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The Reform of Equipment Fault Class Course Based on Action-Oriented

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Abstract: This paper adapts to the needs of teaching, insists on the problem-oriented according to the reality of the fault course, points out the gap between the current failure course and the actual combat requirement, and takes the goal-oriented as the traction, and puts forward the basic strategy of organizing the fault course teaching according to the student's psychological development course, which can provide reference for the follow-up development of the fault course.

Keywords: Action-oriented, Equipment failure, Curriculum reform.

1. Introduction

This paper takes the "equipment failure" course as the research object, insists on the thought of the unity of problem-oriented and goal-oriented, investigates the teaching process according to the action-oriented, analyzes the main problems existing in the course, and puts forward the corresponding teaching ideas and teaching strategies, so as to lay a solid foundation for the next step of teaching implementation.

2. Basic Ideas for Curriculum Reform

2.1. Insist on problem orientation

The curriculum reform insists on the problem-oriented, focuses on solving the problem that the teaching content is" for war ", solves the problem that the teaching process and the post task logic are not consistent, the student's main body status is not obvious, the study enthusiasm is not high, solves the problem that the examination function is not perfect or has not been brought into full play. Specific performance is:

The teaching content is not well-targeted. In the existing teaching content, the main training level repair skills. This is clearly incompatible with the current requirements of the combined forces for post capacity, nor with the requirements of war. Therefore, we must reconstruct the teaching content and form the support for the training of the fault judgment ability of the vehicles belonging to the synthetic troops.

The teaching process is not consistent with the task process logic. The general process of practice teaching organization is to explain demonstration, group practice, follow-up instruction, summary comment, this practice teaching mode is suitable for the relatively solidified operation skills in professional activities, such as the operation and use of equipment, the decomposition and assembly of parts, and so on. The trainees form operation skills through repeated practice. The general process of troubleshooting is to observe the phenomenon of failure, analyze the cause of failure, formulate the elimination plan and carry out the removal action. This makes the teaching process inconsistent with the logic of the post task and lacks the authenticity of the post exercise.

The student's main body status is not obvious. The traditional teaching method is mainly based on the teacher's teaching, the students are in the state of passive learning, not mobilizing the students' interest in learning, the lack of internal motivation in the learning process is not conducive to the students' habit of learning, and is not conducive to the cultivation of the students' ability to analyze and solve problems actively.

The function of assessment is not perfect. The functions of assessment include identification function, diagnosis function, incentive function and regulation function, but under the influence of academic education, the mode of assessment is single, and the main way to be adopted is the end-of-class assessment, which only exerts the function of appraisal, and the post-service education assessment is to realize the goal of training talents for better service. It is necessary to find out the problems in the teaching process through the examination in order to find out and correct them in time. Therefore, it is necessary to improve the assessment function in the teaching process. Give full play to other functions of assessment.

2.2. Adhere to Goal Orientation

Curriculum design follows the teaching concept of "post-oriented, action-oriented, learning-oriented".

In the teaching content, fully investigate the artillery repairman and the artillery technician's post task, on the basis of the post duty, around the army equipment training and the combat process automatic filling common faults judgment as the main teaching content, enhance the teaching content pertinence, achieve "according to the outline training, according to the post training" requirements.

In teaching implementation, according to the characteristics of post-oriented education, according to the principle that the process of performing post task is consistent with the logic of teaching process, and according to the actual operation process of fault diagnosis and arrangement, the action-oriented teaching process is selected, so that the seamless link between classroom and army can be achieved, and the authenticity of post work in teaching can be enhanced.

In the teaching method, in the interactive process of teaching and learning, emphasis is placed on "learning-based", and the teaching based on students' psychological development process is adopted to improve students' participation in the whole teaching and to highlight students' subject status.

In the examination way, give full play to the appraisal function, the stimulation function and the regulation function, choose the formative examination as the examination way, so as to discover the student's study situation in time in the

teaching process, and achieve the goal.

3. Teaching Strategies

In the determination of the teaching content, according to the steps of understanding the needs of the army, calibrating the standard of the post ability, determining the target of the personnel training, optimizing the course content, on the basis of full investigation, according to the task of judging and arranging the specific fault of the post, choosing the typical fault from the army as the main teaching content, carefully analyzing the knowledge points needed to complete the task of judging and arranging the fault, Skill and method form knowledge system, skill system and method system, and then form new teaching content system through reconstruction.

In order to make the logic of classroom teaching process more consistent with the logic of fault judgment process, we choose action-oriented teaching process. Its main characteristic is that the teaching process is consistent with the post task process, realizing the seamless link between the teaching process and the task process, and the general action-oriented teaching process is as follows: task description, task analysis, clear process specification, task implementation and result evaluation.

At the same time, in order to improve the students' enthusiasm of independent thinking and self-study, the teaching process is divided into four stages based on the students' psychological development process of learning knowledge. They are the stage of setting interest, the stage of exciting interest, the stage of attracting interest and the stage of expanding interest.

The interest stage is the teacher sets the fault stage, in this stage is mainly through the teacher sets the fault to realize, this stage teacher should pay attention to the problem is to set up the fault which is easy to analyze the fault reason, lets the student get the successful experience first, thus lets the student achieve the self-affirmation and the self-identity.

The exciting phase is in the group discussion stage. Because before this course the student has learned the automatic loading operation use, when the loading process suddenly a certain link does not go on, the student's first reaction is" the equipment how? Why can this be "? In order to stimulate students' interest in seeking real reasons, teachers should also cherish students' curiosity at this stage, enhance their curiosity and raise their interest level.

Enticing stage occurs in the process of analyzing the cause and troubleshooting, and may fail according to the elimination plan, but learning is a process of gradually deepening and gradually reaching the learning goal. The spiral rising process of "doubt → doubt → doubt → redoubt → doubt → redoubt → redoubt". Each time a student solves a problem, there is an excitement of overcoming difficulties, and more self-confidence.

Expansion is to develop the habit of questioning the problem after the task is completed, encourage students to think more, try to find the problem, solve the problem, expand the breadth and depth of thinking. Make the student bring the problem into the classroom, the problem is solved, and then take the problem out of the classroom.

During the whole teaching process, the students' main body status should be emphasized, and the teachers' guidance and motivation should be brought into full play. According to the characteristics of the students' practical ability, the students' success in the practical trouble-shooting should be realized, so as to improve their enthusiasm and initiative in learning and achieve the strong desire for further improvement. At the same time, the assessment methods should be set up rationally. To give full play to the diagnostic and motivational functions of evaluation.

In the task description stage, the teacher mainly sets up the malfunction and operates the equipment, lets the student observe the malfunction phenomenon of the automatic loading machine carefully, lets the student describe the failure phenomenon through the way of asking questions, the teacher carries on the comment and the explanation according to the failure phenomenon described by the student, the comment and the explanation tone should adopt the motivational and the solicitation language, Such as" you said very reasonable, but you have not considered a prerequisite "and other motivational and advice language, affirming the students' achievements, but also targeted to the corresponding recommendations.

Task analysis and clear process specification stage in the implementation of specific teaching at the same time, the teacher according to the number of students and guarantee conditions will be divided into a number of groups, each set up a team leader (group leader rotation), each group to discuss the causes of the failure and make troubleshooting plans, after the end of the group leader report plans, teachers to the program for comment. At the same time, the tone of the comment, "How do you think about this question?" and other languages. This stage mainly cultivates the student logical thinking ability.

Task implementation stage mainly by the team leader according to the plan to carry out personnel grouping, equipment preparation and troubleshooting, teachers in this stage mainly follow-up guidance and risk control, to train the ability of fault judgment while training the trainees' training ability, so that the trainees do in the middle school, learning.

In the stage of achievement evaluation, students mainly give self-evaluation according to their self-performance, and summarize the advantages and disadvantages of their respective group programs, so that they can get the experience of learning success and failure. Teachers give full play to the evaluation of the incentive function, diagnostic function, regulatory function, encourage advanced, look for deficiencies. At the same time, it was found that the students who entered the group faster led the students who entered the group more slowly, forming a pair of students, thus changing the information flow of teaching and learning from point to point, and enhancing the efficiency of information circulation. To achieve "do not abandon, do not give up", so that the classroom has a certain emotional spirit.

In the application of teaching means, the theory teaching of knowledge and method class is mainly improved by three-dimensional animation, practical assembly and maintenance training simulator.

In order to directly face to the post, the actual troubleshooting adhere to the actual installation-based.

In order to solve the problems of pre-class and post-class review, the course team produced micro-courses on network courses and key subjects, and the students used these teaching resources to complete self-study.

4. Conclusion

Through the investigation and selection of the fault from the user as the teaching content, to achieve the war of teaching. Organize the teaching process according to action-oriented, enhance the consistency of teaching process and post task.

Based on the psychological development combined with the teaching process, the author sets up the teaching design of interest-setting, interest-stimulating, interest-inducing and interest-expanding, which can stimulate the students' inner driving force of active learning and highlight the students' main body status. Of course, reform and innovation is endless, we will keep an eye on the new battle demand, according to the change of learning situation, use the new technology to constantly update our talent training goal, teaching content and method means, strive to achieve supply side and demand side precise docking.

References

[1] Deng Zemin. Teaching theory of vocational education[M]. China Railway Publishing House.2011.

[2] Li Yanhong, Song Bingshui. The Implementation Process of Teaching Reform of Secondary Vocational Education Based on Action-oriented[J]. Contemporary vocational education. 2016.

[3] Qu Wenying. Action-guided Reform and Practice of Courses in Higher Vocational School. School of Aeronautical Engineering,Jilin Institute of Chemical Technology[J];2020.