On Construction and Practice of Online-Offline Hybrid Learning Model of Management in Military Universities

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Abstract. With the development and popularization of the modern information technology in the military universities, the hybrid online-offline teaching has become a reality. There are some problems in the traditional learning mode in the military universities, such as the old teacher-centered teaching idea, the single teaching method and the delayed transfer of the students' learning ability. While the hybrid learning theory can integrate the face-to-face teaching and online learning so that the two learning modes complement each other. The combination of these two aspects provides the theoretical and practical basis for the construction of the hybrid learning model based on online and offline. Includingthe online pre-school preparation, the offline classroom learning, the online collaborative tasks, the offline achievement reporting, the online post-school evaluation and other modules, the online-offline hybrid learning model of the management in military universities is a new learning mode based on the teachers' activities and the students' activities, and takes online-offline teaching process as the main line.The experimental results show that the students have higher enthusiasm for learning and the teachers and students have good interaction between each other. And it shows that the model has certain operability.

Keywords: Online-offline hybrid learning model · military universities · management

1 Necessity of Online-Offline Hybrid Teaching of Management Courses in Military Academies

The development and popularization of the modern information technologies such as the Internet, the cloud computing and the big data in the military universities not only innovates the teaching model and makes the online-offline hybrid teaching a reality, but also satisfies the students' needs for hybrid learning that integrates the independent learning, the active learning, the cooperative learning and the personalized learning. This online-offline hybrid learning model not only gives play to the leading role of

the teachers in guiding, inspiring and monitoring the teaching process, but also fully reflects the initiative, enthusiasm and creativity of the students as learning subjects, which is an improvement of the learning concept. This kind of promotion changes the students' cognitive mode, the teachers' teaching mode, teaching strategy and roles [1]. This change is not only a change in the form, but also on the basis of analyzing the students' needs, the teaching content and the actual teaching environment, making full use of the complementary advantages of the online teaching and the classroom teaching to improve the students' cognitive effect. The emphasis is to apply hybrid learning methods at the right time to achieve the best learning objectives.

It is an important direction of the curriculum reform to develop online-offline hybrid learning in the military universities. By carrying out the hybrid learning reform and turning over the traditional teaching mode, the teaching efficiency and effect can be improved to a great extent, and the students' subjective initiative in teaching can be further enhanced [2]. As a core compulsory course for the management majors in the military universities, the management course is an important cornerstone for the management majors to construct the basic knowledge framework of their major. The management has the dual characteristics of social discipline and applied science. Its teaching process should be based on theoretical exposition, closely combined with economic development and the real operation of social management, and grasp the course context to ensure that the students can accurately understand the content of the course. However, the traditional management teaching and learning methods have been difficult to meet the needs of the students' personalized learning and diversified development brought by the progress of the information technology, which is contradictory to the military's demand for the management talents. Therefore, the reform of the management teaching methods and learning methods in military universities is urgent. Based on the blended learning theory, this paper analyzes the challenges faced by the current traditional management learning model in the military universities, explores the construction of a hybrid learning model based on online-offline, guarantees the learning effect of the students' professional knowledge of the management, and lays a more solid foundation for the students' learning of other professional courses.

2 Challenge to Traditional Learning Mode of Management in Military Universities

The traditional learning mode of the military universities faces the challenges in the following aspects. The first is the influence of the old teacher-centered teaching concepts. In the traditional classroom teaching of the management in the military universities, the teachers are used to being self-centered and lecturing, and they are in a dominant position in the whole teaching activities with supreme authority. This traditional teacher-centered, classroom-centered and teacher-centered teaching concept is not conducive to the students' learning initiative, enthusiasm and creativity, and is not conducive to the cultivation of the innovative talents. The second is the single teaching method. The traditional management teaching in military universities mainly adopts the method of combining lecturing and case study. This teaching method is relatively simple, which is not conducive to the cultivation of the students' independent exploration ability. The

management is both a science and an art. As a science, the students can master the theoretical knowledge in teaching materials, which is not difficult to do. But at the same time, the management is also an art which comes from practice and there is no art without practice. Therefore, in the management teaching, the teachers are required to provide the students with theoretical thinking space and practical situations, so that the students can live in them and effectively learn the management. The third is the students' learning ability being not transferred in time. In the pre-college education process, the students are urged to study, while college life is the complete opposite. Without being urged, some students who lack self-control think that they have accomplished their goals by going to the university. Some students are very confused. They don't know what they need and can't make the right judgment when facing the choice. The students are not psychologically prepared because they are not clear about how to study and live in college and when facing the content of abstract management courses, they will be tired of learning and their interest in learning is greatly reduced.

On the other hand, the education model before college tends to make the students look for the standard answer, which makes the students subconsciously believe that there is only one right answer. However, the dual characteristics of the managementnamely the dual characteristics of science and artcannot get the only correct answer in class. As a result, the students lose confidence in this course and are unwilling to learn it.

3   Hybrid Learning Theory

The Hybrid learning theory is a new way of learning that integrates the face-to-face teaching and the online learning to make their advantages complement each other so as to reduce costs and improve benefits.It organically combines a variety of learning methods, learning media, learning content, learning mode and learning environment to form more advanced teaching conceptsso as to achieve the effect of $1 + 1 > 2$ [3]. As a relatively novel learning method, the hybrid learning contains very rich content, including the mixing of learning theories, learning resources, learning environment and learning methods.

3.1   A Hybrid Theory of Learning

The guiding ideology of the hybrid learning involves a variety of learning theories, such as the constructivist learning theory, the humanistic learning theory, the educational communication theory, the activity theory, the virtual-real integration theory and the situational cognition theory. In the actual operation situation, in order to adapt to the needs of different students and different types of learning objectives, the initiative of the student-centered learning is advocated [4].

3.2   A Hybrid Learning Resources

Generally divided into the specially designed learning resources and the available learning resources, the learning resources refer to all resources that can be used for learning, including information, personnel, materials, equipment and technology [5]. The hybrid

learning is to integrate related resources into a platform as much as possible to form a powerful knowledge management center, so as to realize the explicit tacit knowledge, the systematization of explicit knowledge, the digitization of system knowledge and the internalization of digital knowledge, and finally to achieve the purpose of improving the learning effect.

3.3 A Hybrid Learning Environment

In hybrid learning, the students spend part of their time in face-to-face learning in real physical environments such as classrooms and part of their time in virtual environments such as the network platforms, the virtual learning communities and the mobile learning carriers [6]. With the development of the information technology, the online learning and the offline learning are gradually integrated, especially in space and time.

3.4 A Hybrid Learning Style

The learning style is the specific path that the students take in order to achieve certain learning objectives in the learning process and act on specific learning content.The common types of hybrid learning include the receptive learning, the independent learning, the inquiry learning and the cooperative learning [7]. The hybrid learning can make full use of the power of the network, organically combine online learning with offline face-to-face teaching, implement real-time and non-real-time, synchronous and asynchronous teacher teaching, discussion learning, collaborative learning, group learning based on the concept of "cooperation", as well as traditional and web-based independent learning [8].

4 Design of Online-Offline Hybrid Learning Model

In order to improve the rigidity and boredom of the students' learning activities caused by the teacher-centered traditional teaching process, effectively drive the students to conduct independent construction in the learning process, and ensure that the students actively participate in the learning process, this paper takes the management teaching in the military universities as an example to build an online-offline hybrid learning model, as shown in Fig. 1. This model is a new way of learning with the teachers' and the students' activities as the main content and online-offline teaching process as the main line.

4.1 Online Pre-school Preparation

The teacher sets the initial teaching objectives. The hybrid learning emphasizes the teaching objectives that arise from the interaction between the students and the problem situations [9]. In the teaching planning, the management teachers of the military universities determine the initial teaching objectives in advance, that is, the knowledge and skills that the students should acquire after learning. However, such initial teaching objectives should be open to some extent. When the teaching objectives are generated
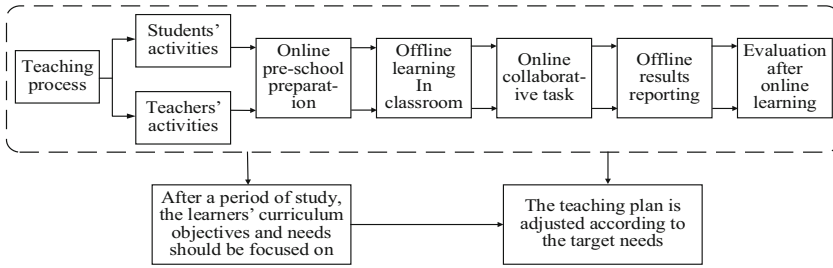
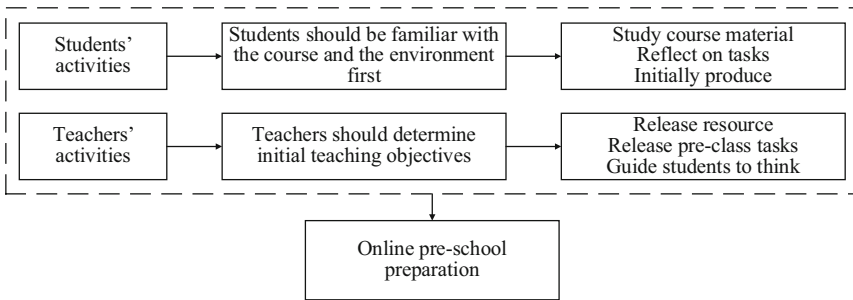**Fig. 1.** Schematic diagram of hybrid online-offline learning model

Fig. 2. Schematic diagram of online pre-school preparation stage

in the interaction between the students and the problem situations, the teachers should timely adjust their teaching plans.

The students initially generate knowledge content. On the basis of analyzing the content of the management teaching, the teachers release the corresponding learning resources into the learning platform before each class and combine the existing learning resources with the learning content to release an appropriate amount of pre-class tasks. Then each student is familiar with the online learning environment and takes tasks to carefully study the learning materials, expand the thinking, and record the content obtained from their thinking. The knowledge content here can be either their own ideas about the learning content or the questions generated in the process of self-learning before class. As shown in Fig. 2.

4.2 Offline Learning in Classroom

The teachers teach knowledge and the students construct the generated knowledge content. Offline learning in classroom is the communication process between the students and the teachers. The teachers explained the important and difficult points in a targeted way, using PPT and other multimedia resources to carry out teaching activities and focused on the problems collected in the pre-class tasks. Through pre-class and in-class learning, the students establish connections between old and new knowledge and rebuild the system of the relevant knowledge. The teachers can also put forward some questions
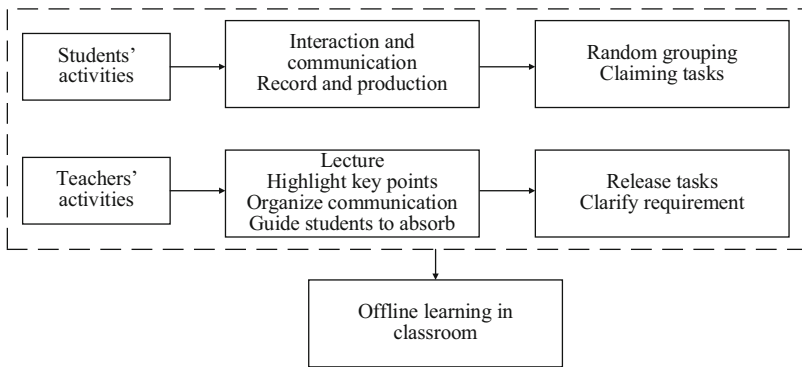
Fig. 3. Schematic diagram of offline learning stages in classroom

so that the students can think around the questions, generate their own ideas, and communicate each other's ideas through communication and cooperation to improve their cognition. In this kind of class, the teachers and students form a mutual help and common development relationship.

The teachers assign the tasks after class. Mastering the important and difficult knowledge of a class, the students need to apply the knowledge they have learned. With the key and difficult knowledge of this class as the core and the basic knowledge of the following class as the aid, the teachers arrange the tasks after class and clarify the specific task requirements to the students. At the same time, a list of after-class tasks will be uploaded to the online learning platform for the students' convenience. The students are randomly grouped and claimed the tasks assigned by the teachers in small groups. It should be noted that the topics designed by the teachers need to be generative. Specifically, the students can adjust their original cognitive structure and experience through in-depth study and understanding of the topic. The topics designed by the teachers should be able to stimulate the students' interest in interaction and leave some "blanks" for them to think and share their ideas. As shown in Fig. 3.

4.3 Online Collaborative Task

The students collaborate to generate knowledge and seek common ground while reserving differences. Knowledge generation emphasizes the generation of new ideas, new understandings and even new ways to solve problems on the basis of the interaction between the individuals and groups and between the individuals and the environment. It is difficult for the students to complete after-class tasks offline at a specific time and place, so they adopt the form of online collaboration to complete them. Before collaborating on the task, each student must think independently, generate their personal ideas and communicate meaningfully in the later collaborative process. In the communication process of the group members, they express their own opinions and get inspiration from their peers to supplement their own ideas. The group communication is a process of seeking common ground while reserving differences. To a large extent, the group members can reach a consensus on learning tasks. In the process of the group cooperation,
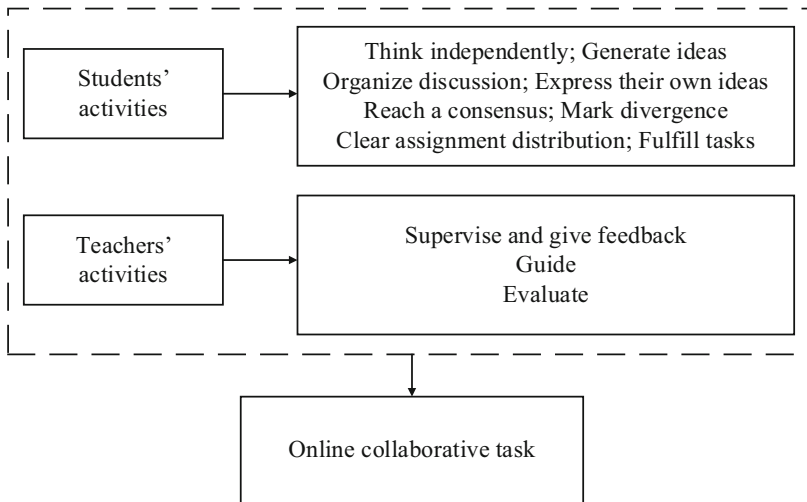
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│  ┌──────────────┐      ┌──────────────────────────────────────┐ │
│  │              │      │   Think independently; Generate ideas │ │
│  │  Students'   │────▶ │ Organize discussion; Express their own ideas │
│  │  activities  │      │   Reach a consensus; Mark divergence  │ │
│  │              │      │ Clear assignment distribution; Fulfill tasks │
│  └──────────────┘      └──────────────────────────────────────┘ │
│                                                                 │
│  ┌──────────────┐      ┌──────────────────────────────────────┐ │
│  │  Teachers'   │      │      Supervise and give feedback      │ │
│  │  activities  │────▶ │              Guide                    │ │
│  │              │      │             Evaluate                  │ │
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Fig. 4. Schematic diagram of online collaboration phase

only when the division of labor of the members is clear, can the study injustice caused by the unclear division of labor be prevented.

The teachers supervise and guide the students, evaluate and feedback the students' performance. When the students are engaged in the collaborative learning, the teachers should provide timely supervision and guidance. If the students are found to deviate from the direction of thinking, the teachers should put forward and give appropriate guidance in time. The teachers should provide feedback and evaluation of the students' knowledge generation so that they can improve what they have generated before reporting results. In this process, the teachers can comprehensively grasp the students' knowledge and task completion, and make more targeted explanations in the subsequent lectures. As shown in Fig. 4.

4.4 Offline Results Reporting

The students share their results and get the teacher's evaluation. After the completion of the learning task, the teachers arranged the students to report their results. And the students shared their research results and put forward the unresolved problems. This kind of interaction can be extended to groups, where peers can ask questions about what is shared, or cooperate to explore the problems that each group has not solved. The teachers can evaluate their achievement reports and propose improvement plans to help the students improve their cognition.

The teachers promote the internalization of the students' knowledge and trigger their reflection. The students' offline achievement reporting can help their peers to improve their cognitive structure to some extent, while the teachers' comprehensive and detailed feedback and evaluation of each achievement report can promote the students' internalization of knowledge. The teachers should pay attention to the method of feedback. On the one hand, they should positively affirm the efforts and progress made by the
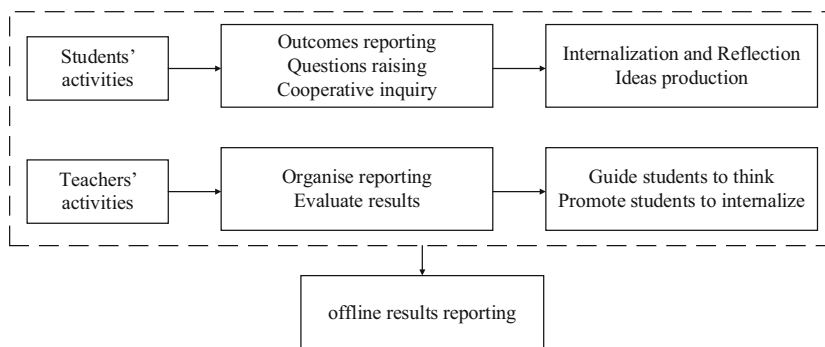
Fig. 5. Schematic diagram of offline learning outcome reporting stage

students, and on the other hand, they should correct and feedback the mistakes made by the students in understanding the content. The teachers should arouse the students' reflection by asking the questions, guiding and repeating their mistakes, so that they can realize their own mistakes and promote their reflection generation. As shown in Fig. 5.

4.5 Evaluation After Online Learning

The teachers evaluate the students. In the process of the students' participation in learning activities, the teachers can conduct comprehensive and objective evaluation on the students from multiple dimensions, and promote the students to continuously generate new knowledge. The teachers' evaluation of the students' learning process and results is equally important. And the teachers can evaluate the students from the aspects of their independent generation, division of labor, cooperative tasks and after-class reflection. The students' independent generation is their cognition, understanding and questions generated in the process of independent learning. The division of labor is measured by the students' responsibility in the task completed by the group cooperation and the contribution to the group. The collaborative task completion is the evaluation of the quality of the task completed by the group of the students. And the after-class reflection is the result of the students' full cognition of learning content and review, reflection, processing and transformation. After mastering the situation of these aspects, the teachers have a clear understanding of the students' learning situation and can timely adjust the teaching content and carry out targeted guidance.

The students' conduct mutual evaluation and self-evaluation. The students are able to know and understand each other's learning status through communication and collaborative learning activities, and can evaluate their peers from the perspective of onlookers and cooperative partners. The students themselves should have a comprehensive and objective understanding and evaluation of their performance in the process of independent activities and interactive cooperation, so as to improve themselves in the future learning process. As shown in Fig. 6.
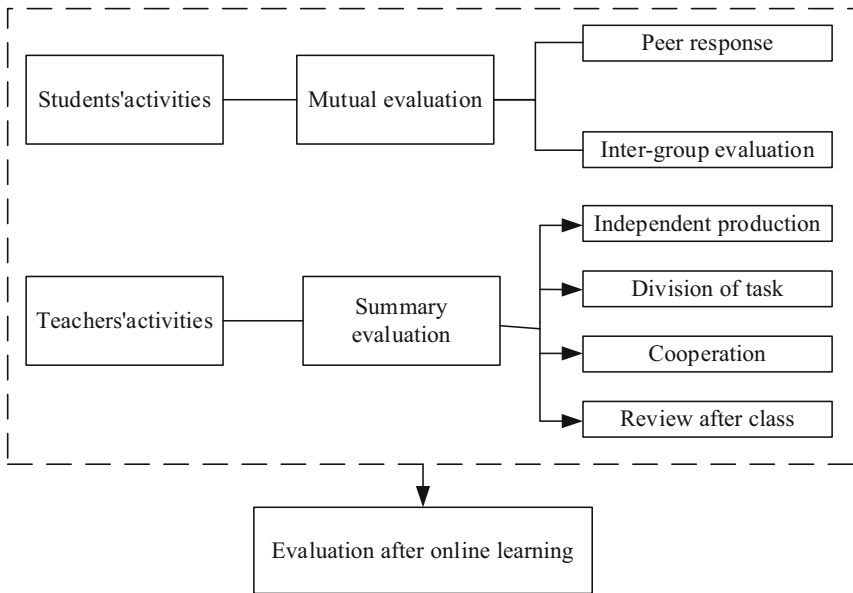
Fig. 6. Schematic diagram of the post-school evaluation stage

5 Effect Evaluation of Hybrid Online-Offline Learning Model of Management in Military Universities

In order to verify the effectiveness of the hybrid online-offline learning model constructed in the military universities, we conducted a one-year experiment among two classes of the students majoring in the management in a military university. During the whole experiment, the students' enthusiasm for learning was high and the interaction between the teachers and students was good.In order to understand whether the students agree with this model, we set the following evaluation dimensions. First, the course content is related to practice and has wide application. Secondly, the teachers' teaching can inspire the students' thinking and creativity. Thirdly, this course has improved my ability of independent learning. Fourthly, I am satisfied with the learning results. The evaluation grade is divided into five categories: A, B, C, D and E.A is for complete agreement, B stands for basic agreement, C is for not taking a position, D is for not entirely agree and E is for totally disagree.

A final questionnaire survey was set up for these evaluation parameters. 98 students participated in the course study and 98 questionnaires were set up. 4 people failed to fill in the questionnaire, and the default choice result was no statement. The survey results are shown in Table 1.

The results of the questionnaire show that among the 98 questionnaires, 84% of the students think that the course content is connected with practice, and the students think that the teaching can inspire them thinking and creativity, 68% of the total. 57% of the students think that the course has improved their ability to learn relevant knowledge,

Table 1. Investigation of learning effect

Evaluation index	Evaluation result				
	A	B	C	D	E
The course content is related to practice and has wide application	82	8	7	1	0
The teachers' teaching can inspire the students' thinking and creativity	67	19	10	2	0
The course has improved my ability of independent learning.	56	25	13	2	2
I am satisfied with the learning results	62	23	11	2	0

63% think that the learning results are very satisfactory, 23% think that they are basically satisfied, accounting for 86% of the total students surveyed.

During the teaching process, the teachers learned from the communication with the students that most of the students believed that through the course of the management, they learned how to analyze problems, organize materials, design experiment process, and finally complete the learning task. Hybrid learning not only improves the students' learning enthusiasm, but more importantly, cultivates them to form a correct learning method and improves their independent learning ability. At the same time, the survey results also show that there are still some shortcomings in this training mode. For example, how to verify whether the students can achieve certain independent learning ability in the future learning process, and how to determine that this learning ability is a lifelong learning ability of the students rather than just the learning ability of this course. All of these need to be studied and discussed.

6 Conclusion

In the operation process of the online-offline hybrid learning model of the management in the military universities constructed in this paper, the whole process of the students' hybrid learning activities and behaviors has been recorded, and their learning activities, social networks, emotional states, personal characteristics and other aspects can be analyzed, mined and predicted through the recorded data. Each student's grasp of knowledge points or whether they need guidance can be accurately located automatically. Through the empirical investigation of the application effect of this model, it can be seen that this model has certain operability. However, the application effect of this model needs to be tested in practice. Only when the problems are found in the process of application can the model be improved.

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