

## Exploration and Practice of the Integrative Assessment Reform of the New-equipment Teaching Courses for Pre-selected Petty Officers

Cheng-Xue WANG<sup>1,a\*</sup>, Wei-Qin XU<sup>1,b</sup> and Hui-Jin WANG<sup>1,c</sup>

<sup>1</sup>Naval Aeronautical and Astronautical University, Yantai, Shandong 264001, China

<sup>a</sup>wcx\_2008369@163.com, <sup>b</sup>qdxwq@sohu.com, <sup>c</sup>Lovefern@126.com

\*Cheng-Xue WANG

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**Abstract.** The course assessment is an important part of teaching and a way to evaluate the realization of teaching objective. It provides guidance and promotion for realization of teaching objective. The integrative course assessment of equipment teaching is raised in this paper in order to improve teaching quality of the new equipment teaching for pre-selected petty officers. The connotation and effect of the assessment is analyzed. Program and practical exploration of the assessment is introduced. Finally the problems needed to be paid more attention to when using the integrative course assessment are pointed out in brief.

### Introduction

Professional education for pre-selected petty officers is a kind of military professional education. The new recruits who have completed the basic training since they enter the army are the cultivation objects [1]. The objective of the education is to cultivate the post competency of the cadets and its teaching contents are basic theory, basic operation and maintenance of the military equipment. The main contents of professional education for pre-selected petty officers are about new equipment. Teaching quality relates directly to the army's battle effectiveness. As an important part of new equipment courses, the course assessment is not only a way to evaluate the reality of teaching objective but also a direction and impetus for teaching [2]. The connotation and effect of the integrative course assessment is analyzed, the mode and practice effect is introduced and the problems needed to be pay more attention to are promoted in this paper in order to improve teaching quality and propel the equipment teaching by course assessment.

### Connotation and Effect of Integrative Course Assessment

#### Connotation of Integrative Course Assessment

The integrative course assessment of the new equipment courses for pre-selected petty officers is a comprehensive examination mode with which the integration of learning process and course assessment, the integration of learning attitude and military literacy, the integration of knowledge skills and post competency are realized [3]. The integrative course assessment is developed according to the requirement of personnel training programs of pre-selected petty officers and the position requirement in army. Its objective is to improve posts competency of the cadets. In essence the integrative course assessment is a process to check and evaluate comprehensively the whole learning process and learning effect of the cadets according to some criterion and methods and take the result as the main reference for the score of the courses. The objective of the integrative assessment of the courses is to strengthen the control of the learning process of the cadets, to supervise and urge them to learn, understand the knowledge better, to cultivate their competency and improve learning efficiency. On the other hand the teacher can know about how the cadets understand and master the knowledge, adjust teaching method to improve teaching quality and to evaluate the cadets about their study fully and objectively.

## **Effect of Integrative Course Assessment**

### ***Benefit for Stimulation Learning Interest of the Cadets and Improvement of Their Learning Enthusiasm***

The teaching contents of the new equipment are complex, comprehensive, informative, full of novel and wide knowledge, which presents higher demands for the cadets of their theoretical basis. Because the education background of the pre-selected petty officers is various from junior middle school, senior high school, junior college to college, the difference of knowledge basis of the pre-selected petty officers is great. During the teaching process the cadets with good theoretical basis can't be satisfied while the cadets with weak theoretical basis can't bear, which will lead to the lack of learning interest and learning motivation for some cadets. With the integrative course assessment the situation that the cadets always get cramming before examination can be improved. At the same time the cadets can better understand the basic knowledge and skill at ordinary times than before. Their learning interest and motivation can also be strengthened with this examination method [4].

### ***Benefit for Teacher to Grasp the Study of Cadets in Time and Improve Their Teaching Mode***

The integrative course assessment emphasizes combined evaluation of the learning process and learning effect of the cadets which is suitable for the pre-selected petty officers with different theoretical basis [5]. During the implementation the teacher can well know about how the cadets master the key point and difficulty, which point they can't understand and who can't follow up the teacher. Then the teacher can determine the counseling objects and make plan to help them with the knowledge. On occasions the teacher should adjust teaching method, teaching contents and teaching progress.

### ***Benefit for Overall Evaluation of the Cadets and Improvement the Science of the Evaluation***

Usually the score of the course assessment is depends on one-shot exams for equipment teaching in college. This course assessment ignores the evaluation at ordinary times and the learning process of the cadets and is of lower credibility. The integrative course assessment realizes the comprehensive evaluation of the cadets for their learning process and learning effect. Not only the knowledge and skill but also the attitude and military quality are involved in the course assessment. Compared with the traditional course assessment the cadets can be evaluated more comprehensively with the integrative course assessment. It is more scientific and its result is more objective, real and receivable.

### ***Benefit for Cultivation of Comprehensive Quality of THE Cadets and Improvement of Cultivation Quality***

Currently the teaching mode of theory, simulation and real equipment for new equipment courses in most military universities.

Theoretical teaching and the practical training including simulation and real equipment can be organized in turn or alternately. They can be related and promoted with each other and construct the whole teaching structure of the new equipment courses. Not only the knowledge and operational skill but also the emotion, attitude and military manner of the cadets during the theory, simulation and real equipment teaching process can be evaluated. It is benefit for the cadets to cultivate the ability to link theory with practice. At the same time it is also a way to improve military and political quality of the cadets.

## **Implementation AND Practice Effect OF THE Integrative Course Assessment of New Equipment**

### **Assessment Mode**

The integrative course assessment emphasizes the evaluation of learning process, learning contents and post competency of the cadets and is composed of process assessment, contents assessment and competency assessment. Proportion of the process assessment is 30%, contents assessment is 30%, and competency assessment is 40%.

#### ***Process Assessment***

Process assessment is used to evaluate the performance of the cadets during their learning process including three aspects as follows. The first one is to check on class attendance. Its proportion is 30%. If the class attendance is below 85% or one time of absenteeism without excuse, the cadets will be given fail. The second one is performance on class and its proportion is 40%. The attitude of the cadets, learning enthusiasm and mastery condition of knowledge are evaluated. The score depends on performance on class including listening to the teachers, answering questions, asking question, class notes and discipline of the cadets. The third one is study situation after class and its proportion is 30%. According to the situation of questioning before class, checking the self-study and completion of homework after class the teacher grades the performance for the cadets.

#### ***Contents Assessment***

Contents assessment is used to evaluate teaching contents on class including three aspects as follows. The first is homework at ordinary times and its proportion is 20% of the contents assessment. The teacher evaluate the cadets according to the number of times and quality of homework. The second is unit test and periodic test and its proportion is 40% of the content assessment. Unit test is the quizzes about the theoretical study of daily unit for the cadets according to requirement and learning progress of the curriculum standard. Its objective is to evaluate the mastery situation of knowledge of daily unit and strengthen comprehension and mastery of knowledge of the cadets. And the teacher adjusts teaching progress and method in time. Periodic test is arranged according to teaching contents including comprehensive exam and problem sets. The teacher grades the performance for the cadets according to completion and quality of the task. The third one is course examination and its proportion is 40% of the contents assessment. It is a comprehensive evaluation after class according to the curriculum standard including written examination of theory and operation examination. Theoretical written examination is closed-book and the operation examination is carried out with simulator or real equipment. The teacher grades the performance of the cadets according to their mastery situation of theory or completion of operation.

#### ***Competency Assessment***

According to requirements of the Outline of Military Training and Evaluation, the teacher needs to carry out the course assessment aiming at teaching content and the post competency of the cadets in future. Assessment of the post competency emphasizes the ability of the cadet to link theory with practice and transform knowledge to practice and operation skill of real equipment. Two modes are used for competency assessment. The first is theoretical examination and its proportion is 30% of competency assessment including written exam and oral exam. The evaluation knowledge point and standard is based on the Outline of Military Training and Evaluation. The basic theory and knowledge required for post in future are chosen. The second is operation examination and its proportion is 70% of competency assessment. The ability of the cadets to operate the simulator or real equipment is evaluated according to requirements of the Outline of Military Training and Evaluation. The cadets need to finish specific operation within the allotted time. In practice the teacher can choose real equipment or simulator according to actual situation. The teacher can choose experienced petty officers or officers in the army to organize examination together with him.

## **Practice Effect**

The integrative assessment are explored and practiced in the course of Structure and Operation of Certain Type of Equipment for the pre-selected petty officers and the result shows that its effect is great.

Firstly, learning enthusiasm of the cadets is improved obviously. The average attendance rate of the cadets is 99% (96% in last year). The cadets are disciplined and they can listen and take notes carefully. The proportion of the cadets who answer questions actively, raise questions and ask questions to teacher is increased. The cadets dozing off in class are decreased. Learning efficiency and military quality of the cadets are cultivated and improved progressively with the new assessment mode.

Secondly, the mastery of the key knowledge of the cadets is strengthened. When the one-shot examination is used before the cadets paid no attention to classroom questioning, unit test and usual homework. They think they can pass the exam through cramming before exam and they learn the key knowledge by rote without deep understanding. While the integrative course assessment reform is practiced the cadets pay more attention to questioning, homework, unit test and periodic test. These exercises strengthen acknowledge of the cadets repeatedly and they master the key point more deeply and clearly.

Thirdly, the posts competency of the cadets is improved obviously. The cadets have a good knowledge of the operation skills for the equipment through learning theory, simulator and real equipment and assessment. The ability of the cadets to link theory with practice is also improved. Cognition of the cadets for equipment realizes cross from abstraction to specific, from locality to entirety, from perceptual to rational. When the cadets have been allotted to the army for three month we made a survey about cultivation quality in the army. The result from the feedback of the army shows that the ability of new cadets to transform role and be competent for the post is improved than before.

## **Problems Needed To Be Paid Attention To When Using the Integrative Course Assessment**

### **Strengthen Training and Guidance to Improve Teacher's Recognition for the Importance of Integrative Course Assessment Reform**

The leaders and office should strengthen training and guidance for teachers in order to help them to recognize the importance of integrative assessment for the improvement of the cadets' military quality and ability of post competency. The teachers can implement the assessment regulations during teaching process so that each step of the integrative course assessment can be realized.

### **Strengthen Supervision and Check to Improve the Quality of the Integrative Course Assessment**

The teacher needs to record the evaluation of attendance, performance on class, homework, and unit test for the cadets and keep the original data when using the integrative assessment. Thus the assessment is objective, accurate, fair and just for the cadets. It costs a lot of time and energy to implement to keep so much record. Few teachers feel that it takes time and energy to finish such assessment and can't realize it in practice. Therefore the leaders and office need to strengthen supervision and check and record the assessment implementation. The assessment record needs to be kept with course archives and the result needs to be analyzed which is helpful for the managers to understand the feedback of the cadets and insure the assessment quality.

### **Strengthen Construction of Score Information Management System to Improve Science of Score Management**

The integrative assessment needs to utilize the large amount of information generated during the learning process of the cadets. It is necessary to build score information management system in order to avoid subjectivity of the teacher and cheating of the assessment, improve efficiency and improve

reliability of the assessment. The information management system can be linked to the campus network and different access permissions are given to the leader and office, teachers, team leaders and cadets respectively. Teachers input the score of each step and the final score is generated automatically. The cadet can query the score of himself and the leaders and office can realize the supervision, check statics, evaluation and analysis of the process. Thus the score management is more systematic and scientific with the information system.

### **Strengthen Analysis of Score to Improve Effect of the Assessment on Evaluation, and Feedback and Promotion of Teaching Process**

The function of the course assessment is to provide evaluation, feedback and promotion for teaching. During the implementation of the integrative course assessment a large amount of information about the learning process, learning contents and ability are generated. Teachers and leaders need to strengthen the statistics, analysis and program of the information through big data technology in order to master the situation of the cadets to learn theory, the ability to link theory with practice and realization of teaching objective. It is helpful to provide scientific basis for teachers to find problems and improve teaching methods. Otherwise the integrative course assessment reform will become formalistic and have no practical significance.

### **Conclusions**

The course assessment is the important part of teaching, the important guaranty for quality of teaching and talent cultivation, and the key factor to realize the teaching objective and talent cultivation. Effective control of learning process of the pre-selected petty officers is realized and promoted through the integrative course assessment reform. The cadets are strengthened to master and understand the key knowledge points and their post competency are cultivated. So it is helpful for the cadets to overcome the problem that some cadets are short of learning interest, learning the key point by rote, incomplete understanding of the key point, not qualified for posts. The assessment is favor of teaching quality. We may encounter problems during the implementation of the integrative assessment. But it will become a sharp swords to improve teaching quality and realize the objective of talent cultivation as long as we dare to explore and improve and build a long-term mechanism.

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