

The Teaching Design and Practice of “Golden Course” of Social Practice Course under the Background of First-Class Undergraduate Course Construction

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Abstract: “Social practice course” aims at cultivating students' comprehensive ability and cultivating students' awareness and ability of knowing, researching, understanding and serving the society, which puts forward new requirements for the teaching of social practice course in the construction of first-class undergraduate courses. This paper analyzes the social practice course teaching present situation and existing problems, and from the first class undergraduate course, train high quality applied engineering technical personnel's mouth, proposed to the social practice course curriculum teaching design idea of the construction of “gold”, hope this research can undergraduate “gold class” teaching and “gold” construction to provide the beneficial reference.

1. Introduction

On June 21, 2018, the Ministry of Education held the first conference on undergraduate education in China's colleges and universities in the new era since the reform and opening up. Chen Baosheng, Minister of Education, proposed for the first time at the meeting that college students should effectively “increase the burden”, enhance the degree of academic challenges for college students, reasonably increase the difficulty of courses and expand the depth of courses. Truly turn the “water lesson” into a “gold lesson” with depth, difficulty and challenge, Sichuan. On November 24, 2018, Director General Wu Yan summed up the standard of “golden lesson” as “one degree of both sexes” at the 11th China University Teaching Forum: high level, innovation and challenge. “High level” means the organic integration of knowledge, ability and quality to cultivate students' comprehensive ability to solve complex problems and advanced thinking; “Innovation” means that the course content reflects the frontier and The Times, the teaching form reflects the advanced and interactive nature, and the learning result is exploratory and personalized. “Challenge degree” means that the course is a certain degree of difficulty, which requires a jump to achieve, and it has higher requirements on teachers' lesson preparation and students' after-class performance. On October 24, 2019, the Ministry of Education put forward the “Plan for the Implementation of the Double Ten Thousand Plan for the First-class Undergraduate Courses” in the “Implementation Opinions of the Ministry of Education on the Construction of First-class Undergraduate Courses” (Higher Education [2019] No. 8). This series of measures have aroused wide attention of universities and teachers all over the country. The so-called “golden course” is to achieve the “gender” high standard of first-class undergraduate courses. Therefore, under the background of first-class undergraduate curriculum construction, it is necessary to explore the teaching reform of “gold course” in order to comprehensively revitalize undergraduate education and cultivate first-class applied talents.

Social Practice is a course from theory to practice, which is the basis for students to learn other professional courses. Therefore, how to make it a “golden course” in the context of first-class undergraduate course construction poses an unprecedented challenge to teachers. Based on the author's own teaching experience, this paper puts forward the teaching design ideas for the construction of the “golden course” of social practice for undergraduates, aiming at creating the “golden course” of social practice.

2. Current Situation and Problems of Course Teaching

With the rapid development of online learning platforms, under the background of “Internet +” and the construction of first-class undergraduate courses, new requirements have been put forward for the teaching of undergraduate courses of chemical engineering principles. Facing new opportunities and challenges, the current situation and problems of teaching mainly manifested in the following aspects:

(1) the traditional classroom teaching idea lags behind, teachers “teaching” as the center of the main cramming teaching, teachers mainly from how to teach, how to 45 minutes in class to tell the whole complicated teaching contents such as Angle to design the teaching process, students can only passive to accept, This kind of full classroom does not fully reflect the “student-centered” teaching concept of OBE.

(2) In the information age, the traditional classroom teaching information level is backward and the teaching means are single. Traditional teaching is based on blackboard writing. In the whole teaching process, teachers often only teach the key content in order to complete the teaching task, while students only mechanically transcribe, without in-depth understanding, which leads to low teaching efficiency. At present, blackboard writing teaching has been gradually replaced by multimedia teaching. Although the teachers have more teaching knowledge, the teaching effect is not very good due to the lack of interaction. The traditional teaching mode and methods have not been able to meet the needs of cultivating high-quality applied engineering and technical talents. Therefore, other teaching modes and methods need to be organically introduced into the classroom teaching process.

(3) The traditional assessment method is single, which mainly focuses on the final paper examination, lacks the process evaluation of the teaching effect, neglects the assessment of students' cognitive process and practical application ability, and does not pay enough attention to the cultivation of students' innovation and practical ability.

3. Create the Teaching Design Idea of “Golden Lesson” in Social Practice

Taking social practice as an example, this paper briefly describes the course design process of “golden course” based on the construction of first-class undergraduate courses.

3.1 Teaching Design Concept

To create “golden lesson” must carry on the classroom teaching reform. Adhere to the student-centered, ability output-oriented, continuous improvement of teaching, highlighting the OBE teaching philosophy of moral education. In the whole teaching process, we should give full play to the main role of students, highlight their main status, fully mobilize their initiative in learning, stimulate their interest in learning, fully explore the ideological and political elements in the course, pay attention to cultivate students' engineering thinking ability, and lay a foundation for the subsequent study of other specialized courses.

3.2 The Teaching Goal

According to the needs of the country, the teaching objectives in three aspects of knowledge, ability and quality are established to meet the needs of cultivating value rationality and high-quality applied talents and to analyze the specific learning situation. The teaching objectives are as follows:

Knowledge goal: to understand and master the basic knowledge and basic principles of typical operations in the process of social practice.

Able to use the knowledge to practice the typical unit operation process, analyze its operation characteristics, influencing factors and strengthening ways, etc., and can design and optimize the operation process of each unit; Can skillfully solve the practical application problems in social practice, strengthen students' ability to deal with problems:

Quality objectives: the design and optimization of the process in social practice cannot be done without environmental protection, energy saving, safety, technology and economy and other factors,

guide students to set up a scientific world view, and abide by the professional ethics and norms, cultivate students' sense of responsibility and contribution to the society;

Through group discussion, I learned how to effectively communicate and cooperate with others, and developed a rigorous and practical working attitude. Through the expansion of teaching knowledge and the use of network resources, I can continue to pay attention to the development status and frontier of the relevant knowledge field of my major, carry out independent learning, master effective learning methods, and become an active and efficient learner.

3.3 Design of Teaching Mode

According to Bloom's principle of classification of objectives, students need to go through six stages, from memory to creation, in the process of implementing course objectives. Therefore, the teaching objectives are refined and stratified, and the corresponding teaching stages of each stratified teaching objective are determined in combination with students' actual learning ability.

In the whole teaching process, three stages of “pre-class instruction, in-class teaching and after-class personalized guidance” are adopted to organize and carry out the teaching. Before class, teachers will push teaching logs, MOOC videos (using the state-level quality course Chemical Mass Transfer and Separation Process lectured by Professor Jia Shaoyi from Tianjin University), lecture PPT, learning suggestions and other preview resources to students through the Super Star Learning Tong (hereinafter referred to as “Learning Tong”) network platform and class QQ group. Students are required to preview the knowledge to be taught and complete the pre-class preview test. Students are required to form a preliminary personal understanding according to the preview content and be able to put forward their own preliminary opinions. This is conducive to improving students' self-management ability and autonomous learning ability. Class, the teacher according to the pre-course reading situation about curriculum content by rain (classroom), emphasis on teaching key and difficult points, and the omnidirectional and multi-level interactive classroom discussion, dominated by teachers, elaborate discussion topics (should reflect golden class of high order, innovative and challenges), answer students, teachers' comments, undertake to the student thought development training; Students can use mobile devices (such as mobile phones) to realize real-time interaction in class. In this way, the professional knowledge can be successfully taught to students, and the ability of knowledge application and solving practical complex problems can be fully trained to realize the organic integration of knowledge and ability. After class, the teacher issues homework, arranges research reports and related knowledge point homework through learning. Students should review and summarize the knowledge in time, clarify the knowledge structure and context, and complete the homework. According to the completion of homework and feedback, teachers will give personalized guidance to students, and further organize and design subsequent teaching links to ensure the achievement of course objectives.

3.4 Integration of Ideological and Political Education in Curriculum

This course fully excavates the ideological and political elements contained in the course, flexibly and appropriately runs through the ideological and political education in the whole teaching system, and realizes the “seamless connection” between teaching and educating people. For example, in introducing the development history of social practice curriculum to students, selectively cut into the touching deeds and outstanding achievements of the older generation of scientists in China, so as to cultivate students' feelings of home and patriotism. In the process of classroom teaching to introduce some of the major projects in our country, such as the introduction section heat exchanger, cut into the qinghai-tibet railway engineering used in by scientists to the creative development of low temperature heat pipe technology in our country, the technology now has successful promotion in the countries along the “area”, strengthen students' sense of national identity and a sense of pride. Principles of chemical engineering course is the essence of “three against”, speak of momentum, heat and mass transfer process, involving many scientists to a named law, introduced the corresponding law, interspersed with these scientists twists and turns of life story and they stick to the truth, and scaling new heights of scientific spirit, caused the student to the scientific spirit and ideal faith.

3.5 Course Learning Resources and Learning Support

Around the design thinking, this course provides students with abundant learning resources, including courseware materials, learning, video, animation and online learning resources, learning, school, class quality, online MOOC Chinese universities, colleges and universities teaching resource network, etc., such as pass by learning platform to provide job library, question bank, the development of class information, etc.). And guide students to make full use of these resources for self-learning; In order to ensure that students reach their learning objectives and achieve learning outcomes, this course provides students with multi-dimensional learning support, including classroom teaching: key knowledge points, learning priorities and difficulties, and learning methods are explained in class; Classroom discussion between teachers and students: ask and answer each other to deepen the understanding of the main knowledge points; After-class learning support: push classroom teaching courseware, videos and other learning resources to support after-class learning; After-class learning guidance: real-time interaction and communication were carried out by the class WeChat group or QQ group to realize whole-nature online question-answering and puzzle-solving; Staged Achievement Feedback: Timely collate students' learning effects through their classroom performance, homework completion, chapter test scores, etc., give feedback to students and make supplementary explanations for common problems; To help students with learning difficulties: to help students with learning difficulties through independent guidance, strengthen monitoring and other ways to help them through the difficult period and successfully complete the learning of the course.

3.6 Achievement Assessment: Two-Way Assessment, Process Assessment

As a link of talent training, college students' social practice needs a learning evaluation mechanism to ensure the quality and effect of the work. The evaluation of college students' social practice is not only to arouse the enthusiasm of students, but also to promote the effect of social practice in personnel training and social service. Because of its long teaching cycle and many teaching points and ability cultivation points, wood courses cannot be assessed in a single way as conventional courses. Instead, students' learning conditions at all stages must be assessed comprehensively, both inside and outside the school, and standardized scores should be assessed.

Students' social practice results are composed of the usual results and the practical assessment results, accounting for 10% and 90% respectively. Scores enter the student's transcript; Social practice scores lower than 10 75 points are not exempted. Among them, the usual grades are determined according to the class attendance; Practice assessment results mainly examine students' participation in classroom teaching, homework completion, security measures implementation, participation in practice teaching, practice unit (practice) evaluation, practice results report quality and other six vigorously. Among them, according to the students to complete the school provisions of the social practice security measures of statistics, not according to the requirements of the students to cancel the qualification to participate in the course of wood; According to the students "social practice registration form" (including daily practice records and practice unit comments, signatures) and students practice summary report, combined with the class exchange students evaluation, evaluation of the practice report scores. For the 10 practice teams, the completion of students' practice planning will be assessed according to the "project report" submitted by students (including practice planning, safety plan and fund budget), and the funding support for the project will be assessed. In addition, wood courses also set up special awards, such as outstanding team in social practice, the first official model, and so on, and the performance evaluation complement each other.

3.7 Course Teaching Method

Different teaching methods are adopted for different teaching contents. For example, for the chapter of gas absorption and distillation, case teaching method is adopted, and engineering cases are carefully selected in combination with engineering practice to enhance students' engineering concept. By analyzing the related problems revealed in the cases, the students can be guided to think,

discuss and summarize, so as to improve the ability of analyzing and solving complex problems. For the chapter on gas-liquid mass transfer equipment, the students were invited to visit the plate tower and packed tower in the laboratory before class to stimulate their interest in learning. For the liquid-liquid extraction chapter, the flipped classroom was adopted to teach students' language expression and teamwork ability. To attract students' attention and explain the teaching difficulties by playing the teaching animation simulation video appropriately; At the same time, the method of discussion between teachers and students is adopted to train students' thinking development.

3.8 Curriculum Features and Innovation Points

The course features dynamic introduction: vivid animated videos and experimental demonstrations are used to demonstrate the transmission phenomenon in practice.

Make students feel immersive experience.

Compared with previous courses, the teaching reform and innovation of this course are as follows:

(1) the innovation on teaching content: on the basis of the original content, time into the project of new methods, new technology, such as content, with the orientation of typical chemical unit operations, combination with the engineering practice, the selected project cases, outstanding class taught knowledge and practice closely, enhance the students' engineering ideas, improve the students' ability to analyze and solving complicated problems.

(2) Innovation in teaching methods: from teacher-centered single teaching, to emphasize that students are the main body of teaching, students' development as the center, adopt flexible and diverse teaching methods.

(3) Innovations in the assessment methods: In addition to the regular final paper examination, the teaching effect is evaluated by implementing the process assessment according to the teaching objectives; Increased the usual class performance, research reports, unit tests, homework process assessment; Dynamic and real-time evaluation and feedback are carried out on the whole process of students' learning, so as to provide timely and accurate information for teachers to teach and realize continuous improvement of teaching. The application practice of human resource management module.

(4) Integration of ideological and political education: fully explore the ideological and political elements in the curriculum and integrate them into the curriculum teaching; Encourages and guides students timely, spreads positive energy, and realizes the unity of "knowledge imparting" and "value leading" of professional courses.

4. Conclusion

The teaching reform exploration of "golden course" construction of social practice course is an inherent part of training students' practical ability, innovation ability, comprehensive quality and core competitiveness for new engineering courses under the background of first-class undergraduate course construction. Curriculum quality and learning effectiveness are the key elements of "golden course". The construction of social practice "gold course" aims at cultivating high-quality application-oriented engineering and technical talents, and deepens the reform of higher education and improves the teaching effect through the deep integration of mixed teaching, information-based teaching and independent inquiry learning. The preliminary practice of "gold course" teaching exploration of chemical engineering principle shows that the teaching design idea of this course is of great significance for the construction of high-quality and effective "gold course". It is hoped that the research of this paper can provide beneficial reference for the "gold course" teaching and construction of applied undergraduate courses.

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