

# Research on the Blended Teaching Mode of “GSP Practice Training in Medicine” in Higher Vocational Colleges

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**Abstract**—Blended teaching is a new type of teaching mode that uses the online platform and network resources and other information technologies to combine the two teaching methods of "online education" and classroom face-to-face teaching. This teaching mode has fully utilized the advantages of contemporary vocational students who are good at applying modern information technology, and has achieved a student-centered flipped classroom. It makes up for the shortcomings of face-to-face teaching mode, the limitation of time and space, and insufficient teaching hours, expands the classroom capacity, realizes precise teaching, and improves the learning efficiency and effect of students.

**Keywords:** *blended teaching mode, higher vocational colleges, GSP Practice Training in Medicine*

## I. INTRODUCTION

In the current "GSP Practice Training in Medicine", a face-to-face classroom teaching model is adopted. In the teaching, although it is guided by the task, the students divide the work and the roles to complete the work tasks, the students do as they learn, the teaching is integrated with the theory, and the theory and practice are fully integrated. The students have a good emotional understanding. However, the phenomenon of "focus on teaching over practice" still exists in the teaching. The students "follow suit" in the operation. Although they completed the project tasks, they only knew the progress without understanding the tasks, which can not improve the student's adaptability and innovation ability. Moreover, it takes a long time to complete the project tasks, and the amount of class hours is seriously insufficient. Either the project tasks must be reduced or the task must be completed in a hurry, which cannot give students enough time to digest and consolidate their knowledge. More importantly, teaching resources are lacking and not systematic, which cannot reflect the openness, practicality, and vocational characteristics of vocational classrooms. They can not directly and vividly show the workplace atmosphere, cannot allow students to learn in a real workplace environment, and can not interact with students outside the classroom; so many students still fail to meet the requirements of corporate job skills after graduation.

With the development of informatization, teaching resources are abundant and activities are diversified, providing students with learning environments such as subsidized exploration, multiple interactions, cooperative learning, and resource sharing, which has greatly improved the cultivation of creative thinking and learning ability and makes up for the shortcomings of the current teaching model.

## II. CONSTRUCTION OF BLENDED TEACHING MODE

### A. Construction of simulation training room

The college must first build a simulation training room. The simulation training room need to be equipped with intelligent whiteboards, networks, etc., computers, and GSP simulation software that meets the requirements of "Pharmaceutical Business Quality Management" and is docked with corporate operations. In the simulation training room, students are divided into a group of 3-4 people and a computer of 1-2 people. In accordance with the requirements of GSP quality management, students play the corresponding roles respectively, and simulate the workplace operation and operation of each project task in accordance with the company's operating process.

### B. Formation of high-level teaching team

With the development of informatization, the requirements for teachers are getting higher and higher. It is necessary for them to understand professional knowledge and interface with the actual operation of the enterprise, as well as the use of information technology such as computer operation and micro-class video production. According to this requirement, under the leadership of the course director, it has set up a teaching team headed by the course leader, as well as the quality leaders of the GSP training teachers and the company's front-line school-enterprise cooperative enterprises with practical operation experience. The teaching team members actively participate in various training studies, such as the training of drug GSP inspectors organized by the drug regulatory department, various information-based training and teaching ability competitions organized by the college's educational affairs office. Through training, teachers have improved their ability to apply professional

knowledge, truly penetrated the enterprise, understood the operating procedures and quality control points of the enterprise, and improved the level of information-based teaching.

### *C. Development and construction of blended teaching curriculum resources*

1) *Development of offline curriculum resources for "GSP Practice Training in Medicine"*: Based on the "GSP Practical Course", the schools and enterprises cooperate to develop the "Practice Course of Quality Management Standards for Drug Operation". According to the process of drug management and the establishment of corporate posts, there are a total of 14 project tasks being designed, including drug purchase, drug receipt and acceptance, drug storage and maintenance, drug warehouse management, retail pharmacy store layout, drug display, computer system operation, economic accounting of operating companies, hospitality etiquette, drug recommendation, prescription preparation, Chinese medicine pieces Identification of traits, formulation of traditional Chinese medicine and use of family medical devices, etc. Each project includes six aspects: work task list, training objectives, training preparation, student skills operation training, operation procedures and related knowledge.

2) *The construction of the excellent online course of "GSP Practice Training in Medicine"*: According to the project tasks of offline teaching materials and the job setting of the company, the teaching content is integrated, and the knowledge is fragmented. It adopts the combination of theory and practice display, and cooperates with the online platform to develop a series of micro-lecture videos of "Quality Management of Pharmaceutical Business". Each video takes about 5-10 minutes to explain a certain knowledge point, and it is also equipped with pictures, audio, operation video, etc.

3) *School-enterprise cooperation, shooting actual operation video of the post at the enterprises*: According to the operation process of the pharmaceutical operation enterprise positions, video shooting of each position operation is taken to completely dock the enterprise positions.

### *D. Application of a learning platform that breaks the limits of learning time and space*

1) *WeChat group and QQ group*: Teachers can send content, goals and requirements of study, and even some learning materials and other information to the group before the class, so that students can look at mobile phones anytime, anywhere, and learn in advance.

2) *Application of e-learning platforms such as micro teaching assistants and comprehensive learning*: The course directors first create courses on the platform, uploads courseware, lesson plans, homework, and the taken micro-lecture videos, operation videos, etc., to the learning

platform, create classes on the platform and assign management of each class to the teams' teachers. Each class of students scans the QR code automatically generated by the platform to get into the group. They can learn online anytime and anywhere on the mobile phone, get notifications, do homework, exams, conduct discussions, etc. Teachers can also communicate and interact with students on the platform at any time and place, make statistics on student learning, and check assignments. In the classroom, teachers can use the platform to perform students' sign-in, preemptive answer, timing, topic discussions, quizzes, questionnaires and other operations, and perform timing for the intelligent statistics at the same time.

### III. THE CONSTRUCTION OF STUDENT MULTIPLE EVALUATION SYSTEM

In the "GSP Practice Training in Medicine", the student's performance evaluation of each project includes: teacher evaluation, student mutual evaluation, and the evaluation of the team members by the task manager of each project. The teacher evaluates the group according to the pre-class discussions in each group, the answers to the questions in the classroom, the report of the results of the group operations, and the learning attitude of the students in the group. Each member is scored according to the group members' participation in learning and discussion before class, and classroom participation in operation and learning. Each student's performance = teacher evaluation \* 50% + student mutual evaluation \* 20% + group leader evaluation \* 30%. This diverse evaluation system allows students to participate by themselves, greatly increasing students' interest and self-confidence.

### IV. APPLICATION OF BLENDED TEACHING MODE

#### *A. Before the class*

The teachers inform the students in groups on the learning platform to conduct previews and discussions of relevant course chapters, micro-lecture videos, operation videos, etc. And the students upload the study summary, mind map or the results of question discussions and questions in groups as a unit, and the teachers will check and make statistics.

#### *B. In the classroom*

"GSP Practical Training in Medicine" uses information-based teaching methods, integrates teaching methods and project teaching methods, and cultivates students' autonomous learning ability, including following steps:

- The teachers arrange the work tasks of this lesson so that students understand the learning goals, operation skills and emotional goals to master of this class.
- The person in charge of each group divides the roles of the members of this group, and each student clarifies his own job responsibilities.

- Teachers use the learning platform to randomly check the online preview before class and conclude and summarize the knowledge required to complete the project tasks.
- Students develop a work plan to complete the project tasks, and conduct simulation training operations in accordance with the operation process.
- After the operation is completed, the person in charge of each group will conduct on-site demonstration and report on the completion of the project, and the students in the other groups will evaluate and score according to the grading standards.
- Teachers evaluate and score the highlights and shortcomings of each group.
- Watching enterprise operation videos to further enable students to understand and consolidate what they have learned.
- Knowledge expansion, problems and solutions that may be encountered in specific operations of the enterprise.
- Expansion of knowledge. Due to insufficient time in the classroom, students should also master relevant knowledge as an after-school assignment and ask students to watch relevant micro-lecture videos online.

### C. After the class

This part includes that teachers check and answer questions after class.

## V. ANALYSIS OF THE IMPLEMENTATION EFFECT OF BLENDED TEACHING MODE

First, in the research process, the researchers adopted different teaching modes for different classes of the same project. At the same time, in order to avoid the interference caused by the differences in the basic knowledge and learning ability of each student, the researchers also use the original teaching model for some projects of the same student, and some projects use a blended teaching mode for comparison. The use of the blended teaching mode in the classroom is obviously more active, the classroom atmosphere is higher, the students are more engaged, the teamwork is tighter, and the learning atmosphere is also significantly higher than the original teaching mode. In addition, teachers can reasonably arrange online and offline learning content according to the learning tasks, and they are more flexible, which completely made up for the lack of the original teaching model.

Second, a questionnaire survey was conducted on 200 students in the majors of drug management and administration, focusing on the teaching effect, learning interest, learning efficiency, learning effect, and learning initiative of the blended teaching mode of this course. (The effective rate is 95.5%). The questionnaire survey shows that more than 82.5% of students have a strong interest in

learning, more than 83.25% of students have improved their learning efficiency, 80.8% of students have better learning results, more solid knowledge, and more than 91.3% of students have improved their learning initiative.

## VI. CONCLUSION

The research results show that the blended teaching mode is applied to the "GSP Practice Training in Medicine" in higher vocational schools. By integrating the advantages of face-to-face teaching and online learning, teachers no longer take up valuable time in the classroom to teach new information, but allow students to gain new knowledge by self-directed learning such as watching micro-lecture videos, listening to podcasts, reading teaching materials, online discussions and online answers. The classroom has become a place where teachers and students fully interact, answering doubts, reporting discussions, and focusing on solving problems that students cannot solve in autonomous learning before class. Through the guidance of inference and bypass, the internalization and improvement of students' knowledge and skills can be realized. This mode gives play to the leading role of teacher guidance and inspiration, inspiring students' initiative and creativity as the subject, leads them to deep learning, and makes up for the shortcomings of the original teaching mode. At the same time, the integration of theory and practice fully simulates the workplace, reflecting the open, practical, and professional characteristics of vocational classrooms, which is more conducive to teacher-student interaction, enhances learning efficiency and learning effect, and enables students to meet social needs in all aspects.

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