

Research on the Reform and Path Optimization of Ideological and Political Education in Engineering Management Majors Based on OBE Concept

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[**Abstract**] In 2018, the Ministry of Education proposed the integration of ideological and political education into majors and courses at the undergraduate level. Major universities are constantly exploring relevant practices. In early 2021, Jiangxi Province proposed the second round of evaluation for undergraduate majors, which also put forward relevant requirements for ideological and political education in its evaluation indicators. Based on the OBE concept, this article analyzes the characteristics of the engineering management major and the current situation of ideological and political education in the curriculum. Based on the requirements of professional evaluation, specific requirements and practices for ideological and political education in the engineering management major of Nanchang Business School, Jiangxi Agricultural University are proposed to meet the requirements of ideological and political education by the Ministry of Education, achieve student-centered educational goals, and thus achieve the goal of integrating ideological and political education into the engineering management major.

[**Key words**] ideological and political education; curriculum ideology and politics; OBE

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In 2018, the Ministry of Education proposed the integration of ideological and political education into majors and courses at the undergraduate level. Major universities are constantly exploring relevant practices. In early 2021, Jiangxi Province proposed the second round of evaluation for undergraduate majors, and designed elements of ideological and political education in the evaluation system and indicators. In order to meet the requirements of ideological and political education by the Ministry of Education and undergraduate evaluation in Jiangxi Province, a series of explorations have been carried out in the ideological and political education of the engineering management major at Nanchang Business School of Jiangxi Agricultural University under the OBE concept, which has achieved certain results. The following is the specific situation of our institute in the construction of ideological and political work system and the establishment of the three comprehensive education pattern in the field of engineering management.

1 Strengthen course construction based on the characteristics of engineering management major

The engineering management major is highly applied and practical. In the process of major construction, Nanchang Business School of Jiangxi Agricultural University mainly considers the job requirements of construction workers, budget officers, data officers, and management personnel in construction units. While teaching students professional knowledge, it strengthens the cultivation of their engineering project management practical ability and operational skills, and emphasizes the cultivation of their personality, comprehensive quality, and ideological and

moral education. Teachers should explore ideological and political education elements in the knowledge structure of engineering management courses, and achieve the educational goals of professional course teaching. At the same time, the ideological and political education resources of engineering management courses have been deeply explored and applied, realizing the educational function of engineering management courses, promoting the education of talents for the country and the Party, and implementing it in the teaching of engineering management courses in our college. All teachers majoring in engineering management participate in ideological and political education, which not only imparts knowledge but also leads the resonance of values, achieving the goal of “comprehensive education” and providing engineering talents with both morality and talent that society needs. Professional course teaching is the smallest unit for schools to impart knowledge and skills to students, with distinct characteristics that directly affect students’ thinking and the cultivation of professional abilities. The college mainly focuses on engineering management courses, respects the laws of engineering management courses, and meets the requirements of the 2021 undergraduate professional evaluation index system in Jiangxi Province. The following measures are taken to promote the optimization of the ideological and political education path in engineering management.

1.1 Adjust the professional training plan and curriculum teaching outline to meet the requirements of education and undergraduate evaluation

In the reform of ideological and political education in the engineering management major, in order to ensure the implementation of ideological and political concepts in the curriculum, our school has revised the talent training plan for engineering management based on the OBE concept. We can integrate ideological and political education into the talent training plan for engineering management, reflect the importance of ideological and political education in professional courses, and highlight the characteristics and educational highlights of ideological and political construction in engineering management courses; for this purpose, specialized basic courses and elective courses related to construction engineering regulations have been set up; in order to highlight the characteristics and highlights of ideological and political education in engineering management courses, the college has improved the teaching outline of engineering management courses and embedded ideological and political concepts in the teaching outline of engineering management courses. For example, in the teaching outlines of courses such as “Engineering Project Management”, “Construction Engineering Contract Management”, “Construction Engineering Regulations”, etc., ideological and political concepts such as national craftsmanship, honesty and trustworthiness, compliance with laws and regulations, and life first have been integrated to achieve the combination and unity of professional knowledge and skills, identity, and pride.

1.2 Optimize course teaching design to explore innovative teaching methods and means

Optimizing course teaching design is a part of educational and teaching activities. Course teaching design is the basis for teaching arrangements and plans, an important reference for evaluating course teaching, and a guiding document that reflects the teaching philosophy and ideas of the teacher. Therefore, in order to enhance students’ enthusiasm for learning, enhance the teaching effectiveness of courses, and make the teaching process innovative, it is necessary to optimize the teaching design of engineering management courses, enabling them to play a crucial role in promoting ideological and political education in the curriculum. The college takes teaching and education as the guiding principle of professional course teaching. Through teaching reforms in course teaching objectives, content, methods, means, and tools, and based on professional knowledge, ideological and political education is implemented, which resonates with the guidance of values and the transmission of professional knowledge and skills; by studying the current behavior and ideology of students majoring in engineering management, as a teaching starting point, the course teaching objectives mainly focus on emotions, ideology, behavioral norms, etc., while

also incorporating ideological and political elements to optimize the course teaching design. Then, through course evaluation and classroom reflection, the course teaching design is further optimized; at the same time, new teaching methods such as Internet plus, VR, micro classes and MOOC are embedded in the course teaching to promote the organic combination of new teaching and traditional teaching, strengthen the connection with platforms such as Learning Connect and China MOOC, enrich the ideological and political resources of the course, and achieve the integration of online ideological and political education and offline course teaching and education; innovative course teaching methods are adopted, including visiting teaching, case teaching, experiential teaching, leaderboard style teaching, and group discussions. By integrating ideological and political education such as the spirit of craftsmanship, national craftsmanship, and national honor into engineering management courses, students can perceive the mission and responsibility of engineering personnel while studying engineering management courses, and unconsciously impart knowledge and guide their thoughts, values, and behavioral norms, achieving the goal of education and teaching in engineering management courses.

1.3 Improve professional practice teaching platform to cultivate students with practical experience

In 2018, the Ministry of Education proposed the integration of ideological and political education into majors and courses at the undergraduate level. Major universities are constantly exploring relevant practices. In early 2021, Jiangxi Province proposed the second round of evaluation for undergraduate majors, which also put forward relevant requirements for ideological and political education in its evaluation indicators. It also proposed practical education, requiring universities to establish and improve internship practice bases for ideological and political education in undergraduate professional courses. In internship practice, practical skills can be improved while strengthening correct values. Based on the OBE concept, the construction of the ideological and political practice platform for engineering management courses in our college mainly considers two aspects: firstly, fully utilizing practical courses, such as engineering drawing and geometric drawing internships, building materials internships, engineering surveying internships, housing architecture internships, bidding internships, engineering project management internships, building materials internships, engineering cost internships, etc., with a focus on cultivating the spirit of hands-on operation and honesty in students; the second is to establish an internship practice platform with construction related enterprises, allowing students to participate in engineering project construction, experience the hardships and difficulties of engineering project construction, cultivate students' character of hard work and endurance in engineering project practice, cultivate students' spirit of "meticulous calculation" in cost calculation, and cultivate students' honest and trustworthy qualities in the bidding process.

2 Grasp the connotation of curriculum ideology and politics in the engineering management major to form the essence of curriculum ideology and politics

Grasping the connotation of curriculum ideology and politics in the engineering management major to form the essence of curriculum ideology and politics and construct the ideological and political soul of engineering management courses is the key to optimizing the ideological and political construction path of engineering management courses. To optimize the ideological and political construction path of courses, the educational and guiding nature of engineering management professional knowledge must be fully explored, and the ideological and political construction of courses must be actively promoted.

2.1 Provide reference for curriculum ideology and politics in engineering management courses based on National Certified Constructor's professional ethics and role in engineering projects

On February 27, 2003, the State Council issued a regulation on the cancellation of the second batch of administrative approval projects: "The qualification approval for project managers of construction enterprises shall be cancelled, replaced by National Certified Constructors, and a transitional period shall be established". National

Certified Constructors need to pass professional exams to obtain corresponding professional qualifications. As the foundation of project managers, National Certified Constructors not only need to master theoretical knowledge, but also need to understand practical engineering management operations. The most important thing is to have a high level of professional ethics, work enthusiasm, enthusiasm, and professionalism; be brave enough to take responsibility; strive to fulfill one's responsibilities, possess a spirit of innovation and development; be brave in making decisions; take responsibility and risks; honest and reliable, upright, straightforward, consistent in words and actions, and willing to work hard.

Therefore, taking the role of National Certified Constructor in professional ethics and engineering projects as a reference for curriculum ideology and politics in engineering management courses, courses on National Certified Constructor practice exams are set up in the training program for engineering management talents, and courses on National Certified Constructor practice ethics and regulations are set up in professional courses, in order to help students establish a good sense of professional ethics and conduct in school. To lay a solid ideological and political foundation for students to enter work positions, enter engineering projects, and become excellent project managers in the future.

2.2 Take outstanding figures in the history of civil engineering as role models to inspire and support curriculum ideology and politics in the engineering management major

Through the charm and role of role models, students majoring in engineering management are guided and motivated to build correct values and behavioral norms. Introducing outstanding alumni, as well as engineering professionals who have made significant contributions to the country in engineering management practice, into the engineering management professional courses can achieve ideological and political education effects that words cannot achieve through exemplary role models. When teaching about the development history of civil engineering in the course of Introduction to Civil Engineering, Zhan Tianyou explained that he independently designed and led the construction of the first railway, the Beijing-Zhangjiakou Railway, in order to eliminate obstacles from Britain, Russia, and other countries. This created an atmosphere for the Chinese people who were deeply insulted at that time, inspiring students majoring in engineering management to have a sense of mission for the times, a sense of responsibility for the country's strength, and a sense of urgency to build a strong motherland.

3 Take multiple measures to build a distinctive teaching team for professional curriculum ideology and politics

"The results of the 2018 rolling survey on the ideological and political situation of university teachers and students show that the first factor that has the greatest impact on the ideology, behavior, and growth of college students is the professional course teachers." "Curriculum ideological and political education revolves around five key links: the foundation is in the curriculum, the focus is on ideological and political education, the key is on teachers, the focus is on departments, and the effectiveness is on students." Therefore, in the reform of engineering management teaching, the role of professional course teachers should be played, and efforts should be made to build a team of "four-qualities" teachers, effectively improve the educational ability and awareness of professional teachers, and achieve the transmission of knowledge and the guidance of ideas, values, and behavioral norms in gentle weather.

3.1 Transform teachers' ideological concepts and strengthen their moral education awareness

Traditional professional course teachers often have such misconceptions in their ideological concepts, believing that professional courses only need to focus on imparting professional knowledge, while neglecting the essence of professional course education. Therefore, in order to achieve the goal of moral education in the teaching reform of engineering management courses, the first step is to change the ideological concepts of teachers. Thinking affects

behavior, and behavior determines results. Firstly, it is necessary to strengthen the learning of ideological and political theory by professional course teachers, such as studying the history of the country, the Party, and the New China. At the same time, professional course teachers should deeply understand the spiritual essence of both teaching and educating. They should be guided to lead by example, be diligent in teaching, and be content with teaching. Each professional course should play a role in cultivating morality and nurturing talents. Finally, a quantitative assessment will be conducted on the educational goals of various professional courses in engineering management. Corresponding incentive measures will be set, and corresponding rewards will be given based on the assessment results, so as to encourage teachers of engineering management courses to actively improve their educational awareness and achieve the goal of ideological and political education.

3.2 Enhance teachers' professional literacy on curriculum ideology and politics and their moral education abilities

The key to achieving the goal of curriculum ideology and politics is to enhance the ideological and political professional competence of engineering management teachers and their moral education abilities. Therefore, on the one hand, the college actively carries out demonstration courses of ideological and political education in professional courses, carries out various teaching and research activities, establishes a separate and collaborative mechanism for ideological and political education in professional courses, and forms teams among teachers from different professional courses to learn from each other, and complement each other's strengths and weaknesses with a focus on improving the ideological and political professional competence of young teachers; on the other hand, professional course teachers are encouraged to actively participate in ideological and political research projects, enhance their moral education abilities through project research, and enhance their professional competence through team cooperation. Finally, the college also makes full use of courses such as ideological and political lectures, micro group courses, dean's classroom visits, first lesson of the school year, and mutual listening, in order to timely point out and communicate with professional course teachers about their problems during teaching, thereby enhancing their professional literacy and moral education abilities.

3.3 Establish a regular discussion mechanism between professional course teachers and ideological and political course teachers to learn from each other

Professional course teachers often focus mainly on disciplinary theories and frontiers in their teaching, and pay less attention to the development of current ideological and political theories; ideological and political course teachers may lack professional knowledge, which requires the establishment of a communication mechanism between professional course teachers and ideological and political course teachers to strengthen cooperation. Firstly, the planning and adjustment of the ideological and political courses in the engineering management major are all completed with the joint participation of professional course teachers and ideological and political education teachers. Ideological and political education teachers provide theoretical support for professional course teachers and valuable suggestions for the design and planning of professional curriculum ideology and politics. Secondly, in response to the problems in curriculum ideology and politics, professional course teachers and ideological and political course teachers will regularly hold various forms of seminars and other means of communication and cooperation to ensure that the main forces of ideological and political education are interconnected and coordinated, improving the effectiveness of ideological and political education in professional courses, and achieving the goal of curriculum ideology and politics.

4 Improve the management and evaluation of ideological and political education

According to the principle of total quality management in ideological and political education, a full participation approach is adopted. The reform of ideological and political education in engineering management

major requires to strengthen the top-level design of curriculum ideology and politics, establish a complete management mechanism for professional curriculum ideology and politics, and provide institutional and financial support for ideological and political education in engineering management majors. Evaluation indicators should be embedded for the effectiveness of ideological and political education in the evaluation of engineering management curriculum reform projects, ideological and political projects, non-standard answer projects, and red culture projects. At the end of the project, the implementation effect of ideological and political education in the curriculum is also an important indicator for project completion. The weight proportion of "moral education factor" shall be appropriately increased in the teaching evaluation (student satisfaction evaluation, supervision and attendance), lecture telling contest, micro group lesson contest, teacher morality pacesetter, exemplary individual, excellent instructor and other teacher honor evaluations of engineering management courses. Thus, the top-level guarantee for the reform of ideological and political education in the engineering management major is achieved, allowing engineering management teachers to feel at ease and have confidence in doing a good job in ideological and political education in the curriculum, wholeheartedly educating students, and guiding their outlook on value, life, and world.

5 Conclusion

The reform of ideological and political education in the engineering management major based on the OBE concept is an effective combination of classroom education and practical education. It is an effective measure proposed to address the current difficulties in carrying out ideological and political education in the engineering management major curriculum, as well as the failure to fully integrate ideological and political concepts into the teaching of the engineering management major, resulting in professional teachers not paying enough attention to ideological and political education in the curriculum. At the same time, it is also a measure to cultivate applied talents who are well-rounded in morality, intelligence, and physical fitness to meet the needs of the country in the 21st century. Therefore, our school adheres to the guidance of cultivating morality and cultivating talents, integrating ideological and political education into the entire process of professional course teaching from the aspects of talent cultivation plans, teaching design, teaching methods, practical platform construction, faculty, top-level design, etc, promoting the coordination and cooperation between engineering management professional course teaching and ideological and political course teaching, and achieving comprehensive education.

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