

Design of Hybrid Teaching Mode Based on Information Teaching Platform

Hua Li^{1,a*}, Da Xu¹, Yuchen Yue^{1,b*} and Xianghua Bai¹

¹Army Armored Force Academy, Weapon and Control Department, China

^aiuanne@163.com, ^bgonzo123@sina.com

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Abstract. Aiming at the problem that the traditional classroom teaching mode is not ideal due to limited teaching time, a hybrid teaching model based on information-based teaching platform is proposed to meet the talent training goal of “learning ability, practical ability and innovation ability training”. This paper focuses on the teaching content system, the design of learning strategies, the design of teaching activities and the design method of teaching evaluation system in the hybrid teaching mode based on information teaching platform.

1. Introduction

In order to solve the problems of traditional classroom teaching mode because of limited teaching time and unsatisfactory teaching effect, the paper design a hybrid teaching mode that guided by the cultivation of "learning ability, practical ability and innovative ability" and integrate with the online information learning and flipping classroom teaching compatible which is with Innovative talent training.

This teaching mode integrates the information-based teaching environment with the flipping classroom teaching method. It can give full play to the technical advantages of information-based teaching, transform the limitations of traditional guiding methods, not only can further strengthen the training of students' learning ability, but also can greatly improve the teaching effect.

The hybrid teaching mode based on the information-based teaching platform includes: the design of the teaching content system, the design of the learning strategy, the design of the teaching activities and the design of the teaching evaluation system.

2. Designing a teaching content system suitable for information-based teaching platforms

Combining the learning characteristics and learning needs of the Cadets, the teaching content system based on the hybrid teaching mode of the information-based teaching platform is designed. The following three modules are designed: the basic information module, the learning content module and the interactive activity module.

2.1 Design of Basic course information

Since the learners of the course come from different levels of training and the pre-requisite knowledge is not sufficient, it is necessary to clarify the learner's precautions when designing the basic information of the course. The basic information module of the course mainly includes the syllabus, introduction of learning objectives, learning time requirements, reserve requirements for prior knowledge, scoring methods and standards, and credit requirements.

The design of the syllabus and learning objectives should be concise and clear, and also should be written according to the teacher's teaching activity design process. It must have a certain structure, and avoid missing the connection with the teaching content. The design of the learning time should be reasonable and more important to reflect the flexibility of information learning. The reserve requirements for pre-requisite knowledge should be expressed in a detailed and comprehensive manner as much as possible, so that learners can reserve knowledge in advance according to requirements or determine the path of learning in combination with their own ability level, so formal learning can be smooth. The design of scoring methods and standards should be timely and reasonable, so that learners can accurately understand their own learning and adjust their learning at any time; to promote the enthusiasm of learners, to develop students' initiative, and to improve information. The completion rate of the course.

2.2 Learning content design

In the design of learning content, it is necessary to outline the course. The content of the course on the information-based teaching platform focuses on the core and important concepts, memory, and structural knowledge, while providing certain learning guidance; while learning in the flipping classroom the learning style is centered on the learning experience. The design content of the learning content is mainly based on the problem-solving, exploring, and recalling the individualized meaning construction of knowledge and knowledge in the curriculum of the information-based teaching platform, cultural experience and emotional training. Cadets can develop their interest in learning, master their learning skills, develop good study habits, and facilitate the exploration of self-learning under the class, which will help students achieve personalized learning. The design of the learning content is novel and meets the needs of learners' learning. In addition, the teachers in the flipping classroom have targeted questions and answers. Such teaching design can help cadets improve their learning initiative and promote students' learning effects.

2.3 Interaction design

In the design of flipping classroom teaching activities based on information-based teaching platform, the interactive activity module plays a very important role, which helps to promote the absorption and internalization of knowledge, and the individualized development of learners and the improvement of self-learning ability. The interactive activities in the teaching activities include forum interaction (real-time interaction and non-real-time interaction) and peer-to-peer interaction in the SPOC platform, as well as deep interaction activities in the flipping classroom for teachers and students, face-to-face collaboration and communication, and teachers can learn according to the learning. The learning experience in different interactive environments provides targeted and personalized guidance, actively guiding the interaction between teachers and students, students and students, students and learning resources.

3. Design a personalized learning strategy

The purpose of the learning strategy is to facilitate learners to effectively regulate the knowledge processing process of learning in order to efficiently store and extract information. The diversity of learners' motivation and background determines the diversity of learning paths, participation levels and learning outcomes. Therefore, designing individualized learning strategies can meet the individual needs of learners and support the diverse participation and learning of learners.

3.1 Individualization of Learning Style Selection

On the SPOC platform, learners can choose their own learning time and learning progress. They can use the fragmented learning time to learn anytime and anywhere. The platform will automatically remember the learning progress so that the next learning can continue. This paper designs a hybrid learning method under the information platform, which allows learners to personally choose the learning method. Teachers and learners can choose to participate on the spot.

3.2 Individualization of Learning Path Selection

According to the learner's individualized learning purpose and the original learning experience and background, the learner can choose the course to be studied independently and decide the path of personalized participation in the learning activity. Although teachers give relevant resources for preparing for learning, learners can decide which needs to learn through their own existing knowledge background, and carry out retrospective learning or knowledge construction learning for some of the acquired knowledge, based on their own knowledge and ability level. Learning objectives, developing and implementing a learning plan that suitable, and personalizing the choice of learning path.

3.3 Individualization of Knowledge Network

Gain the combination of knowledge and practical skills, establish a connection between the original knowledge and the new learning experience, establish a personalized knowledge network, and conceptualize knowledge. In this process, by collecting different learning resources in different learning environments, collecting information, combining informationization courses or peer discussions or teacher-student interactions on the platform, processing the collected information and establishing personal knowledge. The network helps future knowledge integration and meaning construction.

3.4 Individualization of Knowledge Meaning Construction

Learners reorganize and construct the acquired knowledge and information according to their own learning background and learning objectives, and integrate and create them into new knowledge that is useful to them.

In this process, learners should not only communicate, share and collaborate with other members on the information-based teaching platform, but also have a deep understanding of the learning content through the flipping classroom, and use the feedback from teachers and other peers to use learning. Analysis tools, learning evaluation tools, etc. analyze, evaluate and reflect on the learner's own learning effects and learning process, and finally realize the meaning construction process of individual learners.

4. Designing Diversified Teaching Activities

Teaching activities are the sum of learning by the learners and related learning groups to achieve specific teaching goals or teaching effects. Based on the activity theory, a design model of diverse teaching activities was constructed. This model divides the whole teaching design into two modules: the design of teaching activities of information-based teaching platform and the design of teaching activities of flipping classrooms.

4.1 Design of Teaching Activities for Information-based Teaching Platform

The overall design is based on the learner, combined with the analysis of the learner's quality, needs, curriculum objectives and curriculum content, the overall goal of the curriculum is broken down into independent small goals, and a variety of open educational resources, quality teaching methods and new teaching media organically integrated into a teaching system. In addition to video learning and online testing, the informatization teaching platform also conducts interactive interviews, practical projects, virtual experiments and other comprehensive practical activities in addition to discussion and communication, material reading and survey. The design of teaching activities based on informatization courses should make full use of the teaching resources already existing in the MOOC course to carry out teaching activities, while the teaching activities that are lacking in the informatization course are supplemented and improved by flipping the classroom. The self-study of the informatization course is explored by the two events of attracting the learner's attention and informing the learning goal, and self-checking or passing the stage test to understand the learning situation. The problems generated during the learning process are automatically recorded and prompted by the system. The participants participate in online communication and online inquiry activities according to the questions, and then obtain solutions to the problems or solve problems in the flipping classroom by teachers and students, so that the learners can complete the knowledge transfer. process.

4.2 Design of Flipping Classroom Teaching Activities

Flipping learning behavior in the classroom is a process of knowledge internalization. The key to the design of flipping classroom teaching activities is how to enable students to “internalize” the knowledge independently learned in the informatization curriculum. Based on this, this section has designed a variety of flip classroom teaching activities. First, the learner learns the content learned in the informatization course by stimulating the memories. For example, the questions encountered by the instructor or the students in the informatization course are jointly completed by the group members under the guidance of the instructors, thereby reviewing the prior knowledge or obtaining the method of solving the problem; secondly, the teacher should provide diversified and personalized teaching mode guidance or learning strategy according to the analysis of the learner's learning characteristics. Each group of learners will encounter different problems in the process of inquiry, so the teacher if it is necessary to carry out personalized learning guidance according to the different needs of students, and to use a variety of teaching modes to guide learners to communicate and interact, to solve problems independently, and to deepen the internal understanding of knowledge; again, by consolidating the difficulties and difficulties of practicing knowledge; The learner summarizes and reflects according to his own learning situation, so as to systematically review the problems. Finally, the teacher conducts an overall evaluation based on the performance of the learner in the learning process, and the teacher should study. Pay attention to the learner's learning feedback at any time during the process, and timely Line summary and evaluation, for the purpose of individualized teaching.

5. Design a Diversified Teaching Evaluation System Based on Formative Assessment

The design of the teaching evaluation system mainly adopts the formative evaluation based on the learning analysis technology, and the process evaluation and the summary evaluation are the multiple evaluation methods combined with the auxiliary. Learning analysis technology is the analysis of the teaching big data generated in the teaching process based on the information

platform to identify the development trend and mode of learning behavior to promote personalized teaching support system.

The biggest benefit of e-learning is that it can record all the behaviors of teachers and students, including information-based platform-based assignments, unit tests, performance in the discussion group, peer review results, and face-to-face flip classroom teaching. Classroom assignments and classroom performance (obtained primarily through faculty evaluation and self-evaluation), with these data we can conduct formative evaluations; extract relevant data based on variables in the learner's learning activities, and characterize these data Analysis, through such a procedural evaluation can promote the mastery and application of the learner's learning content; summative evaluation is through a comprehensive assessment of the learner's online final exam and the final exam of the traditional school. Such diversified learning evaluation methods comprehensively reflect the learning effect of learners in the whole teaching process, and are more conducive to improving the initiative of learners to participate in learning activities.

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