain. And equipment practical training teaching is the core breakthrough point for comprehensively improving students' equipment operation and maintenance, assembly and debugging, and equipment support capabilities, as well as a key measure to further enhance the combat effectiveness of the army.

2. Problems in the Course Teaching Process

The equipment course is the core course for military equipment and equipment support majors, aiming to cultivate students' abilities in practical operation, maintenance, and troubleshooting of equipment. But currently, most military academies have the following teaching problems in equipment courses:

(1) Theoretical and practical disconnection: In equipment course teaching, there may be a disconnect between theoretical knowledge and practical operation. Students may have learned relevant theoretical knowledge in the classroom, but lack practical experience, which makes it difficult to apply the learned knowledge to practical situations.

(2) Single teaching method: Traditional teaching methods may mainly rely on teacher explanations, lacking interactive and practical elements. This teaching method may lead to insufficient understanding of course content by students and a lack of initiative in learning.

(3) Experimental equipment and venue limitations: Equipment courses typically require the use of specific experimental equipment and venues for practical operations. However, due to limitations in equipment and venue, students may not be able to fully experience and master practical equipment operation skills.

(4) Outdated textbook content: Equipment technology is constantly evolving and updating, and textbook content may not be able to keep up with the latest technological developments in a timely manner. This may lead to outdated knowledge learned by students and inability to meet practical needs in reality.

(5) Lack of practical experience among teachers: Some teachers may lack practical equipment operation experience and may not be able to impart their practical experience to students. This may lead to students lacking practical guidance and case sharing during the learning process.

Therefore, the equipment curriculum system is unable to meet the needs of equipment support talents, nor can it encourage students to form positive practical emotions and reflective consciousness, resulting in its teaching effectiveness not meeting the cultivation goals of professional talent core literacy. This requires necessary restructuring design and practical exploration of its curriculum teaching process.

3. Reconstruction Design and Practical Approach of Curriculum Teaching and Training System

3.1. Refined training mode and construction of "four in one" teaching objectives

The teaching philosophy of equipment courses should revolve around the new era, new missions, and new tasks, apply new methods, new perspectives, and new ideas, deeply study the difficult problems of professional construction, focus on solving the key problems that hinder the improvement of professional construction level, strive to form a new model of professional construction, effectively improve the quality of equipment support talent training, and make efforts to focus on the construction of military combat effectiveness. Therefore, this type of course should keep up with the times, adhere to student-centered, emphasize the development of their individual abilities, and take the coordinated development of students' knowledge, abilities, and qualities as the main line. Around the four aspects of ideological and political ability, professional basic skills, equipment use and maintenance ability, and comprehensive practice, different levels of practical, application, and innovation ability training models should be established.

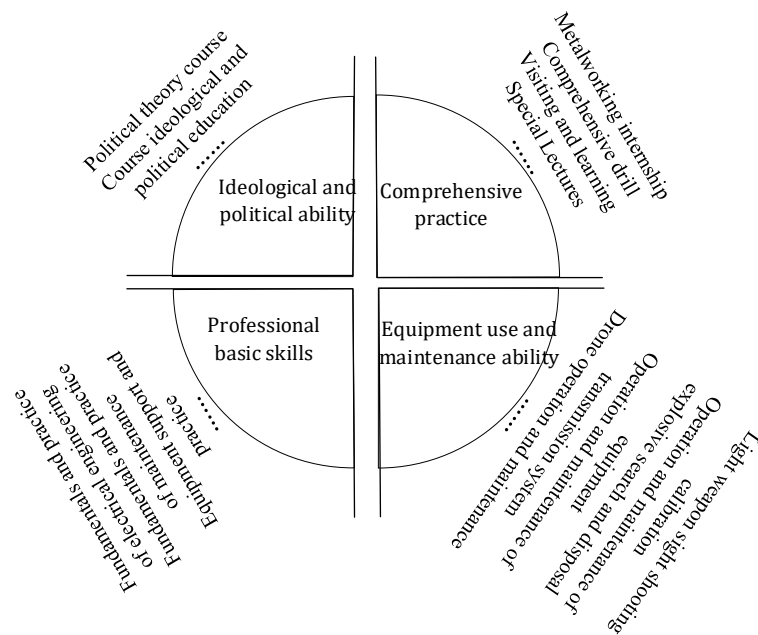


Figure 1. " Four in one " teaching mode

3.2. Focusing on the shortcomings of teaching conditions and building a practical training and teaching platform

To solve the problems of limited quantity of teaching equipment, non intuitive operation demonstrations, difficult understanding of internal structures, difficulty in obtaining actual combat environments, difficulty in setting up real faults, and difficulty in meeting training time in military academies, it is necessary to build a "1+N" new type of practical training platform, which is a diversified teaching mode equipped with multiple online open platforms that can be relied on around a unit's independently constructed equipment course core practical training platform. The unit's self built specialized practical training teaching platform covers various types of equipment such as front-end reconnaissance, relay transmission, platform reconnaissance, and explosive detection and disposal. Students can learn about the structural performance, operation and maintenance of commonly used equipment at the grassroots level. The N online open practice platforms mainly include the National Virtual Simulation Experiment Platform, EduCoder Practice Teaching Platform, and the virtual simulation experiment teaching sharing platform constructed by major universities, serving as complementary virtual teaching resource platforms.

3.3. Benchmarking job competency requirements and reshaping course training content

At present, the content of teaching practical training is not enough to support the cultivation of comprehensive ability, and there is a problem of partial knowledge verification or single skill cultivation of practical training subjects, which leads to insufficient matching between the content of teaching practical training and the demand of comprehensive ability of the post. The content of the course is divided into three solid levels: basic class, comprehensive class and research expansion class, and the practical training teaching content system is optimized. The project is driven and the design concept of "post - course - certificate" is adopted, the existing advanced scientific research and experimental teaching platform is integrated, and the multi-level and open practical training project platform of "experiment + practice + scientific research + competition" is supported by the hardware. With the virtual simulation experiment platform as the logical and extension station of professional knowledge and skills, the experimental and practical training system integrating in-class teaching and extra-class research and learning is

constructed, which essentially provides an effective guarantee system for students' practice, exploration and innovation.

3.4. Combining virtual and real with multi-dimensional collaboration, reforming and innovating teaching methods

Based on the "1+N" new type of practical training teaching platform and high-quality military civilian integration resources, a multi-dimensional collaborative training method is proposed, which combines online and offline blended teaching, virtual and reality organically, complements in class and out of class, and deeply integrates the military and local areas, to achieve the transformation of practical teaching methods from single practical teaching to multi-dimensional coordination of virtual and real complementarity. Taking "teaching+learning+examination+evaluation" as the main line, highlighting key links such as pre class training, in class guidance training, and post class research training, extending the practical training teaching space, and improving the training ability of practical training instructors. Concentrate training on common problems, strengthen training on typical problems, innovate training on difficult problems, actively cultivate students' practical thinking ability, and improve their ability to analyze and solve practical problems in the job field.

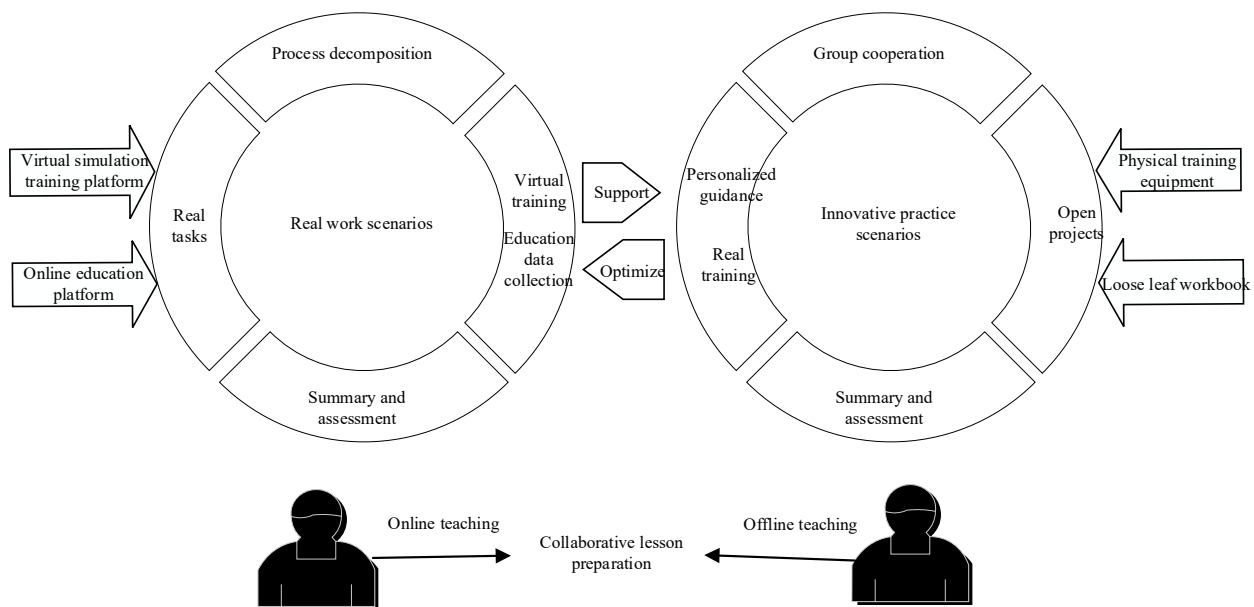


Figure 2. Online and offline blended learning

4. Conclusion

The teaching of equipment courses must closely align with the job requirements of military positions, serving to cultivate talents who are competent in their positions and capable of fighting effectively. Professional construction should adhere to the formation of ability goals as the guidance, cultivate the college to meet the needs of military positions and long-term development, adhere to teacher led, student-centered, and guide students to be willing to learn, take initiative, and innovate independently. At the same time, attention should be paid to the innovative application of new technologies, models, and methods to ensure the rapid achievement of talent cultivation goals.

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