

Equipment Maintenance based in BOPPPS Mode Course Research and Exploration

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Abstract: This paper is based on the BOPPPS teaching model, Taking the professional course of the construction and work of high and low machines in the equipment maintenance course as an example, The classroom teaching is divided into six teaching links: introduction, goal, pre-test, participatory learning, post-test and summary, Overall, more attention is paid to the students' participation in the class, Through the mutual feedback between faculty and trainees, To achieve that both teachers and students can have a deeper understanding of the teaching process and teaching objectives, So as to continuously improve the teaching effect, therefore, The application of this teaching model, Thinking for the teaching reform in the information age, It plays an important practical significance to the research of talent training construction.

Keywords: BOPPPS Pattern; Equipment; Elevating Mechanism; Teaching.

1. Introduction

BOPPPS Mode is a by ISW (Canadian faculty skills training workshop) for faculty certification created "effect", "efficient", "benefit" and can promote students to actively participate in classroom learning teaching mode, through the application of BOPPPS mode, teachers can break through the traditional to the teacher as the main body of teaching mode, promote students to explore, realize personalized teaching, let students get better growth in the teaching process of the [1]. Equipment maintenance course is the key course for the training of equipment maintenance professionals. This paper conducts in-depth research and analysis on the specialized course based on the construction and work of the BOPPPS mode, and expands the teaching ideas of the follow-up equipment maintenance course, hoping to play a certain reference role in the teaching reform.

2. BOPPPS Mode Overview and Characteristics

BOPPPS Mode is also known as "interactive additive teaching method" [2]. BOPPPS mode is based on constructivism and communicative method, and is known for its effective teaching design. It is a closed-loop teaching process mode that emphasizes students' participation and feedback. BOPPPS The classroom teaching process can be divided into six elements, including B (Bridge-in), O (Objective), P (Pre-assessment), P (Participatory learning), P (Post-assessment), S (Summary) [3], as shown in Figure 1.

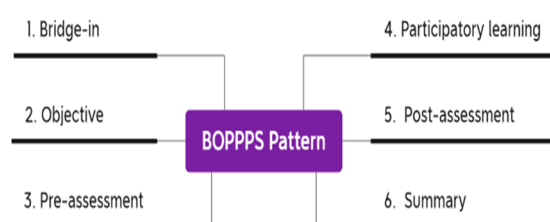


Fig 1. BOPPPS Mode of 6 elements

BOPPPS Mode is a summary of experience combined with practical courses. It is a tool that can help teachers to decompose and analyze the teaching process, and find out the blind spots in teaching, so as to improve and enhance the teaching effectiveness. BOPPPS The teaching model conforms to the teaching curve theory. The core of this model has two points: one is to emphasize the all-round participatory learning; the other is to timely obtain the feedback information of students to adjust the subsequent teaching activities and to achieve the teaching objectives. Through the relative concentration of students in the classroom, stimulating the students' learning enthusiasm as the core, promoting the interaction between teaching and learning, and realizing effective teaching, and this efficient interaction among teachers, students and courses can also promote the classroom reform with learners as the main body of learning.

3. BOPPPS General Idea of the Equipment Maintenance Course in the Mode

According to the characteristics of equipment maintenance course, select a professional course in the artillery repair industry course -- High and low organization building and work for research and exploration. High and low aircraft is a device to make the artillery rise and fall part in the field and conduct high and low aiming. The general idea in BOPPPS mode is shown in Figure 2.

3.1. Bridge-in

For sergeant students engaged in equipment maintenance jobs, equipment repair, fault analysis and maintenance practice subjects willing to operate, and practical ability is strong, but the study of professional theoretical knowledge, unable to stimulate students' desire and learning enthusiasm, therefore, in high and low institutions and work this specialized course, import is the key to the class can achieve the teaching effect. Therefore, using the war equipment pictures, reference classic campaign, news and current events such as Russian conflict to strengthen the import, attract the attention of students and enhance students' sense of mission

and sense of responsibility, strengthen ideological education organic penetration, this can guide students into the next classroom learning, know the importance of high and low institutions and work.

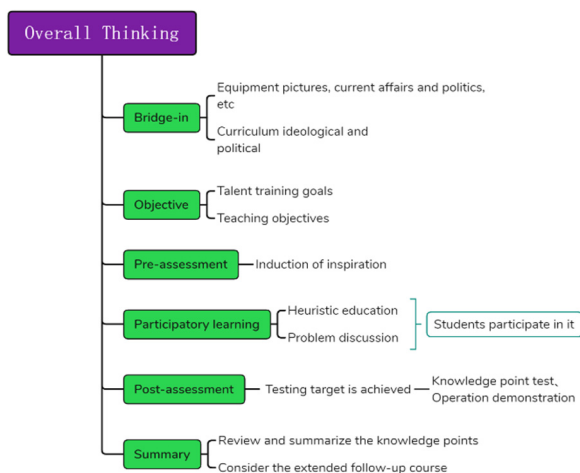


Fig 2. BOPPPS General idea of the equipment maintenance course in the mode

3.2. Objective

According to the talent training plan formulated in the syllabus, according to the talent training objectives in the student training plan, from the overall grasp of the knowledge objectives, ability objectives, literacy objectives, throughout the equipment maintenance course teaching, in the students learn professional skills, have the basic quality of non-commissioned officers' combatants. In the course of high and low machine manufacturing and working, students are required to understand the structure and connection relationship of high and low machine transmission device and clutch device, and master the working principle of high and low machine.

3.3. Pre-assessment

Use questions, quiz, group discussion and other ways to understand the students to grasp the relevant content of the high and low aircraft before class, for example, the work of the high and low aircraft is related to what aspects of the artillery tactical technical requirements? In this way, the progress and depth of the teaching content can be adjusted according to the specific situation of the students. Through group discussion, how does the high and low machine transfer the power? How do the high and low machines achieve overload protection? How does the high and low machine achieve the manual and electric conversion? In view of these three problems, layers of in-depth, induce and inspire students to participate in it.

3.4. Participatory Learning

The most difficult part in the whole BOPPPS mode is participatory learning, whose purpose is to center the students, let the students take the initiative to learn, think deeply and strengthen the impression, and do not teach in a single direction for a long time. Through high and low machine power transfer animation, the heuristic teaching, ask questions to discuss, let students understand the principle of high and low institutions, so the faculty to strengthen the interaction with students, let students to explore the way in a

relatively short period of time to complete the theory of learning, for high and low machine decomposition, fault analysis and maintenance laid a solid theoretical foundation.

3.5. Post-assessment

The purpose of post-test is to accept the learning results, test the achievement of knowledge goals, ability goals and literacy goals. The knowledge point test and operation demonstration can be used. In the course of high and low computer, students can conduct the cognition of high and low computer components according to the actual installation, teach the process of power transmission, and test the mastery of the knowledge of the manufacturing and work of high and low institutions.

3.6. Summary

Summary is a summary review and summary of knowledge points, and the teachers can also allow students to summarize and further consolidate the learning effect, but also can assign extended thinking, homework and follow-up course notice, etc., until the teaching objectives of this lesson are successfully completed. For high and low machine course content, combined with the course objectives, first through the way of mind mapping, let the students to speak knowledge, then summarize the formula, facilitate students to understand memory, finally provide relevant literature or information for students to expand reading after class, told the next teaching content and requirements to preview.

4. BOPPPS Thinking and Prospect of Equipment Maintenance Course in the Mode

BOPPPS As a relatively novel teaching model, Be able to give full play to its unique advantages in the teaching work, It is of great help to improve students' autonomy of equipment maintenance courses and expand the richness of classroom teaching, first, BOPPPS Mode emphasizes trainee participation, And point to promote the deep participation of the students, Focus on a clear goal-oriented and problem-driven, It is helpful for teachers to carry out the interaction without leaving the main line of teaching; second, BOPPPS The mode emphasizes that "participation" is "participation" realized under the effective guidance of the faculty, Is directed to enhance student engagement but does not ignore the leading role of faculty, Therefore, the "participation" can more serve the achievement of teaching objectives; third, BOPPPS Each teaching link of the model is very clear, Operable, Not only is it suitable for multi-hour integrated unit teaching, It is also suitable for a single class of teaching, Can make the participatory teaching process "standardized" and "orderly" [4], It is beneficial to improving the teaching efficiency, To make a greater contribution to meeting the needs of military talents.

References

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