On the Classroom Management of Online+Offline Hybrid Teaching in Higher Vocational Mathematics

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Keywords: Higher vocational mathematics, Online+offline hybrid teaching, Classroom management

Abstract: The article analyzes the current situation of mathematics teaching in higher vocational education in depth by combining various factors such as students, teachers, and educational environment, and puts forward measures such as teaching students in accordance with their aptitude, mobilizing classroom participation, and deeply integrating online and offline teaching, so as to strengthen teaching management and improve the teaching quality and effect of mathematics teaching in higher vocational education.

1. Introduction

The direct form of school education is teaching. As a material carrier and an important way of teaching, classroom is the key to spreading knowledge and achieving the goal of talent training ^[1]. Owing to the deepening reform of China's higher education structure, higher vocational education has developed and expanded, but there are still some problems and deficiencies in its classroom teaching. Online+offline hybrid teaching puts forward higher requirements for teachers' classroom management, which is also an urgent problem to be solved in the current mathematics teaching classroom in higher vocational colleges.

2. Present Situation of Mathematics Teaching Class in Higher Vocational Education

2.1 Students Lack Autonomous Learning Ability

In the teaching activities of higher vocational colleges, the biggest characteristics of students are their low enthusiasm for learning and lack of independent learning ability. Under the influence of exam-oriented education, schools have gradually formed an education and teaching model with examination as the main body^[2]. In this education mode, to cope with various examinations, teachers will summarize knowledge points for students and let them memorize, while students are in a passive learning state. Although this teaching mode can facilitate students to complete various examinations, it is not conducive to the formation and development of students' autonomous learning ability. Under the influence of this teaching mode, when students enter higher vocational colleges for learning, they will show low autonomous learning ability and other problems. Especially in the mathematics course of higher vocational education, due to the complexity of theoretical knowledge and the poor mathematical foundation of students, the problem of weak autonomous learning ability has become increasingly prominent. This leads to problems such as students not listening carefully, playing with mobile phones, learning other subjects and even playing truant in the process of mathematics teaching in colleges.

2.2 Teachers Lack Information Literacy

In the construction of online+offline hybrid teaching classroom management model, teachers are important subjects, so their lack of information literacy will affect the construction process and effect. For instance, higher vocational mathematics teachers do not have enough knowledge of information technology, which leads to the failure to effectively carry out online teaching, and the

failure to solve some network problems in a timely manner, leading to problems such as the slow progress of online mathematics teaching^[3]. In this way, online teaching cannot give full play to its significance and value, thus affecting the efficiency and effect of online+offline hybrid teaching classroom management.

2.3 Lack of Coordination between Online and Offline Teaching

Currently, there is a lack of effective cooperation between online and offline teaching in mathematics education. As higher vocational education attaches too much importance to offline teaching, online teaching can not play its maximum role. In addition, some colleges attach importance to online teaching and neglect offline teaching, leading to some teaching content can only be conducted online. In the actual mathematics education, only by strengthening the integration of online and offline teaching modes, and rationally allocating the teaching resources and teaching practice of the two teaching methods, can the teaching quality and effect be ultimately improved.

3. Strategies of Online+Offline Mixed Teaching Classroom Management in Higher Vocational Mathematics

3.1 Deeply Understand Students and Teach Students in Accordance with Their Aptitude

No matter what kind of teaching subject, the first task to achieve good educational and teaching results is to fully recognize and master students' learning ability and learning needs, and respect the laws of education and students' growth, as is the case with higher vocational mathematics education. Based on this, higher vocational mathematics education should be effectively connected with students' high school mathematics teaching content^[4]. According to the survey, most students in higher vocational colleges are graduates of secondary vocational schools, students who fail in the college entrance examination, and students recruited in advance by the society. The students with poor mathematical foundation in each class account for about 20%. Higher vocational mathematics has a certain degree of abstraction and strict logic, which requires higher mathematical foundation for students. In order to better improve the effect of mathematics education in higher vocational education, teachers should effectively take into account the mathematical foundation and learning needs of each student, reasonably optimize the teaching plan, start from the actual learning needs of students, and help students with poor mathematical foundation to eliminate their fear of learning mathematics, enhance their confidence in learning, and then guide students to gradually explore and learn mathematical knowledge. In addition, higher vocational mathematics education should also adjust the teaching difficulty in combination with the career development direction of students in different majors, so as to stimulate students' interest in learning, improve the effectiveness of higher vocational mathematics education, and effectively achieve the goal of training applied talents in higher vocational education.

3.2 Mobilize Students' Interest in Learning and Enthusiasm for Classroom Participation

Higher vocational mathematics teaching curriculum can be divided into two parts: teaching and learning. It is a two-way communication and learning between teachers and students. The leading role of teachers in the teaching process can only be realized by students' active participation in learning. First of all, in view of the low participation rate in the current mathematics teaching class in higher vocational colleges, teachers should formulate a strict attendance system and link the attendance results with students' final grades and graduation rate. Secondly, students' classroom participation is a direct reflection of teaching and quality. Therefore, teachers should change traditional teaching concepts, focus on the organic integration of theoretical knowledge and practical teaching, and focus on demonstration in the teaching process, so as to stimulate students' interest in learning and enthusiasm for classroom participation^[5]. Finally, mathematics teachers should also break the traditional indoctrination teaching mode, innovate teaching forms, enrich teaching content, and guide students to participate in classroom teaching deeply with multiple

senses such as vision, hearing and action. For instance, use information technology to create flipped classrooms, guide students to teach, use multimedia to enrich teaching resources, mobilize students' multiple senses to participate through videos, mathematical materials, etc., and then innovate students' mathematical learning thinking, achieve good teaching results, and improve students' mathematical learning ability.

3.3 Deeply Integrate Online and Offline Teaching

In the process of higher vocational mathematics teaching, teachers should fully realize the significance and value of students' active learning, develop a variety of mixed teaching modules, including online+offline, in class+after class, to effectively share teaching resources and improve the effectiveness and quality of teaching classroom management. First of all, in mathematics teaching, teachers should strengthen students' dominant position, cultivate students' awareness of independent learning and inquiry, and help students develop good learning habits of pre-class preview, independent learning and timely resumption by arranging online independent preview homework, offline classroom questioning and other teaching classroom management methods. Secondly, teachers should use online teaching resources to optimize offline teaching content, enrich students' mathematical knowledge system with the help of mathematical history, mathematical culture and other contents, broaden students' learning vision, and then mobilize students' interest in mathematics learning and enthusiasm for classroom participation. For a long time, students will be able to change from task-oriented teaching mode to independent inquiry learning, and then expand learning time and space ^[6]. The online+offline hybrid teaching classroom management can effectively solve the problem of improving the basic mathematical ability of students at different learning levels in the same classroom, avoid the stratification of higher vocational mathematics education, and better promote the progress of higher vocational mathematics periodic education.

3.4 Strengthen Classroom Control

The innovation and development in the field of science in China, on the one hand, provides a platform and way for students to obtain information resources and carry out independent learning, on the other hand, it also affects students' classroom attention. Therefore, mathematics teachers in colleges should fully realize the adverse effects of intelligent equipment on teaching effect and quality. In the actual mathematics teaching class of higher vocational education, teachers should effectively weigh the impact of intelligent devices on teaching activities, and conduct unified management of students' mobile devices in offline teaching activities. In this way, students can effectively improve their learning focus and avoid the problems of body in the classroom, mind in the game or network. For online teaching, mathematics teachers should optimize the teaching content to attract students' attention. Information technology can be used to carry out random sign in and online interactive Q&A in online classes, effectively urging students to participate in mathematics teaching classes. In addition to the supervision and standardization through systems and means, mathematics teachers in colleges should also strengthen the construction of classroom style of study and standardize students' learning awareness and behavior from the source ^[7]. Therefore, in the actual online and offline teaching of mathematics in colleges, teachers should strengthen ideological and political education, conduct positive education guidance for students, and then improve the teaching classroom management effect.

3.5 Carry out Dynamic Assessment

First of all, mathematics teachers should build online and offline students' learning ability improvement files and publicize to students. In this way, students can find their own shortcomings in time, and then adjust the direction of learning, optimize the form of learning, improve the quality of learning. Secondly, mathematics teachers should also develop teaching evaluation indicators based on students' learning quality and mathematical ability, and carry out teaching evaluation in combination with classroom monitoring, classroom attendance, teaching interaction rate, etc. In this way, we can effectively avoid the problem of sharpening spear only before going into battle in mathematics education, and then help students establish a lifelong learning awareness. In the

dynamic assessment mode, students' learning ability and learning accomplishment will no longer be limited to a transcript, but a dynamic and real-time list to show what students have learned, and where their mathematical foundation is. In this way, mathematics teachers can constantly optimize the teaching classroom management system, improve the classroom quality, deeply implement long-term learning, and further promote the all-round progress of students.

4. Conclusion

To sum up, to strengthen the online+offline hybrid teaching classroom management in colleges, we should fully combine students' learning ability, learning needs, actual teaching environment, etc. to optimize and improve. The more effective the classroom management is, the more it can regulate students' learning behavior and awareness, and then stimulate students' interest in learning. Therefore, mathematics teachers should enrich teaching contents, innovate teaching forms, build a student-centered classroom management model, and improve the teaching effect of mathematics in colleges to achieve the goal of talent training.

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