Exploration and Practice of the Talent Training Model of "Diploma and Certificate Integration" under 1+X Certificate System

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Abstract

Through research and analysis of the connotation of 1+X, taking the "e-commerce data analysis" certificate as an example, this paper explores how to integrate the X certificate from a practical perspective. The vocational skill level standard has been integrated into the professional talent training plan, and the implementation of the integration of diploma and certificates has realized the innovation of the e-commerce talent training model, and has accumulated experience and provided ideas for the full implementation of the 1+X certificate system.

Keywords

Diploma and Certificate Integration; 1+X; E-commerce; Data analysis.

1. Introduction

In order to further promote the innovation and development of vocational education in the new era and deepen the reform of the training model for technical and technical talents, the "National Vocational Education Reform Implementation Plan" proposes to implement a pilot system of "academic certificate + certain vocational skill level certificates" (hereinafter referred to as 1+X certificate system); the core concept of the 1+X certificate system is "integration", that is, the degree certificate and the vocational skill level certificate are connected to each other to meet the development needs of modern vocational education, promote the reform and innovation of talent training models, and provide new directions and new opportunities for professional construction and development. Under the background of the country's implementation of the 1+X certificate system, how to effectively implement the "diploma and certificate integration" and innovative talent training model has become an important issue that vocational colleges are working hard to explore.

2. Background

With the acceleration of the national industrial transformation and upgrading, social and economic development has entered a new normal, and vocational education has also ushered in new opportunities for development. The 1+X certificate system was born under this background.

In the Internet era, new technologies, new processes, and new business models are constantly emerging, and the evolution of social division of labor has caused changes in industrial organization, professional positions, and talent specifications; a large number of traditional
professional qualification certificates have been "abandoned" or "decreased gold content". The state has canceled a large number of vocational qualification certifications recognized by the government since 2014. In April 2019, the Ministry of Education and multiple ministries jointly issued the "Regarding the implementation of the "Education Certificate + Certain Vocational Skill Level Certificates" System Pilot Program in Colleges and Universities", starting the pilot work of the 1+X certificate system, that is, adopting socialized vocational skill level recognition for skilled talents, so that the society and the market can recognize and test them. Therefore, as a vocational college for training skilled talents, implement 1+X certificate system is imperative.

School-enterprise collaborative education is the important way to cultivate high-quality technical talents. Deepening the integration of industry and education has become an inevitable development of modern vocational education. Under the "1+X" certification system, the issuance and recognition of professional skills level certificates is implemented by a third-party evaluation organization, which is a powerful enterprise in the industry and a bridge between the enterprise and the school. Therefore, the implementation of the "1+X" certificate system in vocational colleges is itself a school-enterprise depth cooperation. It is a direct manifestation of the relationship between vocational education and social economic development. It is a new direction of industry-education integration and school-enterprise cooperation. It will help innovate the talent training model of vocational colleges.

In order to adapt to changes in the economic structure and accelerate the training of various technical talents urgently needed for the country's development, the state clearly proposes that higher vocational colleges expand the enrollment of fresh high school graduates, veterans, laid-off workers, migrant workers, etc.. For different student groups, in order to achieve lenient entry and strict exit, flexible school system and high-quality employment, it is necessary to develop the corresponding curriculum system and education evaluation standards in a targeted manner. Therefore, the 1+X certificate system can more effectively target the diversified source of higher vocational students and implement effective personalized teaching and evaluation.

At present, the implementation of the 1+X certificate system in higher vocational colleges still faces many challenges, such as the unclear connection between the 1+X certificate system and the talent training plan, the incomplete integration of diploma and certificates, and the outdated teaching methods due to many issues. Therefore, vocational colleges need to have a clearer understanding of the 1+X certificate system and the connotation of "diploma and certificate integration" in order to effectively implement the reform and innovation of the talent training model.

3. Connotation of "Diploma and Certificate Integration"

In the 1+X certificate system, the so-called "1" means that after completing the courses specified in the professional talent training program, students obtain corresponding credits, and the academic certificates obtained after graduation are issued by the education administrative department; the so-called "X" is a number of professional skill level certificates, reflecting the different professional skill levels of graduates. The certificates are issued by third-party evaluation organizations. The government only undertakes standard development and supervision services. Compared with the previous professional qualification certificates, the subject who issued the X certificate, management service method, certificate concept analysis, career orientation and grade division have undergone complete changes. Therefore, the X certificate can no longer be understood as an upgraded version of the previous vocational qualification certificate, the 1+X certificate system can not be regarded as the continuation or improvement of the former "double certificate" system in vocational colleges, while it is a new system design of modern vocational education, especially the reform and innovation of the talent training model.
An effective measure to promote the implementation of the 1+X certificate system is to speed up the exchange of academic certificates and vocational skills level certificates, that is, the integration of diploma and certificates, which is its essence. During the pilot period of the 1+X certificate system, there are three main models for document financing: 1&X, 1 | X, and 1+X.

### 3.1. 1&X

The 1&X mode adds one or two courses or corresponding training to the original curriculum system. The "1" professional talent training goal is not consistent with the "X" professional skill level standard, and the "1" professional teaching and "X" certificate Training also "does its own way", which is a transitional measure adopted by vocational colleges during the pilot period of the 1+X certificate system. However, this model provides valuable experience for the future implementation of "X" certificate social training or training for students' autonomous verification, and lays the foundation for real documentary financing.

### 3.2. 1 | X

1 | X means "1" and "X" are connected, but not fully integrated, that is, based on "1", use "X" to effectively supplement, strengthen and expand "1". Though the the analysis of the professional skill level standard of the "X" certificate, we can adjust part of the teaching content in the original part of the curriculum for convergence and integration, instead of adjusting the original professional talent training program and curriculum system. Take e-commerce data analysis as an example, in the original professional curriculum system "Business Data Processing and Analysis" and "E-commerce Data Operation" integrate the knowledge and skills required by the vocational skill level certificate, and adjust the original course content of "Examination Guidance" to the content required by the X certificate, and carry out necessary supplements and enhancements. This mode can meet the needs of professional students to obtain the X certificate, and is also suitable for the future training of veterans, laid-off workers, migrant workers and other social students.

### 3.3. 1+X

1+X means "1" and "X" are completely integrated, which has gradually matured after a trial and is a true "diploma and certification integration" mode. This mode integrates the professional skill level standards into the professional talent training plan by connecting with the national professional teaching standards. Through the methods of adding and replacing courses, strengthening and supplementing the content of the courses, the goal of professional talent training is truly unified with the requirements of the "X" certificate for professional positions. The curriculum system, curriculum standards, and teaching content are fully covered the vocational skill level content, teaching implementation, learning evaluation of the X certificate, and also fully met the requirements of the X certificate teaching and learning. There is no need to set up additional X certificate training, that is, the learning requirements of "X" and "1" will be completed, which means a "1" academic certificate and a number of "X" professional skill level certificates will obtained upon graduation.

### 4. Exploring and Practicing the Talent Training Model of "Diploma and Certification Integration" in Higher Vocational E-commerce Professional

The rapid development of the digital society has caused enterprises to pay more attention to the data analysis ability of e-commerce-related positions. Under the 1+X certificate system, vocational colleges choose the "X" certificate of "e-commerce data analysis" to assimilate into "1" in order to meet the needs of enterprises. The implementation of "diploma and certificate integration" has become the direction of efforts for the reform of e-commerce professional
talent training model in many vocational colleges. The reform content mainly includes the following six aspects.

4.1. Docking Professional Positioning, Reflecting the Integration of "1" and "X" in the Top-level Design

Integrating the training and positioning of X and 1 is the prerequisite basis for "1+X" diploma and certificate integration. The vocational skill level standard of the X certificate can better reflect the knowledge, skills and literacy requirements of the relevant positions of the enterprise, and match the national professional teaching standards and the talent training program, together with third-party evaluation organizations, regional backbone enterprises, etc., which will jointly study and determine talent training goals, and reflect the integration of 1 and X in the top-level design of talent training.

4.2. Restructure the Curriculum System and Integrate "X" Vocational Skill Level Standards into "1"

Curriculum is the basic unit of talent training, and the curriculum system is the framework of professional teaching. The most critical link in the "diploma and certification integration" is the restructuring of the curriculum system, which is a key factor in achieving the goal of professional talent training. Under the background of the 1+X certificate system, the vocational skill level standards are transformed into the basis for the construction of the curriculum system, and the vocational skill level standards are used to guide the improvement of the curriculum system. Each task in the work field is compared with the corresponding teaching task. The teaching task is to benchmark one or more courses. Taking the e-commerce data analysis professional skill level standard as an example, the e-commerce professional offers "Business Data Collection and Processing", "Business Research and Analysis", "Online Store Promotion", "Business Data Analysis and Application", "Examination Guidance", "E-commerce Data Operation", "Graduation Comprehensive Practice" 7 courses, which are corresponding to one or more work tasks in the work field in the three different levels of vocational skill level standards of "X" certificate elementary, intermediate and advanced. Each course contains several work tasks, and the X vocational skill level standards are organically integrated into the entire curriculum system as shown in Figure.1.

![Figure 1. Reconstruction of the curriculum system](image)

4.3. Integrate Course Content to Realize the Integration of Work Tasks and Teaching Tasks

The optimization and integration of the course content is the focus of "diploma and certificate integration". Following the basic principle that "X" is the supplement, strengthening and expansion of "1". The core knowledge points, skill points and literacy requirements of the
elementary, intermediate, and advanced requirements of the "X" certificate are aligned with the basic skills, comprehensive skills, and professional quality, to realize the integration and docking of work tasks in the work field and course teaching tasks, and the integration and docking of skill training projects and real enterprise projects, and determine the course teaching content by revising the curriculum standards.

4.4. Joint and Import Enterprise Resources, and Innovate Classroom Teaching

1+X certificate system is a new direction of industry-education integration. Its classroom teaching cannot be separated from the in-depth participation of enterprises. The Joint and importing of enterprise resources can make classroom teaching more effective and practical. Using the teachers, technology, platform and other related resources provided by enterprises reasonably, integrating the industry's latest demand for talents into professional teaching materials and courses, truly realize zero-distance docking with enterprises. The so-called "joint" means that students can join the enterprise through the way of ordering by uniting local backbone enterprises, and carry out modern apprenticeship training, so that students can directly obtain the latest professional skills of industry enterprises, and ensure that the education of students is not disconnected from the market; the so-called "importing" is to import high-quality corporate resources, that is, to introduce corporate teams into the classroom, implement real project teaching, jointly develop and design curriculum practical projects, and give full play to the practical advantages of real enterprise data. At the same time, make full use of online and offline resources to improve the quality of classroom teaching and enhance students' learning initiative.

4.5. Based on Incentives, Adopt Process Evaluation Methods

Assessment and evaluation are based on motivation. We can urge students to better master knowledge and improve their abilities by adopting a procedural assessment and evaluation method, rather than distinguishing students from good or bad; assessment and evaluation run through the entire learning process, insisting on equal emphasis on knowledge, skills, and literacy assessment, highlighting the principle of professional job ability improvement, not only assessing the level of professional knowledge, but also evaluating students' professional skills and comprehensive ability to solve practical problems. At the same time, paying attention to students' innovative thinking, communication and expression, teamwork, craftsmanship, social responsibility and other qualities. In course teaching, "certificate on behalf of the test" is adopted, and the X-certificate assessment result is used as an important part of the relevant course scores, or directly replaces the relevant course scores. Taking e-commerce data analysis as an example, the intermediate certificate can replace the "Business Data Analysis and Application" course, and the advanced certificates can replace the "E-commerce Data Operation" course.

In addition, try to establish and improve the credit bank system, so that the relevant vocational skill level certificates can be converted into credits, and the course credits in "1" can be mutually recognized and exchanged, so as to realize the integration of "1" and "X".

4.6. Use the "1+X" Certificate Training and Assessment System to Promote Professional Social Services

Make full use of the "1+X" certificate training and assessment system to provide relevant enterprises with technical consulting services, enterprise employee training and continuing education services, cultivate technical talents urgently needed by the social economy, improve professional social service capabilities, and effectively carry out the integration of production and education, school-enterprise cooperation to further promote the reform and innovation of vocational education.
5. Conclusion

"Diploma and Certificate Integration" is the only way to implement the 1+X certificate system. Vocational colleges should select X certificates that are more suitable for current professional development needs based on the analysis of the demand for talents in regional economic development. Taking the “e-commerce data analysis” certificate as an example, through the docking with the national professional teaching standards, the professional skill level standards of the X certificate are organically integrated into the professional talent training plan. Exploring and implement the 1+X certificate integration to talent training model, accumulate experience and provide ideas for the full implementation of the 1+X certificate system.

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REFERENCES


