

Ideological and political exploration and practice of “production planning and control” course based on questionnaire survey

Kaiping Ma, Jing Li

College of Information Management, Nanjing Agricultural University, Nanjing, Jiangsu, 210031

Abstract: In this paper, the ideological and political teaching design of the course of production planning and control was carried out, and the implementation was completed in the two majors of logistics engineering and industrial engineering. In order to test the teaching effect, the questionnaire was used to investigate the students of the two majors. The survey was carried out at the beginning and end of the semester respectively. Comparative analysis displayed significant differences between the scores. The results show that ideological and political reform has important theoretical value and practical significance to the deepening of the comprehensive reform of “three wide education”, further implementing the fundamental goal of morality and talent cultivation, and enhancing the moral value of professional curriculum teaching.

Keywords: Curriculum ideological and political education; Explore; Practice; questionnaire survey

1. Introduction

In December 2016, the National Conference on Ideological and Political Work in Colleges and Universities proposed: “we should make good use of classroom teaching as the main channel, improve the affinity and pertinence of ideological and political education, and make all kinds of courses and ideological and political theory courses go hand in hand to form a synergistic effect.” Later, in the opinions on strengthening and improving the ideological and political work in colleges and universities under the new situation, it was further pointed out that to strengthen and improve the ideological and political work in colleges and universities, we should adhere to the whole process and all-round education, guide the ideological value through the whole process and all links of education and teaching, and form long term mechanism of the education of teaching, scientific research, practice, management, service, and organization. On this basis, the CPC Central Committee has put forward new requirements for the talent training mode in colleges and universities.

The proposal and implementation of curriculum ideological and political education is not only a change of curriculum concept, but also a change of educational concept. Ideological and political courses and professional courses are in the same direction and form a synergistic effect, which is the internal requirement of moral education. Mining the educational value of science and engineering courses is an important way to achieve the same direction and synergistic effect. Around this theme, many science and engineering courses have carried out relevant exploration. Yezhiming et al. started from the construction of ideological and political education in science and engineering courses to the teaching practice of ideological and political education in courses, and provided ideas, methods and cases that can be used for reference in the implementation of ideological and political education in courses. Yuhaitao et al. provided measures and methods for systematically organizing the implementation of ideological and political education in science and engineering courses by analyzing the focus of the implementation of ideological and political education in science and engineering courses. The production planning and control course is the core course of industrial engineering major. The ideological and political construction of the course will help guide students to deeply understand and consciously practice the professionalism and professional norms of industrial engineering, and enhance students’ sense of social responsibility, national pride and national identity. The following is to explore the design, implementation and effect evaluation of the ideological and political teaching of production planning and control.

2. Ideological and political teaching design of production planning and control course

2.1 Refining ideological and political elements

The content of production planning and control covers a wide range of knowledge and is highly practical. The teaching content of the course is integrated with a number of industry practice activities including the conception, design, operation and optimization of production system, involving operations research, statistics, management, economics, basic industrial engineering, facility planning and logistics, enterprise resource planning and other aspects of knowledge. The teaching content has extensive cross penetration with several professional courses. Combined with the main contents of the course, we will focus on enhancing students’ sense of value and mission, such as home and country feelings, innovation, social service consciousness, etc., to enhance their professional interest, so that they can carry out creative work at a higher level and realm in the future.

The ideological and political elements are condensed in the following aspects:

(1) Patriotism, sense of responsibility and mission. According to the development history of manufacturing industry, globalization strategy, agile manufacturing, concurrent engineering, green manufacturing and other knowledge points, this course describes the outstanding contributions of the development of China’s manufacturing industry to the world from ancient times to the present, cultivates students’ patriotic beliefs, enhances students’ national self-confidence, and establishes a sense of responsibility and mission.

(2) The scientific spirit of being pragmatic, innovative and people-oriented. Scientific and technological innovation is an important engine for the development of human society. Integrate the education of scientific spirit into the case teaching of knowledge points such

as mass customization, product demand forecasting and new product development, and guide students to establish the consciousness of emancipating the mind, keeping pace with the times, actively exploring and being brave in innovation.

(3) Professional ethics of dedication and team spirit. The importance of the concept of rule by law for safe production and the role of team spirit in the manufacturing process are described in the characteristics of flowing manufacturing mode, the concept of concurrent engineering, lean production, production line balance and other knowledge points.

2.2 Curriculum ideological and political objectives

Agriculture-related engineering majors in agricultural colleges and universities in China are gradually developed based on agricultural majors. Engineering majors in agricultural colleges and universities have learned a lot from the contents of similar engineering majors in the curriculum setting, and have been enriched and improved in combination with the requirements of agricultural production. Under the new situation of the integrated development of new agriculture and new engineering, the teaching reform of professional courses also needs to be explored. Combined with the characteristics of agricultural colleges and universities, based on the excavation of ideological and political elements, this paper reflects the reform direction of “integration of agriculture and industry”, and uses systematic thinking to reset the teaching objectives of the course from the four dimensions of system design, system simulation, data analysis and agricultural characteristics.

(1) Cultivate students’ ability to plan and design complex industrial engineering problems related to industry and agriculture by using production and manufacturing related technologies and industrial engineering professional knowledge;

(2) Cultivate the students’ ability to analyze, interpret and compare the results and data of simulated industrial and agricultural enterprise production and operation experiments;

(3) Cultivate students’ ability to use production planning and control and other related professional knowledge to propose solutions to practical problems of industrial and agricultural manufacturing enterprises;

(4) It can combine the characteristics of agricultural production and agricultural products, use the thinking of operation management to analyze the agricultural production system, and carry out monographic and case studies in combination with the latest research results and frontier issues of “three rural issues” at home and abroad, so as to improve students’ professional quality and expand students’ international vision.

3. Implementation of ideological and political teaching in production planning and control course

The content in the course of production planning and control includes the classification and characteristics of different production mode, the development and design of products, inventory control theory, master production scheduling, material requirement planning, capacity requirement planning, production operation planning, etc. Ideological and political teaching mainly reflects in the classification and characteristics of different production mode, the development and design of products, and inventory control theory. “Curriculum ideological and political education” is mainly realized through the organic unity of explicit education and implicit education, specifically through the development of relevant curriculum construction and teaching activities. The ideological and political education needs to solve the problem of the theme entry time and method. This course plans to adopt the following entry methods:

(1) Problem creation method

The problem of “ideological and political education” involved in a professional knowledge point causes students to think or discuss. For example, the concept of “green manufacturing” focuses on the whole life cycle of products, pays attention to environmental protection, and leads to “lucid waters and lush mountains are invaluable assets”, which leads to the discussion of “ecological civilization education”, stimulates the students’ sense of social responsibility, and makes deeper thinking on environmental protection.

(2) Event or case introduction method

Select events or cases related to professional knowledge points, start from the dimension of ideological and political education, elaborate the ideological and political elements behind them, and integrate ideological and political education into teaching in an implicit way. For example, through the hot sale of Nannong lipstick, it describes the influence factors of new product development, analyzes the reasons for the success of lipstick product development, leads to resource advantages of Nanjing Agricultural University in raw materials and technology, and stimulates students’ enthusiasm to strengthen agriculture and prosper agriculture, love agriculture and love school.

(3) Story introduction method

Collect the stories behind the professional knowledge points, and guide students to think. For example, the story of Turkey hypothesis in “three body” guides students to think about the limitations of prediction activities, leads to the concept of system boundary, makes students have systematic and overall thinking, further introduces the regularity and uncertainty of agricultural production prediction activities, and enhances students’ sense of mission to prosper agriculture in a big country.

(4) Situational approach

Based on the preset assumption, guide students into the situation, and gradually lead to the theme of ideological and political education. For example, in the description of concurrent engineering, the initial conception of a new product is given, and the students are asked to discuss the production process design scheme in groups, thus to cultivate the students’ teamwork ability and the craftsman spirit of keeping improving.

(5) Comparative method

Through the case comparison through professional knowledge vision, the theme of ideological and political education such as “sense

of responsibility and mission” is introduced. For example, by making a horizontal comparison between China and foreign countries from the development process of production management, students can understand the development of China’s ancient manufacturing industry and agriculture, enhance national pride, further understand the bottleneck of the development of Chinese enterprises, and think about their own responsibilities and missions.

4. Evaluation of ideological and political teaching of production planning and control course based on questionnaire survey

The scientificity of ideological and political education is embodied in verifiability. This research designs a questionnaire of 20 questions, 5 of which relate to the explicit knowledge of ideological and political education, which are the knowledge points of ideological and political elements contained in classroom teaching and production practice, and are directly presented in the questionnaire; and the rest 15 of which involve the implicit knowledge needs to be integrated with the course content in order to internalize the ideological and political elements in the process of production management.

The questionnaire was distributed to undergraduates majoring in industrial engineering and logistics engineering at the beginning and end of the semester respectively. 196 questionnaires were distributed and recovered at the beginning of the semester, and 181 questionnaires were distributed and recovered at the end of the semester (some students added or dropped). Then the two survey results were compared and analyzed according to the score of explicit knowledge and the total score of the questionnaire. The results showed that the average score of explicit knowledge in the questionnaire was 2.47 at the beginning of the semester and 3.33 at the end of the semester. The total average score of the questionnaire was 11.58 at the beginning of the semester and 12.73 at the end of the semester. The results of the two scores were both significantly improved.

Conclusion

To sum up, the course of production planning and control contains rich ideological and political elements. The optimization of the curriculum system structure and training scheme by fully combining the ideological and political elements in the curriculum design is conducive to the comprehensive implementation of the construction ideas of “new engineering” and “new agricultural” and to the deepening of the comprehensive reform of “three wide education”, further implementing the fundamental goal of morality and talent cultivation, and enhancing the moral value of professional curriculum teaching, which has important theoretical value and practical significance.

References:

- [1] Speech at the National Conference on Ideological and Political Work in Colleges and Universities[N]. Guangming Daily, December 9, 2016 (01)
- [2] Yanhe Zhu , TaoWang , Fan Li, etc The evaluation, analysis and reform of curriculum ideology and politics in functional experiment teaching -- based on the statistical analysis of the questionnaire survey of medical students in the medical department of Xi'an Jiaotong University [J] Research and Practice of Medical Education, 2020, 28 (4): 5
- [3]Lingling Peng,Qiman Deng,Biling Fang, etc Exploration and reflection on the implementation effect of curriculum ideological and political education -- taking the teaching practice of "Advanced English Reading and Writing" as an example [J] English teacher, 2022, 22 (22): 8
- [4] Xuejing Ruan,Qingqing Li , Jiang Tao Professional curriculum construction and practice based on the integration of ideological and political education and "entrepreneurship and innovation" education [J] Theoretical Research and Practice of Innovation and Entrepreneurship, 2021 (12): 4

Ma Kaiping (1976-), female, associate professor, PhD, majors in production operation management, industrial engineering, etc.

Li Jing (1980-), male, professor, PhD, majors in agricultural system engineering.

Project funding: Granted by the Ideological and Political Model Course of Nanjing Agricultural University (Special program for Farming Education, Fund No. KCSZ2021096).