

Teaching Reform and Practice of Automobile Application and Maintenance under the “1+X” Certificate System

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Abstract: With the continuous promotion of the new curriculum education reform, vocational education has become an important part of the education field in China. In the education of secondary vocational schools, in order to help students obtain academic certificates and obtain the skills certificates used in their work, teachers often adopt the talent training mode of “1+X” certificate system. This paper takes the automobile application and maintenance specialty of secondary vocational schools as the research object, starting from the connotation and implementation steps of the “1+X” certificate system, and thinking about the significance and specific countermeasures of the integration of the two, in order to help secondary vocational schools to deeply implement the integration of industry and education and school enterprise cooperation, highlight the characteristics of vocational schools, and then improve the quality of the training of automobile operation and maintenance professionals in secondary vocational schools.

Keywords: “1+X” certificate system; Automobile application and maintenance; Integration countermeasure;

Introduction

In secondary vocational schools, the “1+X” certificate system has a wide range of applications and high application value. In this system, “1” refers to the academic certificate obtained by students after graduation, while “X” refers to the vocational skill grade certificate obtained by students while receiving education. The relationship between the two is based on “1” and supplemented by “X”, that is, on the basis of obtaining academic certificates, try to obtain job related skill level certificates as much as possible, so as to provide adequate guarantee for the subsequent career development. When developing the “1+X” certificate system, the secondary vocational automobile operation and maintenance specialty needs to balance the relationship between academic certificates and vocational skill level certificates, and integrate them in a deep way, so that they are connected with each other rather than independent of each other. To achieve this, on the one hand, the teachers of the automobile operation and maintenance specialty need to objectively recognize the characteristics of vocational education, on the other hand, they need to be familiar with and understand the specific implementation process of the pilot work of the “1+X” certificate system, so that they can better combine the automobile operation and maintenance specialty with the “1+X” certificate system, so as to cultivate more practical and versatile talents for the society.

1. The Meaning and Connotation of “1+X” Certificate System

The “1+X” certificate system is an important system for secondary vocational schools to further improve the vocational education training mode, deepen the cooperation between schools and enterprises and the integration of industry and education, and is also an important feature of vocational education as a form of education. The significance of implementing the pilot “1+X” certificate system is that it is an important measure to improve the quality of talent training, and it is also the need to accelerate the process of socialist modernization and achieve higher quality employment of secondary vocational school graduates. At the same time, it is also a challenge and opportunity given by the society to vocational education in the new era. With the acceleration of a new round of scientific and technological revolution and industrial transformation and upgrading, there is still a certain gap in the adaptability, consistency and foresight of talent education and

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training. The guidance of building vocational skill grade certificates through the socialized mechanism and speeding up the reform of talent supply structure are conducive to improving the degree of talent training and industrial demand, training compound technical talents and expanding employment and entrepreneurship skills.

With the rapid development of social economy, the demand for talents with single skills in the market has decreased greatly, and the demand for talents with multiple skills is increasing. Based on this, the “1+X” certificate system was officially launched, which began to change the process of vocational education in China. In the context of the “1+X” certificate system, secondary vocational schools need to effectively integrate vocational education with local industries, constantly improve students’ professional abilities and skills, and enable students to adapt to their posts and society in constant practice. Under this background, the education department of our country has also proposed to deepen the reform of the training mode for skilled personnel with complex skills, draw on the experience of international vocational education training to formulate corresponding measures and work plans, and take the “1+X” certificate system as a pilot work to carry out teaching in secondary vocational education. Therefore, this paper takes the teaching reform and practice of automobile application and maintenance under the “1+X” certificate system as the research object for research and analysis, aiming to find the relevant strategies for the rational use of the “1+X” certificate system, cultivate more compound talents for the society, and promote the development of China’s social economy.

The implementation of the “1+X” certificate system is a statement for the teaching reform, transformation and challenges of the automobile maintenance specialty in secondary vocational schools, and it is also the key for secondary vocational schools to open the channel for delivering compound talents to the society. In the face of new challenges and situations, secondary vocational schools should have a good grasp of the national economic policy, and conduct in-depth cooperation with relevant enterprises according to the relevant requirements and connotation of the “1+X” certificate system, so as to establish a comprehensive talent training system and open a new situation for the teaching of automobile maintenance specialty in secondary vocational schools.

2. Implementation process of “1+X” certificate pilot work

2.1 Learning and training

When conducting teacher training, secondary vocational schools need to organize relevant backbone teachers and department leaders to lead a team to observe and learn, in order to better integrate resources and improve the training effect. The person in charge of the secondary vocational school should also cooperate with other colleges and universities to have in-depth exchanges on the examination site, teachers and related equipment. Not only that, the person in charge of secondary vocational schools should also invite the teachers of the “1+X” project from other colleges and universities to come to the school to exchange and learn with their own teachers and share their experience, which is very helpful for improving the teaching level and professional ability of teachers in China. Finally, the school organized the teachers of automobile maintenance specialty to conduct communication and research within the school, divided into different working groups, and conducted in-depth research and discussion on the content of the assessment module. When training students, they should be grouped reasonably and trained according to group rotation.

2.2 Preparation before examination

Students need to hold a seminar on the assessment and certification of automotive application and maintenance professional skills, at which they will discuss in detail the assessment time, venue and process of the “1+X” certificate system and make relevant preparations, so as to ensure that the examination can be carried out smoothly.

2.3 Examination arrangement

The current examination module of the major is comprehensive analysis technology of automobile power and drive system (primary). The four specific items for students to participate in the examination are power system inspection and comprehensive maintenance, automatic transmission function inspection and maintenance, transmission and transfer function inspection and maintenance, and power and drive function inspection and maintenance. The invigilator is arranged according to the “1+X” invigilator standard, which requires four invigilators, one leader and one supervisor. The students will take the examination in the form of rotation, and all examinees will take the practical examination of four items.

3. “1+X” certificate system and integration path of automobile operation and maintenance specialty

3.1 Establish work promotion mechanism

First of all, it is to formulate policies, that is, to determine appropriate areas of reform advantage, systematically sort out the policies and measures related to the “1+X” certificate system, conduct full and special training for project leaders participating in the pilot, conduct in-depth discussions on “quality improvement”, and list the “1+X” pilot as the annual key work of the University; By sorting out the policy content, it is clear that “X” is the direction of strengthening, supplementing and expanding “1”, so as to maximize the teachers’ consensus on the reform content, and it is clear that the construction of document certificate integration mode is the core and focus of the construction of

“1+X” certificate system.

Secondly, we should establish and improve the mechanism for promoting coordinated reform. The school has established a “three type” work promotion mechanism, namely, a three-level management model of “executive level, overall planning level and decision-making level”; It is clear that “business output, school discussion, training and education guidance” is a three-stage training method. At the same time, we should establish corresponding mechanisms in the service process, such as daily supervision, process assessment and regular seminars. In terms of feedback control, it is necessary to build a dimensional demand information analysis mechanism composed of relevant enterprises, graduates, professional teachers, students and other diversified subjects. The establishment and improvement of these work promotion mechanisms can deepen the reform of teaching models and promote the progress of education in secondary vocational schools.

3.2 Further define the connotation of “1+X” certificate standard

First, it is the project guidance to promote the research and certification standards of automobile maintenance specialty. We launched and implemented a series of reform projects of “improving quality and improving quality”, and took the “1+X” pilot work as the key content of the ideological and political teaching of the curriculum, the construction of new textbooks, and the construction of golden courses. Promote the “1+X” certificate system pilot in teaching, research and scientific research, and conduct an all-round and whole process research on the current situation and improvement methods of related work.

Second, it is to build a platform to promote the formation of joint forces of scientific research in secondary vocational schools. Relying on the alliance of “three reforms”, the university has established teacher reform, experts, teaching materials and teaching databases, and formed an “X” certificate research team to promote the construction of teachers to meet the needs of work; Taking certificate integration and license standards as the starting point, carry out relevant thematic research to ensure that the “X” certificate corresponds to the training orientation of professionals and posts; By exploring new models, measures and ideas, we will accelerate the integration of curriculum standards, professional standards and “X” certificate standards.

3.3 Formulate personnel training plan for documentary integration

First, secondary vocational schools need to establish teaching standards for automobile maintenance, so as to further promote the integration of professional courses and professional skill standards in the automobile field, which is an important guarantee for the implementation of “1+X” documentary evidence integration. The secondary vocational school should be higher than the national standard, define the assessment standard, curriculum description, curriculum setting, training specifications, skill decomposition, training objectives and professional positioning, formulate the construction standard of automobile maintenance professional group, promote the integration of professional teaching standards and professional qualification standards from multiple dimensions, and further clarify the credit and class hour weights. At the same time, the school should also actively promote the establishment of the automobile maintenance teaching standard setting mechanism led by the school and participated by enterprises, and promote the effective connection and integration of professional qualification standards and employment needs. The teaching standards used in the talent training process are formulated in combination with the professional qualification level required by the automobile enterprises, which reflects the all-round connection between the professional qualification certificate “X” and the enterprise, industry and society, as well as the mutual correspondence between the professional qualification certificate and the actual job requirements.

The second aspect is to comprehensively revise the talent training plan to ensure the accurate matching of the classification of “X” certificates. Secondary vocational schools can strengthen the management of the full credit system, rely on professional teaching standards, comprehensively revise the training program for professional talents of the automobile maintenance professional group, and classify the proportion of “X” skill certificates according to the different educational systems and sources of students. Realize the process connection and integration of professional ability, quality, knowledge, general ability and leading knowledge, and effectively connect the standards of professional technical level with the professional talent training plan. According to the pilot semester, the integration mode and diversification degree of different “X” certificates for different occupations, the constraints, assessment methods and focus on knowledge and skills of “X” certificates are distinguished according to students’ basic abilities, so as to improve the integration of professional talent training programs and students’ professional ability needs.

There are some differences in the classification of skills structure between the Vocational Skills Grading Standard and the traditional curriculum system, but there is no conflict. Re divide the content of each course according to the principle of implementing a standard. The traditional curriculum system is divided according to the discipline structure: engine, chassis, electrical appliances, vehicle network technology, etc.

According to the skill certificate, the Vocational Skill Level Standard is divided into power system, chassis system, electrical system, gateway system, high-tech system and other modules. In the process of docking and integration, the certificate module is subdivided into several work tasks. In combination with the requirements of professional quality and basic knowledge, the docking training equipment is used to reasonably plan knowledge, skills and training projects, and build a new curriculum system.

The third is to reconstruct the curriculum management system and further promote the integration of “1+X” certificate standards into the professional curriculum system. Actively dismantle the knowledge, skills and literacy standards of professional skill level, accurately match and reorganize them, implant them into the existing curriculum, and incorporate them into the assessment reform. Allow the “X”

certificate to replace and replace the academic performance credits, and establish a free evaluation system to achieve the full chain of professional skill level standards and curriculum systems. For practical projects that are difficult to be included in the professional talent training plan or that really need to be strengthened in the professional skill level standard, the “X” certificate will be directly included in the creative practice class or the professional core project practice class of the professional talent training plan, and its positioning and teaching requirements in the teaching process will be clarified. At the same time, we will actively promote the reform of the mixed teaching mode, explore special “X” certificate courses and learning resources under the new situation, and meet students’ needs for “X” certificate training and certification in the stages of internship, follow-up internship and on-the-job internship.

3.4 Improve teachers’ quality of “double teachers”

At present, the automobile operation and maintenance specialty in many secondary vocational schools is short of teachers, and lacks the necessary teachers; The structure of professional titles among the existing staff is unreasonable, and the educational level is low; The school’s internal management system is not clear and many other problems. All these reasons lead to the phenomenon that the teachers in secondary vocational schools are generally older, their knowledge is aging, their knowledge structure is outdated, and their scientific research awareness is not strong. In addition, since secondary vocational schools have long attached importance to the reform of curriculum and teaching content and neglected the training and education of young teachers, some young teachers are not well qualified for management, which is not conducive to the growth of innovation and entrepreneurship teams, and it is difficult to meet the needs of modern high-tech industries for high-quality skilled workers. By improving the teacher training system and the mechanism for teachers, it will play a positive role in promoting the scientific research work of secondary vocational schools. Therefore, the following measures should be taken: First, optimize the post setting of teachers. According to the characteristics of different types of posts, scientifically determine the corresponding post responsibilities and assessment methods to promote the effective connection between posts and realize the complementary advantages of people and posts in the workplace. The second is to strengthen teachers’ professional quality. The school needs scholars and experts with academic achievements in the “1+X” certificate system to enter the school regularly to give lectures to students, so as to improve teachers’ understanding and application level of the “1+X” certificate system. In order to increase the enthusiasm of automobile operation and maintenance teachers, the school also needs to establish a salary distribution system that conforms to the professional characteristics to ensure that teachers’ income is fair, fair, reasonable and orderly. When recruiting teachers, the school can try to recruit excellent technicians from enterprises to serve as practical teachers for students, which is the basic basis for introducing and using talents, so that a group of outstanding young teachers with both ability and integrity can stand out and better serve the enterprise development and local economic construction.

3.5 Upgrade internship training conditions

To improve the training conditions, we must strengthen the in-depth cooperation between schools and enterprises. The secondary vocational school needs to organically integrate the “1+X” certificate system with the automobile maintenance professional group, expand the scale of the training site, as far as possible close to the enterprise post environment, create a real training platform, and further meet the needs of “1+X” documentary integration. At the same time, teachers can improve the teaching mode and integrate the classroom teaching content with the real projects provided by the enterprise. Establish a training base that conforms to the real enterprise production environment and has the functions of practical guidance courses, enterprise project training and skills competition.

4. conclusion

Through the analysis and summary of the above contents, we find that the “1+X” certificate system is of great significance for the automobile operation and maintenance major of secondary vocational schools. For this reason, this paper studies its deep significance and connotation, and puts forward the specific implementation path of the “1+X” certificate system for the automobile operation and maintenance specialty. From the aspects of work promotion mechanism, the connotation of the “1+X” certificate standard, talent training program, teachers’ “double teacher” quality, and training conditions, this paper puts forward the implementation program and key points, hoping to provide a reference for the training of automobile operation and maintenance professionals in secondary vocational schools.

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