

Research and Practice on the Teaching Mode of "Trinity" Industrial Auxiliaries Under the Network Environment

Fang Wang¹

¹Department of Chemical Engineering, Binzhou University, Binzhou, 256600, Shandong Province, PR China.

Abstract

According to the characteristics of industrial auxiliaries course, make full use of the developed network resources, carry out the reform from the aspects of teaching content, teaching methods and evaluation system, and build the course learning + autonomy Learning + extracurricular practice -- three in one three-dimensional teaching mode. Practice has proved that the teaching reform can stimulate students' initiative in learning to a certain extent, enhance students' adaptability to society, and improve students' competitiveness in employment.

Keywords

Network; Industrial auxiliaries; Teaching model.

1. Introduction

"Industrial auxiliary" course is a limited elective course for undergraduate majors of applied chemistry, material chemistry, chemical engineering and process. It is a course based on polymer materials and fine chemicals, and intersects with other courses of polymer and applied chemistry. At present, the auxiliaries industry is closely related to all industries and people's lives. The wide range of fields and professionalism are unmatched by any other profession [1]. However, due to the wide variety of synthetic materials and wide application, the types of chemical additives required are more complicated, the amount of knowledge is large, the number of hours is small, and the teaching is more difficult [2]. In addition, the popularization of higher education and its seriously unbalanced teacher-student ratio require that modern teaching must be based on modern high-tech communication technology, integrate a variety of teaching modes and teaching means, create a personalized and interactive teaching environment, so as to greatly improve the efficiency of teaching under the network environment, and alleviate the shortage of hours, teachers and the serious imbalance of teacher-student ratio contradiction. Network hardware facilities have been popularized rapidly in our school, and have gradually become a part of the life of young students. The network has the characteristics of massive, interactive and multimedia. This paper attempts to explore the teaching reform path of the "Industrial Auxiliary" course from the three aspects of teaching content, teaching methods and evaluation system by means of the new platform and new means of the network.

1.1. Teaching Content Reform

Based on the principles of positioning, seeking truth from facts and teaching students according to their aptitude in Huanglan Economic Development Zone, Binzhou university has formulated the teaching syllabus of industrial auxiliaries with its own characteristics, and has constructed a curriculum content system that focuses on practical content and trains applied talents

1.2. Pay Attention to the Practicality of Teaching Content

According to the characteristics of various kinds of auxiliaries, huge knowledge system and strong theory, students are required to have a general understanding of the development of most industrial auxiliaries in just a few minutes in class, and to achieve the teaching goal of mastering the mechanism of the role of auxiliaries. If we can make full use of the regional economic advantages, and choose the more practical additives as the key content, it can not only stimulate students' interest in learning, broaden the employment channels of students, but also enhance their employment competitiveness to a certain extent. For example, Binzhou has the world's largest cotton textile enterprise, Shandong Weiqiao venture group. We can take dyeing and finishing auxiliaries as a key content, and give students a detailed explanation of the classification and mechanism of dyeing and finishing auxiliaries in the form of special topics. In addition, with the rapid development of industry and agriculture, food additives have gradually become a hot topic after discussion. We also selected it as the key content to guide students to treat food additives with a correct attitude.

1.3. Pay Attention to the Novelty of Teaching Content with the Help of Network Reconstruction

In order to enable students to grasp the operation methods of the first line of production as soon as possible and enhance their employment competitiveness, the reasonable selection of curriculum content is the key. The rapid development of industry requires that the teaching content of the major should be advanced with the times. The novelty and practicability of the course content directly affect the level of the course construction and the employment competitiveness of the students. As the main carrier of theoretical teaching, the updating of teaching materials often lags behind the development of society. We should supplement new knowledge in time. Relying on the network, timely introduction of hot topics, on the one hand can enrich the content of the textbook, enrich the details, on the other hand can improve the fun and attractiveness of the course to a certain extent. According to the content of the teaching material, the production process is introduced less, and video clips are added appropriately to show the process flow and operation precautions intuitively. In order to cultivate students' consciousness of innovation and scientific research, it is necessary to keep up with the times of professional knowledge, timely supplement scientific frontier knowledge and new technology, and perfect the theoretical content of teaching materials. For example, plastic bags and disposable tableware students can be reached almost every day, guiding students to correctly identify the safety of plastic products used in different conditions, and try to bring utensils to reduce unnecessary white pollution. In addition, in view of the Internet hot discussion on the use of food additives to mix fruit juice, increase the knowledge of food additive classification, dosage and relevant laws and regulations.

2. Teaching Method Reform

The first task of the reform is to support various learning modes through modern high-tech network technology, integrating traditional learning mode, independent learning mode, digital and network learning mode. On the basis of inheriting the advantages of traditional classroom teaching, the reform of teaching mode of industrial auxiliaries will give full play to the advantages of multimedia technology in the teaching of industrial auxiliaries and improve students' learning Enthusiasm.

2.1. Break Through the Traditional Teaching Mode And Give Full Play to the Students' Subjective Initiative

In the process of teaching, teachers often occupy an absolute authority position, teacher-oriented, and knowledge-based teaching mode based on textbooks [3]. The teaching mode

greatly suppresses the fun of students' learning, neglects the cultivation of students' subjective initiative, and turns the teaching of industrial auxiliaries into the memory and memorization of theoretical knowledge. The result is that the course is boring and tasteless. As a junior college student who has completed all the basic courses of this major, he has rich knowledge reserve and certain self-study ability. Therefore, industrial auxiliaries should play a leading role in classroom teaching, and the teacher's responsibility is to guide students to learn textbooks and explore problems. The opportunity to give each student a speech in the classroom as a unit can not only stimulate students' ability to think independently, but also exercise their ability to organize language and develop their ability to explain scientific issues. In the process of guiding, teachers should treat students with equal attitude, respect students' ideas and doubts, and use digital materials to train students' thinking ability to cultivate students' innovative thinking.

2.2. Make Full Use of Cyberspace Teaching

For teaching, network is a virtual classroom with complete equipment and rich materials. In this virtual classroom, teachers can upload various course learning materials, assign homework and grade homework to students, etc., while students can learn synchronously in this virtual classroom, upload their homework to teachers, interact with teachers or other students, enter other space users' personal space, and find all kinds of materials they need To fully exercise and improve the ability of autonomous learning. Before class, teachers can upload teaching courseware and think about problems. Students are required to preview, think about and find answers to the problems by combining the teaching content. For example, when teaching food additives, how do you correctly understand food additives? In the class, teachers use the virtual classroom of cyberspace to combine the prearranged thinking problems with the teaching content of the class, take the teachers as the leading, the students as the center and the problems as the guide, actively carry out the problem-based teaching, and fully stimulate the students' enthusiasm and initiative in learning; after class, teachers can upload the extended learning resources of the classroom teaching content in the space Materials, guide students to further broaden the knowledge, deepen the consolidation of classroom teaching results.

2.3. Strengthen Extracurricular Practice Teaching

The content of industrial auxiliaries is mainly about the synthetic development and application performance test of major auxiliaries. It is not enough to rely on theoretical knowledge. Therefore, it is necessary to emphasize the opening of practical experiments corresponding to theoretical knowledge and the strengthening of practical ability. On the one hand, the opening of applied experiment can make theoretical knowledge be verified and applied in the process of experiment, on the other hand, it can also make students enhance their perceptual knowledge of relevant applied knowledge, so as to consolidate their memory.

3. Reform of Evaluation System

According to the characteristics of industrial auxiliaries, it is difficult to grasp the key knowledge only by rote learning. Therefore, we have reformed the assessment method of this course. The score of theory examination accounts for 40%, and a large amount of memorized knowledge is minimized. For the key theoretical knowledge, it is mainly displayed in the form of open questions or discussion questions, emphasizing the students' understanding of knowledge; the score of ordinary times accounts for 30%, including the pre class preview and the completion of homework after class; the score of classroom questioning accounts for 10%, focusing on the students' understanding of knowledge and it's The final part is the investigation of students' practical ability, which is mainly in the form of assistant design and verification, accounting for about 20%, mainly including the rationality and effectiveness of the prescription [4].

In summary, through the reform of teaching content, teaching methods and evaluation system, we strive to build curriculum learning + independent learning + extracurricular practice-- "three-in-one" three-dimensional teaching mode, that is, "classroom teaching masters cultural knowledge, autonomy Learn to consolidate the ability of knowledge development, extracurricular practice to improve the ability to adapt and adapt to the social" three-dimensional teaching mode.

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