

Application of “PBL” Teaching Mode in Inorganic Chemistry Experiment Teaching

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Abstract: Inorganic chemistry experiment is the most basic experimental course in pharmacy. It not only requires students to have certain theoretical knowledge, but also requires students to have strong hands-on ability to ensure the learning efficiency of chemistry. However, due to the poor hands-on ability of students, they are unable to apply the knowledge they have learned to practical operation; Teachers' teaching mode is relatively single, and they pay less attention to practical courses; Due to various reasons, such as low capital investment, certain problems have arisen in inorganic chemistry experiment teaching, and students' learning effect cannot be guaranteed. These problems need to arouse the attention of chemistry teachers. This paper will put forward some suggestions for this problem.

Keywords: “PBL” Teaching Mode; Inorganic Chemistry; Experimental Teaching

Introduction

“PBL” teaching mode is a new teaching mode formed under the new education system. This teaching mode meets the requirements of the new education system, perfectly reflects the dominant position of students, and pays attention to the development of students' hands-on ability. Therefore, it can greatly improve the teaching quality of teachers in the classroom. The problems in inorganic chemistry experiment teaching have affected the teaching effect of chemistry. The emergence of this teaching mode can solve the problems in traditional chemistry experiment teaching. Therefore, each chemistry teacher needs to apply this teaching mode appropriately according to the situation of students in class, so as to better improve the learning quality of students.

1. Problems in Inorganic Chemistry Experiment Teaching

1.1 Students have poor practical ability, and there is deviation between theory and reality

Chemical experimental phenomena can intuitively display the changes of substances, which is conducive to deepening students' understanding of theoretical knowledge. Therefore, inorganic chemistry experiment is a must for many majors. The experimental operation of inorganic chemistry needs to be based on students' hands-on ability. If students have poor hands-on ability, they will not be able to successfully complete the operation of inorganic chemistry experiments. Inorganic chemistry experiment requires students to be very careful to make the experiment successful, so any mistake in the experiment process will lead to experimental mistakes. But in real life, many students do not have the ability to operate, which leads to some problems in the operation of inorganic chemistry experiments. For example, indistinct identification of chemical reagents, lack of effort in mastering instruments, and poor grasp of chemical reagent measurement are all common mistakes made by students in hands-on operation. However, many students do not realize the impact of poor hands-on ability, which leads to students' poor grasp of knowledge and greatly affects students' learning quality.

1.2 The teacher's teaching mode is single and the students' interest is insufficient

The process of inorganic chemistry experiment is relatively boring, and students are likely to be uninterested. However, in the traditional teaching mode, teachers often adopt a single teaching mode, which leads to a more boring inorganic chemistry experimental subject, leading to a low interest of many students in learning this subject, which leads to a decline in the quality of stu-

dents' learning. Many teachers are not aware of the impact of the boring environment on students, which greatly affects students' learning efficiency. In the traditional teaching mode, teachers often occupy the active part of the classroom and students are in a passive state, which will greatly suppress the nature of students and make them unable to achieve all-round development.

2. Advantages of "PBL" teaching mode compared with traditional teaching mode

2.1 It is conducive to the cultivation of students' practical ability

The "PBL" teaching mode requires students to explore the mysteries contained in knowledge themselves, which can not avoid the phenomenon of students' explanation through hands-on experiments. Chemistry can not be learned without experiments, so experimental teaching is a very important part of chemistry. The application of "PBL" teaching mode in inorganic chemistry experiment teaching can promote students' practical ability by encouraging them to explore knowledge by themselves. In traditional teaching, many teachers directly tell students the results of the experiment and cancel the process of students' actual operation, which greatly affects the students' ability to operate. In real life, many students are very skilled in theoretical knowledge, but there are many mistakes in practical operation. These are the drawbacks of traditional teaching methods. The application of the "PBL" teaching mode has well avoided the shortcomings of the traditional teaching mode, and paid attention to the impact of the hands-on ability on the development of students, so that students' hands-on ability can be effectively improved, and then promote the overall development of students.

2.2 Emphasize students' main position and improve students' learning efficiency

The reform of the new education system requires teachers to pay attention to students as the main body in the classroom, and then effectively improve the learning efficiency of students. In the "PBL" teaching mode, the most important point is to reflect the students' dominant position, and the teachers play a role of guidance, so that students can learn in the process of exploration. In traditional teaching methods, teachers play a decisive role in the classroom. Students have a poor sense of participation in the classroom and cannot be the master of learning, which greatly affects the learning effect of students. This is not conducive to the overall development of students, and it is easy to limit students' thinking to teachers' teaching, which leads to the limitation of students' development. Taking students as the main body in the classroom can stimulate students' enthusiasm for learning, and then put more energy into learning. The "PBL" teaching mode largely reflects the requirements of quality education. The application of this teaching mode in inorganic chemistry experiment teaching can greatly improve students' learning efficiency and further promote their all-round development.

3. Application of "PBL" Teaching Mode in Inorganic Chemistry Experiment Teaching

3.1 The school increases capital investment to support the development of inorganic chemistry experiment teaching

The development of inorganic chemistry experiment occupies a very high position among pharmacy majors. Many pharmacy related majors regard inorganic chemistry experiment as a basic discipline of the specialty. Therefore, the school needs to vigorously support the development of inorganic chemistry experiment teaching in the school, increase investment in funds, and provide students with a high-quality learning environment. The allocation of hardware facilities is inseparable from the support of funds. The school needs to invest a certain amount of funds in the chemical laboratory every year to ensure the development of inorganic chemistry experiment teaching. First, the school needs to establish a special teacher as the place for students to experiment. Second, it needs to purchase professional chemical instruments, such as test tubes, rubber tip droppers, beakers, alcohol lamps, sterile lamps, etc., to provide the most basic chemical instruments for students' experiments and ensure that students can operate normally. In addition, the school needs to employ professional instrument maintenance personnel to carry out regular maintenance of the chemical laboratory to ensure the normal use of chemical instruments. Finally, the school needs to regularly replace the chemical instruments in the school to ensure that students can use the most advanced equipment for experiments, so as to improve the quality of students' experiments.

3.2 Increase the frequency of classroom teacher-student interaction and activate the classroom atmosphere

In the "PBL" teaching mode, the most important thing is to experience the dominant position of students, which can not

avoid certain interaction between teachers and students in the classroom. In the traditional teaching mode, the frequency of teacher-student interaction is low, and students have a poor sense of participation in the classroom, which leads to poor learning results. Under the "PBL" teaching mode, teachers need to have some interaction in the classroom to improve students' participation in the classroom and help students focus their attention. For example, teachers can ask some questions in the classroom. By designing lively and interesting questions and interacting with students to a certain extent, they can not only test students' learning effects but also alleviate the boring atmosphere in the classroom. Teachers can also encourage students to actively put forward their own opinions in the classroom, which is conducive to teachers to deepen their understanding of students. Through one question and one answer, we can also close the relationship between teachers and students, thus creating an active classroom and promoting the development of students.

3.3 Teachers innovate teaching methods and adopt various teaching methods

The simplification of teaching methods will reduce students' interest in learning, so teachers need to use a variety of ways to teach, and then cultivate students' enthusiasm for learning. Under the "PBL" teaching mode, teachers need to let students explore knowledge independently. Therefore, teachers can use the mode of joint teaching between students and teachers in the teaching process. Teachers can teach students simple knowledge points in the learning process, which can not only stimulate students to preview knowledge carefully after class, but also increase students' interest in students, thus effectively improving students' learning effect. Teachers can also use the form of group learning to teach, let students form groups freely, explore knowledge, put forward different views between different groups, and discuss in class, which can not only optimize the teacher's classroom atmosphere but also effectively improve the students' learning effect.

4. Conclusion

The "PBL" teaching model should be able to largely avoid the drawbacks of the traditional teaching model, greatly develop students' abilities, and thus improve the quality of students' learning. The application of this teaching mode in inorganic chemistry experiment teaching can improve students' hands-on ability, and can also have a certain impact on the change of teachers' teaching concept, which can effectively improve the teaching quality of inorganic chemistry experiment teaching. All chemistry teachers need to pay attention to the positive impact of this teaching mode on students, actively apply this teaching mode to their own teaching, and devote themselves to the cultivation of students' abilities, so as to lay a foundation for students' future learning.

References

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