

Research on the Construction and Management of Training Bases for Automobile-related Majors in Vocational Colleges under the Background of Double High-level Initiative

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Abstract: With the rising demand for technical and skilled talents nationwide, automobile-related majors in higher vocational colleges aim to meet industrial demands and cultivate competent professional technicians. Optimizing talent training programs has become a priority, among which practical training is indispensable. It serves as a vital platform to improve students' practical skills and professional literacy, verifies the rationality of classroom teaching, and effectively boosts students' employability to achieve vocational education goals.

Keywords: Double High-level Initiative; automobile majors; training base; construction; management

INTRODUCTION

Driven by the rapid development of the automobile industry, automotive majors in vocational colleges are facing accelerated skill updates and increasingly sophisticated technical requirements. It is urgent to innovate vocational education modes to cultivate high-caliber talents fitting industrial development needs.

1. Necessity of Constructing and Managing Automobile Major Training Bases

1.1 Compliance with National Policies

The expanding enrollment of vocational education highlights the urgency to build automobile training bases. Traditional safety management and practical training modes can no longer satisfy educational development needs. To guarantee the safety of teachers, students and teaching facilities, standardized laboratory safety management is essential.

The Ministry of Education issued and implemented the Specifications for Laboratory Safety in Institutions of Higher Education on February 8, 2023, defining laboratory management norms, safety responsibility systems, training mechanisms, access rules and hazardous chemical management standards. In July 2023, relevant documents clearly proposed to build national and regional demonstration virtual simulation training bases, striving to complete 200 national-level and 1,000 regional-level bases by 2025, so as to reform practical teaching modes for skilled talent cultivation.

1.2 Opportunities Brought by the Powerful Transportation Country Strategy

The Outline for Building a Powerful Transportation Country emphasizes the independent research and development of intelligent connected vehicles including intelligent automobiles and automatic driving systems, aiming to build a self-controlled complete industrial chain. Supported by integrated virtual-real teaching concepts, vocational education can spread positive industrial values and promote steady industrial and social development.

2. Strategies for Construction and Management of Automobile Professional Training Bases

2.1 Coordinate Safety Construction and Standardized Management

Clarify post responsibilities of all management staff, standardize safe operation norms, equipment management, vehicle use, new energy vehicle charging and teaching supplies storage. Strict rules such as no overnight fuel storage, whole-process charging monitoring and double-person safety confirmation shall be enforced. Colleges shall formulate emergency plans for fire accidents, equipment failures and personal injuries and organize regular drills to fully guarantee practical teaching safety.

2.2 Build Virtual Simulation Practical Teaching Platform

Promote the application of virtual simulation technology in vocational education, optimize the construction mode of virtual simulation training bases for new energy vehicle majors, and enrich modules including professional cognition, skill training and assessment evaluation. Relying on cloud resource sharing, the platform can meet the learning and training needs of students, enterprise employees and social learners, improve school teaching quality and social service capacity, and form a sound teaching system combining virtual simulation and offline practical training.

2.3 Establish Diversified Practical Training Modes

Colleges shall fully exploit off-campus training resources and carry out on-the-job internship programs based on school-enterprise cooperation, enabling students to experience real workplace atmosphere and workflow. Diversified cooperation modes including order-based talent training and modern apprenticeship can be adopted to build long-term stable cooperative relations.

Schools and enterprises jointly formulate talent training schemes, set internship standards and share high-quality resources. Enterprises provide practical training sites, advanced equipment and professional instructors, while colleges deliver targeted professional talents for enterprises, realizing win-win cooperation and continuously improving the standardized management system of training bases.

2.4 Improve Overall Safety Prevention System

Training bases shall formulate preventive safety management measures and conduct regular hidden danger investigation. Since automobile practical training involves mechanical operation, fuel, lubricants and electrical equipment with potential risks, safety education must be prioritized. Colleges need to improve safety management systems, strengthen safety skill training, and enhance teachers and students' safety awareness and emergency response capabilities.

2.5 Forge Training Base Culture with Craftsman Spirit

Colleges integrate craftsman spirit represented by dedication, perfection pursuit and team awareness with ideological and political education, enterprise culture education and patriotism education into practical teaching.

Through school-enterprise cooperation projects with well-known automobile enterprises, colleges cultivate students' innovative consciousness, service awareness and sense of social responsibility, realize ideological and political education in practical training, and shape excellent professional ethics among students.

2.6 Optimize Teaching Team Construction and Training Mechanism

Build comprehensive training bases integrating teaching, training, research, skill competitions and practical display. Introduce enterprise senior technicians to form structured teaching teams, deepen school-enterprise joint teacher training and curriculum development, and formulate targeted plans to improve teachers' digital teaching capabilities.

3. Conclusion

Higher vocational colleges need to continuously deepen teaching reform, strengthen school-enterprise integration, adjust talent training schemes in line with industrial technological progress, and focus on building high-quality teaching teams. The above measures can effectively cultivate high-quality skilled talents for the new energy automobile industry, and facilitate the sustainable development of automobile industry and social economy.

4. References

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