

Construction of Practical Teaching System for Full Time Professional Master's Degree Students

Xiaoling Shi, Quanzhi He, Nana Song, Xiangling Wang

Department of Resources and Mechanical Engineering, Lyuliang University, Luliang, Shanxi, 033000, China

Abstract: The article aims to explore the construction of a practical teaching system for full-time professional master's degree students, with the aim of enhancing their practical abilities and comprehensive qualities to meet the demand for high-level applied talents in society. Through literature review, current situation analysis, and case studies, this article proposes the basic principles, framework, implementation path, and guarantee mechanism for constructing a practical teaching system. From the perspective of "professional competence" in the construction of the practical teaching system, research is conducted to enhance the professional competence of professional degree graduate students. By studying the content of the practical teaching system, a practical teaching system is constructed, with clear training objectives, enriched curriculum system, strengthened construction of practical teaching bases, strengthened practical teaching concepts and awareness, and the cultivation of high-quality applied talents, in order to provide reference and inspiration for relevant universities.

Keywords: Full Time Professional Master's Degree Students; Practical Teaching System; Construction; Principle; Route.

1. Introduction

With the rapid development of higher education in China, full-time professional master's degree education has gradually become an important way to cultivate high-level applied talents. However, some universities still have problems in graduate education, such as emphasizing theory over practice, and the disconnect between teaching content and practical needs, which leads to a lack of competitiveness among graduate students in the job market. Therefore, building a scientifically reasonable practical teaching system is of great significance for improving the practical ability, innovation ability, and comprehensive quality of full-time professional master's degree students.

(1) Related research on practical teaching system abroad

There is relatively little research on the practical teaching system abroad, and most of it is related to practical teaching. The concept of practical teaching is relatively advanced and mature, and the practical teaching process has been solidified in the training mode of many foreign universities[1-3]. Western countries, represented by the United States, focus on cultivating diversified talents that can adapt to social development. Professional degree graduate education started early and has established many professional master's degrees that are widely needed in various industries, especially in major types of majors such as energy and chemical engineering, technological innovation, and medicine that serve people's livelihoods[4]. In terms of educational philosophy, emphasis is placed on the combination of scientific research and practice. For example, Professor Terman, who served as Vice President of Stanford University, believes that universities are not ivory towers, but should closely integrate engineering with industry, and combine knowledge with socio-economic development[5]. In addition, in recent years, the UK has also realized the practical significance of closely integrating graduate education with social productivity in cultivating professional degree graduate students' professional and innovative abilities, and actively promotes the joint training of applied talents between enterprises and universities. Governments in many European

and American countries have proposed that higher education should participate in social, economic, and cultural development, and have formulated relevant laws and regulations to ensure the development of graduate vocational training and practical education[6]. Some scholars have also explored the impact of mentors' practical teaching methods on teaching effectiveness through comparative analysis, pointing out that mentors change their teaching practices, lead students out of campus to engage in community teaching practices, and promote mutual reflection between mentors and students[7].

(2) Related research on practical teaching system in China

The research on practical teaching for full-time professional degree graduate students in China's education sector mainly focuses on the current implementation status, teaching system, curriculum system, quality assurance, management mechanism, and other aspects of practical teaching[8]. Wang Fang and others analyzed the current situation of practical teaching for full-time professional degree graduate students, explored the construction ideas of teaching reform, and proposed the construction of an application-oriented talent training model that combines industry, academia, and research[9]. Yang Lijun and others applied the Quality Function Deployment (QFD) theory to the research of the quality assurance system for practical teaching in order to improve the quality of practical teaching and cultivate engineering application-oriented talents that meet social needs. Guo Yongfeng et al. conducted a questionnaire survey on the current situation of practical teaching for full-time education master's degree graduate students in 20 universities in China that cultivate full-time education master's degree graduate students. The survey found that teachers in the practical teaching system did not recognize the importance of practical teaching, and there was a lack of practical links and guarantee mechanisms. A scientific evaluation system and evaluation index system were proposed[10].

There is still relatively little research on the construction of a practical teaching system for full-time professional master's degree students, mainly focusing on the reform of the practical teaching system for engineering master's degree

students, and generally optimizing the practical teaching system in terms of structure and content. Scholars have constructed a three-stage practical training program for full-time engineering masters, which is a typical structural optimization. For full-time professional degree graduate students, currently only Zhang Yanfei and others have constructed a practical teaching system under the dual mentor system based on the coordinated development of knowledge structure, ability requirements, and quality requirements, with goals as the core, content as the focus, conditions as the guarantee, and management as the means. This practical teaching system provides a large block of elements covered by practical teaching, laying the foundation for subsequent refined research[11].

2. Theoretical Basis for the Construction of Practical Teaching System

The problems existing in the current practical teaching system. (1)Weak practical teaching links. Currently, many universities overly emphasize the imparting of theoretical knowledge while neglecting practical teaching in the process of cultivating professional degree graduate students. This leads to students lacking necessary practical experience and abilities in actual work, making it difficult for them to adapt to social needs. (2)Insufficient practical teaching resources. Practical teaching requires abundant resource support, including practical teaching bases, experimental equipment, teaching staff, etc. However, some universities have insufficient investment in practical teaching resources, which makes it difficult to effectively carry out practical teaching. (3)Improper management of practical teaching. The lack of standardized management in practical teaching is also a current problem. Some universities lack scientific management mechanisms in organizing, implementing, and evaluating practical teaching, which makes it difficult to ensure the effectiveness of practical teaching.

From the perspective of constructing a practical teaching system based on "professional competence", this study aims to enhance the vocational competence of professional degree graduate students. By studying the content of the practical teaching system, a practical teaching system is constructed to clarify training objectives, enrich the curriculum system, strengthen the construction of practical teaching bases, enhance practical teaching concepts and awareness, and cultivate high-quality applied talents.

(1) Educational Goal Positioning

The educational goal of full-time professional master's degree students should be to cultivate high-level applied talents with solid theoretical foundations, strong practical abilities, and good professional qualities. This goal positioning determines the important position of practical teaching in graduate education.

(2) Educational theory support

Modern educational theories such as constructivist learning theory and situational learning theory provide theoretical support for the construction of practical teaching systems. Constructivism emphasizes the subject status of students in the learning process and their ability to actively construct knowledge; The situational learning theory emphasizes that learning should be combined with specific situations to improve the effectiveness and practicality of learning.

3. Basic Principles for Constructing a Practical Teaching System

(1) Combining theory with practice

Practical teaching should complement theoretical teaching, deepen the understanding and application of theoretical knowledge through practice, and guide the development of practical activities through theory.

(2) Complementary resources between on campus and off campus

Fully utilize teaching resources such as on campus laboratories and training bases, while actively expanding off campus practice bases, to achieve effective integration and complementarity of on campus and off campus resources.

(3) Whole process management

Standardize and manage the entire process of practical teaching, including the development of teaching plans, implementation, and evaluation, to ensure the quality and effectiveness of practical teaching.

(4) Collaborative education

Strengthen the collaborative education mechanism among schools, enterprises, industries, and other parties, form a joint force, and jointly promote the cultivation of graduate students' practical and innovative abilities.

4. Framework for the Construction of Practical Teaching System

(1) Curriculum system construction

Basic theoretical courses: Strengthen students' professional theoretical foundation and provide support for subsequent practical courses. Professional practical courses: including experiments, practical training, project design, etc., aimed at cultivating students' practical and innovative abilities. Comprehensive practical courses, such as enterprise internships, social research, etc., enable students to comprehensively understand the current situation and development trends of the industry, and enhance their overall quality.

(2) Practical teaching mode

Case analysis: Through real or simulated cases, guide students to analyze and solve problems, and improve their practical abilities. Project driven: Using projects as a carrier, students learn knowledge and skills while completing projects, and cultivate teamwork skills. School enterprise cooperation: Establishing cooperative relationships with enterprises to jointly carry out practical teaching activities, achieve resource sharing and complementary advantages.

(3) Practical Teaching Evaluation System

Diversified evaluation subjects: including multiple evaluation subjects such as teachers, students, and enterprises, to ensure the objectivity and impartiality of evaluation results. Multi dimensional evaluation indicators: evaluate from multiple dimensions such as knowledge mastery, skill improvement, team collaboration, and innovation ability.

Combining process evaluation with outcome evaluation: focusing on both students' learning process and performance, as well as their learning outcomes and effectiveness.

5. The Implementation Path of Practical Teaching System Construction

(1) Strengthen the construction of practical teaching

resources

Improve the construction of teaching facilities such as campus laboratories and training bases, and enhance the conditions for practical teaching. Actively expand off campus practice bases and establish long-term stable cooperative relationships with enterprises.

(2) Optimize the teaching staff for practical teaching

Strengthen the training of practical teaching staff, improve their practical ability and teaching level. Hire enterprise experts and industry backbones as part-time teachers to enrich the practical teaching faculty.

(3) Innovative practical teaching methods and means

Introducing modern educational technologies such as virtual reality and simulation to enhance the fun and effectiveness of practical teaching. Reform teaching models such as flipped classroom and blended learning to stimulate students' interest and initiative in learning.

(4) Improve the management system of practical teaching

Develop a scientifically reasonable practical teaching plan and syllabus. Establish a quality monitoring and feedback mechanism for practical teaching to ensure the quality and effectiveness of practical teaching.

6. Guarantee Mechanism for the Construction of Practical Teaching System

(1) Policy support

The government and educational administrative departments should issue relevant policy documents to encourage and support universities to strengthen the construction of practical teaching systems.

(2) Funding guarantee

Universities should increase funding for the construction of practical teaching systems to ensure the smooth implementation of various practical teaching activities.

(3) Cultural Creation

Universities should create a cultural atmosphere and value orientation that values practical teaching, and guide students to establish correct practical concepts and innovative consciousness.

7. Conclusion and Prospect

Building a scientifically reasonable full-time professional master's degree practical teaching system is a systematic project that requires joint efforts from multiple parties such as the government, schools, and enterprises. By strengthening the construction of practical teaching resources, optimizing the teaching staff, innovating practical teaching methods and means, and improving the management system of practical teaching, the implementation of measures can effectively enhance the practical ability and comprehensive quality of graduate students, and cultivate more high-level application-oriented talents for society. In the future, with the continuous deepening of education reform and the continuous development of technology, the practical teaching system will be continuously improved and optimized, injecting new vitality and momentum into the development of graduate education.

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