

Practice and Thinking on the Second Class Teaching of Biochemistry

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Abstract: *The second class of biochemistry in higher vocational colleges focuses on the supplement and expansion of the teaching content of the first class, and generates a teaching place combining theory and practice outside the traditional classroom, in order to meet the talent training objectives of higher vocational colleges, promote the improvement of students' professional skills and comprehensive qualities, and cultivate skilled talents in the new era. Based on the positive significance of carrying out the second classroom teaching of biochemistry in higher vocational colleges as the starting point, starting from the existing teaching problems, and based on the actual learning needs of students, this paper expands the teaching ideas, innovates the second classroom teaching activities of biochemistry, and outlines the research on promoting the second classroom teaching strategies of biochemistry in higher vocational colleges.*

Keywords: *Higher Vocational Education; The Second Class of Biochemistry; Practice and Thinking*

1. Introduction

It points out that vocational education focuses on the improvement of students' practical ability, and emphasizes that the training of vocational talents must be put into practice. Only in close to the real working environment, production line and practical operation process, the higher the quality of skilled talents can be trained.

Biochemistry teaching in higher vocational colleges, as a basic course for medical majors, covers a wide range of knowledge points. Students cannot fully understand the traditional classroom teaching method, and the single theoretical knowledge teaching is relatively boring. Students may lose interest in learning for a long time, and the teaching effect is poor. The basic task of the second classroom teaching is to establish morality and cultivate people. It emphasizes the supplement of the first classroom teaching content and practical activities. On the basis of imparting students' knowledge and skills, it innovates practical activities and guides students to use theoretical knowledge to guide practical activities. The first and second classes go together, give play to the advantages of collaborative education, and accelerate the cultivation of technical talents, so as to construct a new pattern of biochemistry teaching in higher vocational colleges[1].

2. Brief description of the second class

In 1983, the concept of "second classroom" was put forward in the Management of Colleges and Universities. Zhu Jiushi proposed that the second classroom refers to extracurricular activities outside the classroom teaching plan, which mainly plays the role of guiding students to carry out curriculum-related activities, and can be political, intellectual, academic, entertaining or public welfare. In the Dictionary of New Words, the interpretation of the second classroom is the second channel. [2]Compared with the classroom (the first classroom) teaching, it refers to the activities that teachers or parents use extracurricular time to guide students to learn, emphasize the improvement of students' knowledge and skills, help students to find and fill in gaps, or expanding the level of knowledge, to improve students' comprehensive quality.

With the development of modern education, the second classroom is widely used in all stages of teaching. As an extension of the first classroom, it is generally conducted outside the time of the first classroom, and its teaching content is related to the first classroom. It originates from the textbook but is not limited to the textbook. It is used to assist the first classroom in teaching, help students consolidate knowledge or improve their practical ability, and promote the two-way improvement of

students' theory and practice. At the same time, the form of the second classroom is diversified, and it is not limited by time and space, which effectively avoids students' learning problems under the influence of traditional classroom.

3. The positive significance of the second class teaching of biochemistry in higher vocational colleges

3.1. Diversified teaching forms in the second classroom can improve students' interest in learning

The second class of biochemistry in higher vocational colleges is different from the first class. Its form is flexible and diverse. It is not limited by the teaching time, place and space of the special class. It has obvious advantages in cultivating students' practical ability and application ability of professional skills. Its teaching content and form cover theoretical knowledge, practical skills, social activities, workplace literacy, employment and entrepreneurship, as well as students' ideological and moral aspects. It is of positive significance for students to enter the society after graduation, which can further enhance students' ability to apply professional skills, and increase students' employment and job competitiveness.

3.2. The second classroom teaching can promote the comprehensive ability of students

The second class has the value of motivation, practice and reverse in students' daily teaching, which is embodied as follows: ① The appearance of the second class provides favorable conditions for students to discover their own flash points, help students to establish learning confidence, and avoid students' fear of difficulties under the influence of the general environment and daily teaching activities. At the same time, students can have a deep understanding of the work content of the relevant professional posts in the second class practical training, skill improvement and other teaching, so as to lay the foundation for students to step into their jobs; ② As an extension of the first class, the second class can help students self-inspection, recognize the shortcomings in their personal learning, so as to find out and fill in the gaps, and form a role of supervision for students with weak foundation. In addition, the traditional first class is limited by time, teachers can not cover all aspects of teaching, and some event activities are difficult to carry out, which is not conducive to the biological improvement of students' practical ability. While the second class effectively solves this problem, teachers can carry out practical activities in combination with the teaching content of the first class, take students as the main body, and strengthen students' theoretical knowledge and hands-on practice; ③ The second classroom is student-oriented, and its teaching quality directly affects students' learning effect. Teachers need to improve the second classroom teaching system in combination with students' actual learning needs and teaching objectives, standardize students' behavior with strict standards, and guide students to effectively carry out the second classroom activities, in order to promote the effectiveness of the second classroom teaching of biochemistry in higher vocational colleges and improve students' professional skills.

4. Analysis of Existing Problems in the Second Class Teaching of Biochemistry in Higher Vocational Colleges

4.1. The participation of teachers and students in the second class is not high

The development time of the second classroom in higher vocational colleges is still short. Some teachers and students pay little attention to the second classroom. The second classroom exists in name only. Teachers only aim at completing teaching tasks without purpose.[3] The consistency and scientificity of classroom activities are low, and the subjectivity of students is not high. They ignore the promotion of classroom activities on students' development, resulting in low participation of students, and even the phenomenon of coping with problems. Moreover, colleges and universities have not yet formed a complete teaching evaluation system. Daily assessment is mainly based on subjective evaluation of teachers, which cannot guarantee its fairness. At the same time, the teacher did not balance the relationship between the first class and the second class. When the teaching work, scientific research work and other tasks are heavy, the teacher may directly hand over the second class activity plan to the students to complete, resulting in the lack of scientific nature of some activities and the inability to guide students to complete efficient learning.

4.2. The first and second classes are not closely connected, and the second class expansion evaluation pattern has not been constructed

The purpose of teaching in higher vocational colleges is to cultivate high-quality technical talents in the new era. The teaching objectives of the first class and the second class are the same. It emphasizes that on the basis of training students' theoretical knowledge, students should be guided to carry out time operation to ensure that students master professional skills and are competent for professional work. However, in actual teaching, the second classroom, as a supplement to the content and form of the first classroom, cannot play its practical role and value. The first and second classroom are not closely connected, and the second classroom expansion evaluation pattern has not been constructed, which directly leads to the low efficiency of the second classroom teaching in higher vocational colleges. Some colleges and universities have formed independent teaching, teaching research and management models when carrying out the second classroom, and lack effective communication and contact with the first classroom, which has affected the organization and innovative teaching role of the second classroom. In addition, the second classroom has not established a relevant evaluation pattern, its role is limited to the improvement of students' knowledge and skills, and its impact on the post competitiveness of students after graduation is insufficient.

5. Research on strategies of promoting the second class teaching of biochemistry in higher vocational colleges

5.1. Formulating the teaching implementation plan for the second course of biochemistry

The second class is different from the first class. In terms of teaching activities, the second class is more selective, its content and form are diversified, and it is not limited by time and space. It has a wide range of participation and openness, which reflects the main position of students in learning. Students can use their spare time to meet their individual learning needs and promote their professional quality of biochemistry. Based on the characteristics of students in higher vocational colleges and the nature of biochemistry courses, the implementation plan for the second class teaching of biochemistry can include: a series of lectures of biochemistry courses, and the colleges can invite medical professionals and teachers of biochemistry to participate in the lectures, such as the latest research progress in biochemistry, biochemistry and medicine, and the study of special cases in biochemistry, to expand students' knowledge level; The knowledge contest is carried out by the class or college as a unit, is carried out in combination with the current course content of the students, and is appropriately extended. For example, the mind map contest is mainly to examine the students' understanding and memory of the knowledge points, and requires students to use the mind map to build a systematic knowledge framework, such as the function and metabolic characteristics of human organs, or the situational drama contest. The class or college prepares the relevant situational drama of the course in groups, and carry out real-life drills to turn boring professional knowledge into interesting sitcoms to stimulate students' interest in learning; Laboratory practice: colleges and universities can open biochemical laboratories on weekends and evenings to guide students to practice and improve their practical application ability; Participating in teachers' scientific research work:, teachers can select excellent students to participate in teachers' scientific research work according to the needs of the project, assist teachers to complete the work, and improve students' professional quality and scientific research ability; Innovation and entrepreneurship project activities can also promote the comprehensive development of students' comprehensive ability.

5.2. Effectively carrying out the teaching activities of the second course of biochemistry

Influenced by students' interests, learning ability and conditions, there are certain individual differences among students in each class. Therefore, solving the problem of individual differences among students can promote the effectiveness of teaching in the second class of biochemistry. At the same time, in order to avoid students' doubts when they participate in the second class learning, they don't know how to learn? What to learn? Teachers need to clarify the learning objectives of students' participation in the second class, release learning tasks in real time, and point out precautions to guide students to conduct effective learning. Taking the original pithy formula competition as an example, there are many conceptual knowledge points in biochemistry and they are abstract, which brings great difficulties for students to understand and remember. Therefore, in order to help students quickly remember and avoid confusion of knowledge points, teachers can organize the original pithy formula

competition to strengthen students' memory of knowledge points.

5.3. Establishing and improving the second classroom management mechanism of biochemistry

Based on the characteristics of students in higher vocational colleges, talent training objectives and the nature of biochemistry courses, when carrying out the second classroom teaching, we should establish and improve the management mechanism of biochemistry second classroom, follow the training mode of skilled talents in higher vocational colleges and the same management system, so as to promote the integration of production, learning and research, promote the trinity of colleges, enterprises and scientific research, and expand the students' second classroom training base. Colleges and universities should establish supervision and management organizations in conjunction with local enterprises and scientific research institutions, improve the superior and subordinate management model mechanism, and use the network platform to conduct comprehensive second classroom teaching evaluation, as well as follow the second classroom supervision and management mechanism, in order to weaken the impact of subjective factors in the evaluation, ensure the fairness of the evaluation, and meet the learning and development needs of students.

6. Conclusion

To sum up, there are still some problems in the second class teaching of biochemistry in higher vocational colleges, such as the low participation of teachers and students, the weak connection between the second class and the first class, and the inability to reflect the value of the second class transcript in the employment of graduates, which directly affect the enthusiasm of students to participate in the second class learning. Therefore, in order to further promote the efficiency of the second class teaching of biochemistry, teachers and students of colleges and universities are required to work together to formulate the implementation plan of the second class teaching of biochemistry, highlighting the advantages of the second class teaching; we should effectively carry out teaching activities of the second course of biochemistry, innovate practical activities, and strengthen students' theoretical knowledge and practical skills; we should also establish and improve the second classroom management mechanism of biochemistry to speed up the cultivation of skilled talents, in order to build a professional team of teachers in the second classroom of biochemistry and help the development of teaching in the second classroom of biochemistry.

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