Teaching Reform Exploring of Vocational Education Courses with the Guidance of "Military Training and Competition"

Yani Zhang\(^1,a\), Lei Qin\(^1,b\), Xiaoshuang Wang\(^1,c\) and Xuejun Rao\(^1,d\)

\(^1\)College of Information and Communication National University of Defense Technology, Xi’an, China

\(a\)waterlily_yani@163.com, \(b\)qinleinust@126.com, \(c\)wxs163jundui@163.com, \(d\)51603265@qq.com

*Corresponding author

**Key Words:** Military training and competition; Teaching mode; Vocational education

**Abstract:** Focusing on the instructions “Carry Out the Mass Activities of Military Training and Competition” of President Xi [1], oriented by war preparation and driven by the contemporary spirit of “Military Training and Competition”, this paper explores a comprehensive multi-level teaching reform and innovation of vocational education practice courses including teaching contents, training methods, resources and evaluation mechanism.

1. **Introduction**

In January 1964, Luo Ruiqing, secretary general of the Central Military Commission and chief of the General Staff, proposed the idea of holding Military competition in the entire army. In April 1964, a preparatory committee for the Military competition was established, and the “The certain problem provisions of Military tournaments of the People's Liberation Army in the 1964” was issued. On June 15, 1964, Chairman Mao Zedong, Premier Zhou Enlai, Marshal Zhu De, Marshal He Long and Marshal Ye Jianying and others watched the performances of Beijing, Nanjing troops and militia teams in Beijing, and made fully affirmed and praised to the military training results and competition methods. Since then, “Military Training and Competition” has been added into the history of the Chinese People's Liberation Army and is of great significance to the development of our military training [2].

On January 3, 2018, at the mobilization meeting of the training, President Xi pointed out that all levels of the military should strengthen their training and war preparations to a clear direction, set military training as a strategic position and a work center unswervingly, which should be hold on and achieved a good result. It is necessary to correct the training style, innovate training methods, improve training safeguard, train and monitor strictly, carry out mass training and competition activities, strengthen targeted confrontation training, and improve the level of military training. President Xi’s instructions have set off a wave of mass training and competition in the new era once again.

2. **Contemporary spirit of “Military Training and Competition”**

At present, strengthening the construction and reserve of information security support for joint operations is an urgent need for the improvement of joint operations information support capabilities, and is the basis for adapting to the requirements of diversified military missions and informationized warfare. In the cultivation of talents, we should improve the training efficiency of information security talents in all aspects, from multiple angles and in multiple channels. In the new historical period, President Xi re-introduced the instructions for conducting mass training and competition, so that the “Military Training and Competition” was given a new era connotation. Through in-depth study of the spirit of President Xi’s instructions, the “Military Training and Competition” is based on the new military revolution and the new system of preparation, guided by
the preparations for training in the new era, and around the requirements of winning the battle, creating a realistic battlefield environment and a strong atmosphere of competition. Targeted confrontation and actual combat training. The connotation of the era of “Military Training and Competition” is concentrated in the vocational education of the colleges and universities on the training of information security communication personnel in the joint operations. It is concentrated in the “Close to the post”, “Emphasizing the confrontation”, “Focus on actual combat” and “Being able to win in the battle”.

2.1 Military Training and Competition, it is necessary to use the post task as the content
"Close to the post" is to use the joint combat information to ensure the specific tasks of the talents in the actual combat positions as the training content. Train the required capabilities to meet the needs of fighting a battle, and learn the required knowledge according to the task of the position. Starting from the actual post tasks, analyze the job responsibilities and build a scientific training content system. With the deepening military reform and the adjustment of the military establishment system, the task of joint operational information security personnel has also evolved from a monotonous skill operation type to an "Integration of command-technology" and "Specialization and comprehensiveness". In the new era, Military training and competition should be combined with the new changes of post tasks of the new era

2.2 Military Training and Competition, it is necessary to use the competition as a means
"Emphasizing the confrontation" is to use the mass military confrontation competition as a training method. The traditional military training is carried out according to the subject step by step, and the training is not confrontational and the officers and soldiers are not interested in participating. In the new era, the "Military Training and Competition" should rely on the means of competition, with "soldier" as the main body, we should emphasize confrontational training in the competition, create an atmosphere of all students participating in, simulate the competition of “real guns and bullets” under actual combat conditions, and build a bridge from daily training to war preparation. It can give full play to the non-commissioned officer's subjective initiative and creativity, and train the non-commissioned officer's ability to analyze and solve practical problems in these competitions.

2.3 Military Training and Competition, the actual battlefield should be the environment
"Focus on actual combat" is to copy the real combat scene of the future as a training environment. The training ground should be like the battlefield, so as to create a strong atmosphere of the battlefield and build the basic conditions for docking the battlefield. The closer the training field is to the battlefield, the more realistic the environment is. The more the officers and soldiers can find the immersive feeling, the ability to analyze and solve practical problems, and the ability to quickly adjust the state and integrate into the battle “role” in actual combat. Quickly find ways to defeat the enemy.

2.4 Military Training and Competition, it is necessary to win the competition
"Being able to win in the battle" is to win the modern war as the final standard to verify the training results. Training results are evaluated against the standards of actual warfare, and according to the conditions of winning modern warfare, analyze the capabilities of officers and soldiers, use practical evaluation methods, and establish a multi-dimensional evaluation system that can meet the standards of winning and defeating a war.

3. The current shortage of vocational education personnel training
Focusing on the instruction "Carry Out the Mass Activities of Military Training and Competition" of President Xi, combined with the actual teaching of vocational education, the comparative analysis found that the following problems exist in the current curriculum teaching.
3.1 The content of the course is lagging behind, which imparts the knowledge and skills as the main task, and is out of line with army posts and tasks.

With the profound changes in the combat style of the troops and the nearly finished adjustment of the army's organizational system in the new era, the post tasks are undergoing new changes. At present, vocational education mainly teaches basic theories and relatively mature traditional practice subjects in the teaching content, and pays attention to the training of single skills, and does not research enough on the new changes of the task of the troops. Some new post tasks, application of new equipment operations and engineering have not yet been introduced into the classroom, the teaching content is relatively lagging, and it is out of line with the military post task. At the same time, the current teaching focuses on the knowledge and skill transfer of individual operations, while the military positions often require the group (or class) as a unit to complete the combat mission, teamwork. The ability to complete tasks is difficult to develop in traditional classrooms.

3.2 The organizational form is monotonous, the connection between theory and practice is not close, and regulations and norms are difficult to implement

The existing vocational education courses mainly adopt modularization in the form of teaching. First, explain the relevant theoretical knowledge of the course in the classroom, and then transfer to the computer room to practice and explain the equipment operation skills. This separates the theoretical teaching from the practical operation. The students often forget the forefront after learning, and the ability to comprehensively apply knowledge and skills to solve problems is insufficient. At the same time, vocational education is geared to the task of the military. The trainees need to accurately grasp the professional related duty maintenance regulations, engineering construction norms, equipment operation procedures, and the style of the work. The traditional classroom infusion is boring and difficult to attract enough attention from the students. It is more difficult to train students ability to complete job tasks in strict accordance with regulations, rules and procedures.

3.3 The students' interest is low, the motivation for learning is insufficient, and the initiative to solve practical problems is weak

After in-depth student surveys, vocational education students have certain fears about professional courses, and their interest in learning is not high. They are often passive learning. The instructors speak a little. The students listen a little, the instructors teach a little, the trainees practice a little, and there is a general lack of independent learning and exploration. Initiative. Therefore, traditional classroom teaching is difficult to stimulate the enthusiasm of the students, and the teaching effect is not obvious.

Guided by the “Military Training and Competition”, the reform of curriculum teaching, relying on the changes in the tasks of the troops in the new period, and organizing "training" with the goal of "preparing for war and fighting", and "competition" according to the requirements of actual combat, which can realize the docking of teaching content and the actual combat positions of the troops. The teaching and training are combined with actual combat tasks and integrated into the actual combat environment, regulations and norms are introduced into the classroom, and the students are trained in the Military competition of actual combat post. The theory and practice are organically integrated, and the precision implementation is carried out based on the combat post, so as to improve the quality of personnel training for information and communication guarantee of joint operations. At the same time, the teaching mode driven by the “Military Training and Competition” can create a learning atmosphere of strong military and military, and transfer the knowledge and skills as the central teaching mode, transforming into a teaching mode centered on completing practical tasks, and constructing training for everyone. The environment will maximize the enthusiasm of the students to meet the difficulties and improve the learning initiative and learning efficiency of the students.
4. The countermeasures of the curriculum reform driven by the “Military Training and Competition”

Focusing on the instructions of President Xi to carry out the “Carry Out the Mass Activities of Military Training and Competition”, in order to prepare for war-fighting, and to drive the era of “Military Training and Competition”, the new model of vocational education curriculum reform is explored [3], as shown in Figure 1. Through the analysis of the new changes in the post task, combing the post-employment ability system in the new era, and leading the vocational education with the connotation of "training the soldiers" teaching content, training methods, resource conditions and evaluation mechanism, all-round multi-level teaching mode reform Innovation.

Figure 1 the New Model of Vocational Education Curriculum Reform

4.1 Drive the knowledge and skills from “conference” to “strong” through the concept of “Military Training and Competition”, and closely follow the actual post to optimize the course content system

Focusing on the reform of the combat style and the adjustment of the organizational system, aiming at the actual combat requirements for preparing for war, based on the military training assessment outline of our military, combined with the requirements of the military and international military skills, we will modularize the task of the troops in the new period and timely dismantle the troops [4]. The new tactics, new training methods, new achievements, and new experiences are incorporated into the teaching content system. The original teaching content is updated and reorganized with the actual combat subjects, and the current monotonous skill training is transformed into a "comprehensive and comprehensive" fusion cultivate. Strengthen basic skills, deepen core skills, expand innovative skills. Make the students “understand” in theory, “can do” in practice, and "strong" in actual combat tasks.

(1) Grasp the need for a position. The establishment of the content system should emphasize the traction of the post, and improve the ability to win. Through systematic review and scientific argumentation, we will strive to achieve basic knowledge, deep professional knowledge, and innovative cutting-edge courses to meet the needs of positions and wins. Emphasis on practical application, on the basis of mastering basic theoretical knowledge, highlight the training of skills, qualities and abilities that are required for positions.

(2) Grasp the development of the troops. The teaching content should break the inertia of the traditional chapter teaching. According to the requirements of systematization, systemization and standardization, optimize and integrate, make them connect with each other, connect with each other and support each other, and constantly create special course modules that meet the needs of the troops and focus on the posts. Adhere to the latest practical achievements of the military and the
urgent need for knowledge into the teaching, to focus on the development of modern warfare, update the curriculum, increase the proportion of information-based operations, joint operations, simulation exercises, etc., so that teaching and actual combat can be effectively linked. It is necessary to keep abreast of the frontiers of discipline development, research and study, teaching and research, and always maintain the dynamic updating and rolling development of the curriculum content, so that teaching is instructive and leading to the construction of military equipment; it is necessary to master the procedures for the use and protection of military equipment. The method and the key points, difficulties and hot issues that need to be solved urgently, timely adjust the course content, and integrate the issues concerned by the troops into the classroom teaching.

(3) Grasp the actual situation of the students. Focusing on the compound talent training program of “knowing technology, knowing manage and knowing commanding”, the content of teaching and training is divided into different knowledge units. According to different training levels and sources of students, flexible combination of knowledge units can enhance the flexibility of teaching and training. Meet the needs of students of different levels and types.

4.2 Drive curriculum from "training" to "real combat" through the concept of “Military Training and Competition”, highlight confrontation and innovate group training methods.

In the context of combat actual combat, starting from the whole process of the full-features of combat missions, according to the number of personnel and the scale of knowledge and skills, the competition is based on the competition, hierarchical and phased organizational confrontation training.

(1) Differentiate the level of the number of people and coalesce them step by step. In the training, it pays attention to the integration of single-player skill training and multi-players coordinated operation, and constructs a group-by-level group training mode consisting of three levels of single-player skill confrontation training, single-team divisional confrontation training and full-person comprehensive drill\[5\]. The "competition" leads the innovation of the actual combat group training method. In the single-player skill confrontation training, the individual combat skill training method can be used to carry out the training, which mainly strengthens the basic knowledge and skill base of the trainees, and prepares the basic skills of warfare. In the team's cross-field confrontation training, the team's team competition is used to train the students. The main training students rely on the specific combat positions and the division of labor to complete the task. In the comprehensive exercise, the red and blue forces are used to combat the competition. The main training is Students have the flexibility to apply knowledge and skills to solve practical problems in combat. The number of personnel is divided into levels of step-by-step coalesce of the antagonistic training method, which not only ensures individual strength but also highlights cooperation and innovation.

(2) Differentiate the scale of knowledge and skills, and advance in stages. In the training, we pay attention to the segmentation accumulation of knowledge and skills, from single skill training, multi-module combination training to full content element comprehensive drill three-stage segmentation advanced and segment-by-segment accumulation. Organize small competitions in a single practice project training, and train single-player skills; after the completion of the course part of the module, organize a big contest, and train the students to use the multi-module knowledge skills to complete the single combat mission; After the completion of the overall teaching, the comprehensive skills competition, comprehensive reinforcement training for the students to flexibly use the knowledge and skills of the entire course to solve practical problems, enhance the ability of students to solve practical problems and respond to emergencies in actual combat. The training method driven by the “Military Training and Competition” is used to create a full participation and a positive and realistic combat atmosphere. It can mobilize the students' interest in learning and improve the effectiveness of teaching and training.
4.3 Drive the teaching environment from “classroom” to “battlefield” through the concept of “Military Training and Competition”, focus on the battlefield, and build integrated resource conditions.

Based on the practice of modern battlefield, centered on the needs of individual training, team training and comprehensive training, in accordance with the thoughts of "The training ground is the Military training ground, and the competition field is the actual battlefield", build skills training in basic skills, core skills and innovation as the goal of "hard" modular integration training conditions, based on the existing conditions, in strengthening the internal facilities construction, the transformation at the same time, actively coordinate forces and local units to build..

(1) Build a "hard" environment for actual combat training. Starting from the actual situation of the modern battlefield, focusing on the training mode of individual training, team training and comprehensive drills, distinguishing the ability level, and constructing “hard” surroundings for modular integrated training with the basic skills, core skills and innovative skills training. Construct a number of training environment facilities such as the theoretical teaching area, the single-pack training area, the simulation training area, the engineering practice training area and the field tactical operation area, forming an integrated training environment of “inside field and outfield, installation and simulation” to maximize the benefits of site utilization.

(2) Configure the "soft" platform for actual combat training. It is necessary to make up for the lack of training equipment, increase the first-line equipment of the troops, and build a professional teaching and training platform that integrates the functions of theoretical study, duty maintenance, operation training, and fault handling, and develop practical teaching aids, simulation training equipment and virtual training software. We should focus on building task-driven teaching conditions, simulating the battlefield environment, and implementing the whole process of contextualized teaching with practical ideas. At the same time, the military case, engineering norms, and regulations are introduced into the classroom, and a three-dimensional training "soft" platform composed of theoretical teaching materials, practical lectures, and online teaching classes is constructed.

4.4 Use the “Military Training and Competition” to drive the course assessment from “qualified” to “winning”, winning in a warfare, and to establish a multi-dimensional evaluation mechanism.

In order to win the modern war as the ultimate standard for evaluating the effectiveness of training, the "competition" is used to guide the innovation of the actual evaluation mechanism, the combination of process and result, the combination of theory and practice, and the evaluation of single-player skills and single-player comprehensive skills. Multi-dimensional evaluation mechanism combined with multi-player collaborative task evaluation. Introduce the competition mechanism on the basis of the traditional evaluation form, organize small contests at the end of the single-player practice project training, evaluate the single-player operation skills, organize the comprehensive skills competition after the completion of the course content teaching, and carry out the whole course mastery of the students. Evaluation, before the students graduate, organize a comprehensive drill and the "Jingwu Cup" competition, relying on the actual combat position, comprehensive evaluation of the students' comprehensive quality and teamwork ability; in the assessment content, covering the basic theoretical knowledge and practical operation of the major skills and combat styles have been transformed from a knowledge and skill test to a comprehensive quality assessment for “winning” in the information warfare.

(1) Reasonably set the assessment criteria and promote learning through the examination. The curriculum assessment standard is not only a benchmark for measuring the effectiveness of teaching and training, but also an indicator for guiding the implementation of teaching and training. Starting from the conditions for winning modern warfare, systematically analyze the requirements of the post-task to the ability of the students, combined with the training outline, skill appraisal standards
and international and domestic military competition standards, set the curriculum assessment criteria from the knowledge and skills required for capacity development. It not only serves as the goal orientation of the course teaching and training, but also serves as the scoring criterion for the competition. It is also the index for the students to meet the post requirements after graduation. When setting the assessment indicators, we should closely combine the post tasks, the training content and the actual situation of the troops, give full play to the comprehensive promotion role of assessment, competition and drills, distinguish the timing, implement flexibly, and use scientifically to comprehensively improve the quality and efficiency of military training implementation.

(2) Scientific design for assessment subjects, to promote training through the assessment. The course assessment subject is not only an independent training unit with reproducible training in teaching and training, but also a single task element for preparing for the task in preparation for war, and also as an operation unit that can be independently implemented in the skill competition. Relying on the task elements of the post, designing the assessment subjects, realizing the docking of the assessment subjects and actual combat tasks, how to ask for snoring, how to evaluate the teaching and training, and to ensure that the students can adapt to the positions to the greatest extent and adapt to the battlefield. Training subjects, assessment subjects and the formation of organic competitions in the contests, the combination of process and results, training in the examination, in the contest, in the examination, can achieve a smooth transition from teaching, training, competition to actual combat, so that the assessment Passed students can fully adapt to the battlefield and have the ability to “winning a warfare”. At the same time, by simulating tactical situations, designing multiple subjects in a context close to actual combat to conduct a process assessment to test the students' vitality and courage, willpower quality and battlefield environment adaptability, especially the basic skills and tactical application skills in engineering support operations.

Acknowledgement
The work was supported by the Teaching Research Project of National University of Defense Technology, No. “U2018026”.

References