**Study on the Construction of Multivariate Teaching Materials System for Military Vocational Education**

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**Abstract.** Military vocational education is a continuing education for military personnel. It is an urgent task for military vocational education to cultivate a large number of new military talents with high quality. This paper discusses the connotation of the multivariate teaching materials, and compares the multivariate teaching materials with the traditional teaching materials. According to the needs of military vocational education reform and development, the necessity and basic requirements for the construction of the multivariate teaching materials for military vocational education are analyzed. From the aspects of teaching material orientation, top-level design and innovative practice, this paper focuses on the corresponding countermeasures for the construction of multivariate teaching materials for military vocational education. The purpose is to promote the construction and use of multivariate teaching materials and to promote the deepening of military vocational education and teaching reform.

**Introduction**

The teaching material is the basis of the teaching resources, and it is the main reflect to the teaching content, teaching methods as well as teaching mode [1]. The teaching materials are the carrier of teaching content and teaching method, which is directly related to the quality of personnel training, to fully implement the "to combat focused, closer to the troops' position in the process of educational reform, aiming at the construction of military occupation education" is not standardized, systematic, practicality is not strong, sharing is not convenient, content the update is slow, cannot meet the needs of "combat teaching practical problems, to solve our occupation education training combined with the task of military actively explore the construction of a series of standardized, open and practical" multivariate teaching materials system [2]. The development of IT sets demands on the design of Integrated Teaching Materials (ITM) based on digital resources [3].

**Necessity of Constructing the Multivariate Teaching Materials for Military Vocational Education**

**The Incomparable Superiority of the Multivariate Teaching Materials to the Traditional Teaching Materials**

Multivariate teaching materials are the modern education idea and the use of modern network technology platform based on the traditional paper material as the foundation, takes the course as the center, set to multi-media, multi-form, multi-purpose, multi-level teaching resources and a variety of teaching services for the content of the structural matching teaching publications, which can make teachers and students autonomous learning and teaching environment teaching [4][5]. It includes both the traditional paper material and the multimedia digital teaching resources made by modern information technology. As for content, it includes main teaching materials, auxiliary teaching materials, learning guides, test questions, etc. in terms of performance, there are paper medium
textbooks, audio-visual products, electronics, network publications, online courses, MOOC courses and so on. The construction of multivariate teaching materials plays an important role in optimizing teaching resources, improving teaching quality and promoting teaching mode reform [6]. Building multivariate teaching materials will become the trend of military vocational education textbook construction. The multivariate teaching materials have many advantages compared with the traditional teaching materials, as shown in Table 1.

Table 1. Comparison of multivariate teaching materials and traditional teaching materials.

<table>
<thead>
<tr>
<th>Comparison Content</th>
<th>Traditional Teaching Materials</th>
<th>Multivariate Teaching Materials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Form of teaching materials</td>
<td>Text, illustration</td>
<td>Paper textbooks + network platform</td>
</tr>
<tr>
<td>Properties of teaching materials</td>
<td>Static</td>
<td>Dynamic</td>
</tr>
<tr>
<td>Content of teaching materials</td>
<td>Limited</td>
<td>Unlimited links, constantly added</td>
</tr>
<tr>
<td>Learning method</td>
<td>Uniform plan</td>
<td>Self-study, interactive learning</td>
</tr>
<tr>
<td>Timeliness of teaching materials</td>
<td>Quickly outdated</td>
<td>Renewed on time</td>
</tr>
</tbody>
</table>

The Multivariate Teaching Materials Conform to the Law of Military Vocational Education

Military vocational education is generally a short-term round of training, with a clear job-oriented and targeted, with a certain degree of education based on the knowledge directly to a specific position, reflecting the capacity-based, which also determines the employment education has a strong Practicality and dynamism, the teaching goal can be achieved only through practical teaching, and the curriculum content is also undergoing dynamic development. At the same time, the actual combat training also requires that the scientific and cultural qualities of the trainees are always in the process of being generated, continuously meeting the needs of professional posts and serving the post Education and teaching put forward higher requirements.

Requirements for Constructing the Multivariate Teaching Materials for Military Vocational Education

To Highlight the Pertinence and Practicality of the Multivariate Teaching Materials

The construction of teaching materials for military vocational education must, according to the requirements of the training target, be close to the actual situation of the military and truly reflect the actual needs of the military. At the same time, it is necessary to take actual combat teaching materials as the traction, and to strengthen the practice of teaching materials so as to realize the transformation from knowledge-based education to capable education.

To Highlight the Progressiveness and Openness of the Multivariate Teaching Materials

In actual combat teaching, we must grasp the relationship between reality and the future, firmly establish the awareness of the times and foresight, aim at the frontiers of military transformation, and constantly update the contents of teaching materials. It requires that the military vocational education textbook system is an open platform that is constantly evolving with the development of the times.

To Highlight the Comprehensiveness of the Multivariate Teaching Materials

In the context of actual combat teaching, the content of training shows a high degree of integration at the same time as the highly differentiated positions. In particular, the army system has become increasingly "miniaturized," "modular," and "complex," and each occupation Jobs are a variety of professional, a combination of a variety of capabilities. Therefore, teaching materials construction should take full account of the development needs of the post, to maintain the comprehensiveness of the teaching material, it is necessary to highlight the main status of the main course, but also to meet other teaching job requirements required knowledge.
Countermeasures of Constructing the Multivariate Teaching Materials for Military Vocational Education

Taking the Practical Combat Teaching as the Focus to Make the Teaching Materials Well Positioned

The teaching material system of military vocational education is directly related to the training level of the personnel. According to job requirements and the characteristics of military personnel work, in order to avoid repeated training, shorten the training cycle, faster and better form and improve job skills, job occupation education according to the characteristics of military personnel, members of miscellaneous and heavy task, we follow the professional training goal and team needs docking, docking and occupation skills curriculum standard, curriculum the content and the post task docking, construction principles and construction of teaching materials of curriculum content docking ", the scientific construction of teaching system, the comprehensive construction of multivariate teaching resources, teaching and training, to ensure close combat troops, improve military vocational education level of combat.

Taking the Theory as the Guide to do the Top Design

The multivariate teaching materials of military occupation education is to adapt to the construction of specialty education and information technology to form a set of new teaching materials, new concepts, principles, goals, methods. The main theoretical basis of teaching material design and development includes systematic science method, learning theory, teaching theory, educational communication theory.

We learn from the international advanced action-oriented vocational education theory and adopt the systematic approach to propose a position-oriented action oriented multivariate teaching materials system reverse construction strategy [7]. The reverse construction strategy of teaching materials system refers to the backward derivation and analysis of the formation of post competency based on the demand of troops, and the rational allocation of curriculum modules and the construction of teaching materials system. That is, according to the requirement of the position of the army, the goal of training the position of post is defined, and then it is the starting point, and the curriculum system and the teaching materials system are set in reverse. Specifically, the construction of teaching materials system is based on systematic approach: the construction of teaching material system should be carried out according to "post requirements, curriculum system, teaching materials system, multivariate teaching materials", which is promoted step by step, close to the actual situation of the army, and accords with the rule of vocational education. The construction process of the multivariate teaching materials system is shown in Figure 1.

Figure 1. The construction process of the multivariate teaching materials system.

Taking Innovation as the Driving Force to Develop Teaching Materials

Innovation of the Construction Contents of Multivariate Teaching Materials. The standardization, serialization and actual combat of the construction of teaching resources have been realized. Through the research and practice of the project, set up in line with the specifications, covering equipment quality control professional series teaching resources, and timely teaching resources into products to meet the requirements of the teaching profession, teaching and training to meet the actual requirements, students learned that the use of the quality control of practical talents training, improve the students' post the ability to play an important role.
Innovation of the Construction Methods of Multivariate Teaching Materials. It ensures the openness, practicality and advanced nature of the teaching resources. Through the research and practice of this project, to optimize the various resources in the teaching process, the important role to enhance the connotation of the professional, accurate starting point. The co-construction of teaching resources in the cooperation of military academies has promoted the intensive education of the army and the implementation of the teaching reform of the project.

Innovation of the Construction Applications of Multivariate Teaching Materials. It embodies the diversity, openness and sharing of the construction and application of teaching resources. Through the research and practice of this project, the establishment of the equipment system of multivariate teaching material construction of professional quality control, construction standards and operation mechanism can be replicated, has extensive reference significance and popularization value of multivariate teaching materials of similar institutions in the army.

Conclusions
After the construction in recent years, we have written a series of excellent textbooks for the equipment quality control professional of military vocational education, formed a set of high-quality digital teaching resources, established an open online teaching platform, and generated a normalization of teaching content updates mechanism. To create a "textbook (core curriculum supporting materials)—auxiliary materials (extended textbooks)—digital teaching resources (online courses, MOOCs, multimedia materials, etc.)—online teaching platform (open network teaching platform, professional website, network test system, test database, etc.) "four-dimensional multivariate teaching materials system. On the one hand, the construction of the multivariate teaching materials has optimized the teaching resources, formed a normal mechanism of teaching content updating, and met the requirements of practical teaching and training. On the other hand, the construction of multivariate teaching materials is also innovative to serve the teaching mode and enrich the teaching methods.

References