

Research on the Construction of Electronic Information Professional Groups in Higher Vocational Colleges Serving the Upgrading of Regional Information Industry

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Abstract: Through studying the current situation of the construction of electronic information professional groups in higher vocational colleges serving the upgrading of regional information industry, this paper proposes establishing inter-school professional groups from a horizontal perspective, making appropriate adjustments on the professional groups, and actively adapting to the industrial development. On this basis, the integration of industry-education and in-depth cooperation between schools and enterprises can be realized, and the path of realizing “three-sharing, three-integration” professional group service industry upgrading is innovatively proposed.

Keywords: Professional groups; Industrial upgrading; Industry-education integration

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1. Introduction

Many foreign researchers mainly focus on the vocational education talent training mode and the influence of professionals on the industrial development throughout the economic development. There is also some research on the construction of professional groups, which mainly includes the type of profession, the direction of development of the profession, industrial training, and personal training^[1]. However, there are some deficiencies in the study of adapting professional groups to regional industrial upgrading.

Chinese scholars have made a targeted study on the characteristics and influencing factors of the evolution and upgrading of the industrial structure, including a historical analysis of the development and evolution of China’s overall industrial structure and the development and adjustment measures based on local regional industrial structure, and so on^[2].

In the context of economic transformation and development, more and more studies have shown that the construction of vocational education professional groups is closely related to regional industrial upgrading, and vocational education has become a barometer of local economic development^[3]. The setting of vocational education majors, the adjustment of the course structures, the development of professional knowledge, and the duration of personnel training greatly affect the speed and scale of regional industrial upgrading. The structural adjustment, transformation and upgrading of regional industries also affect and drive the construction of professional groups of vocational education. The positive interaction and coordinated development will promote the upgrading and development of regional economy^[4].

2. Construction of electronic information professional groups in higher vocational colleges serves the upgrading of regional information industry in the aspect of “three-sharing and three-integration”

2.1. Inter-school dynamic adjustment and cooperation mechanism for electronic information professional groups should be established

The information industry of China is rapidly developing, which enhances the core competitiveness of the information industry, strengthens innovation and integrated development, and increases the room for industrial development. Higher vocational education deepens the industry-education integration^[5], actively adapts to the needs of industrial upgrading and development and builds professional groups on the industrial and demand chains. The dynamic adjustment and cooperation of inter-school professional groups are a process of actively serving regional industrial clusters and actively adapting to them. In the process of dynamic adjustment, professional groups follow the principle of being oriented to information industry clusters and vocational professions. The construction of professional groups supplies talents for regional industrial upgrading and promotes regional industrial upgrading and development.

The electronic information professional groups of vocational colleges have different emphasis and development strengths. In order to maximize the advantage of every profession in the professional groups and their technical and R&D strengths, an inter-school professional group can be formed, and a cooperation mechanism for the professional groups can be established. In this way, the strong advantages of the electronic information professional groups of vocational colleges can be mutually beneficial. Besides, the needs of regional information industry upgrading and development can be met, and the stable development of disadvantaged majors can be driven, and better connect with the industrial chain.

2.2. Deepening the industry-education integration, studying the “three-sharing” mechanism, and improving the quality of talent training

New requirements for talent quality, knowledge, and ability are inevitable in the process of regional information industry upgrading. Therefore, we should strengthen the coordination of vocational education with industrial clusters, adhere to the combination of working and learning, promote the industry-education integration and the cooperation between schools and enterprises, so as to realize “the sharing of resources, skills, knowledge.” To promote the effective connection of education, talent, industry, and innovation is the path for the electronic information professional groups of higher vocational colleges to adapt to the upgrading of regional information industry.

The industry-education integration should be deepened; the advanced resources, skills, and knowledge of enterprises should be utilized; training bases should be built in vocational colleges; technical service platforms should be created to enable enterprises to participate in the industry education integration, and cultivate talents needed for the upgrading of information industry.

2.3. Helping teachers grow, establishing the “three-integration” mechanism, and enhancing the capacity of industrial upgrading in serving regions.

With professional groups serving regional economy, the teaching staff is important for the construction of professional groups in vocational colleges, and also as a support for the development of talent training in vocational colleges. Therefore, it is important to strengthen the professional groups to serve the regional industry to establish a “skilled, full-time and part-time” vocational college teacher team, reform the recruitment and evaluation mechanism of scientific research talents, and stimulate the enthusiasm of these talents.

The mechanism of “talent-scientific research-cultural integration” between schools and enterprises should be applied. On the platform of the Industrial College, enterprise experts can enter the school, teachers can participate in the project development of enterprises, accept enterprise management, collaborate with

the enterprise research team, and carry out technology upgrading and product research and development for information industry related enterprises. At the same time, in combination with the service projects for enterprises, scientific and technological research achievements and declare scientific research projects to promote the transformation of technological achievements. The research achievements and application cases can then be incorporated into teaching materials and project resources of vocational education to achieve “three -integration.”

3. Promoting the deep integration of resources of schools and enterprises through the “three-sharing and three-integration” mechanism

3.1. Deepening the industry education-integration through resource, skill, and knowledge sharing, and making enterprises “move.”

“Industry” in industry-education integration refers to the production and operation of enterprises and industries, and “education” refers to the educational activities in vocational colleges. The production and operation of enterprises and industries are integrated into vocational education to cultivate talents for specific posts in the industry. Industrial colleges are high-level organizations that collaborates with enterprises while providing vocational education, and deeply participates in the whole process of training vocational talents. Therefore, industrial colleges are the epitome of industry-education integration. Under this framework, enterprises will be encouraged to participate in teaching activities deeply, and close cooperation is carried out in the form of “resource, skill, and knowledge sharing,” such as talent training mode and program, curriculum system, practical training, so as to improve the students’ professional skills and literacy, and to cultivate outstanding talents for industrial upgrading.

3.2. Strengthening the integration of talents, scientific research, and culture to make the specialty “strong.”

A “school-enterprise” teaching team should be created through a two-way staff recruitment, with a two-way flow of school-enterprise personnel, to achieve “professional pair, co-construction of courses; collaboration of specialties, co-administration of colleges; professional interaction, co-education of talents,” and the establishment of “combination of professionals, mutual integration, professional excellence” of the dual teaching team, and achieve the integration of talents.

Rely on the industrial college to build a research and development platform for the information industry. Besides, the management and interest mechanisms should be defined; a research and development team can be set up, where the enterprise research team will work closely with the university research team. Moreover, a management system and operation mechanism for school-enterprise collaboration and industry-education can be established. A “group warming” mechanism can be established to form a school-enterprise research team with good scientific research level and operation and achieve integration of scientific research.

The integration of enterprise culture in campuses can cultivate the culture of vocational colleges, so that students can not only experience the essence of corporate culture such as teamwork, project management, market expansion, technology research and development, but their confidence in learning their majors and the sense of urgency to improve their professional quality and ethics can also be enhanced. In this way, high-quality skilled personnel needed for regional information industry upgrading can be cultivated ^[6].

3.3. Build a dynamic adjustment and cooperation mechanism between professional groups across schools, and achieving a mutually beneficial relationship

Professional groups across schools that complement each other can be created. The formation of these

group should be based on to the direction of “region-based, connecting the industry, serving the locals,” by relying on the information industry chain, closely connecting the job requirements, and achieving an effective connection between the industrial, innovation and education chains. A system of professional groups serving regional industrial upgrading that integrates the functions of personnel training, scientific research, technological innovation, enterprise service, and student entrepreneurship can then be established.

4. Innovating the mode of industry-education integration providing effective solutions for upgrading the service industry of higher vocational specialty groups.

4.1. Solution for the integration of professional groups and regional industries

Vocational colleges should collaborate with enterprises based on the “three sharing and three integration” mechanism to achieve close integration of vocational college professional groups into the industrial chain, forming a healthy talent chain. The combination of rich knowledge and technological capabilities of professional teachers and engineers can support, guide, and serve the upgrading of regional industries, and lead the development of regional industries.

4.2. Solving the problem of insufficient information industry platforms by supporting the construction of professional groups and serving the region

After nearly a decade of reform, the construction of electronic information professional groups in vocational colleges has formed many unique professional group construction models. Through the effective integration of industry and education, the training model, and the service of the regional information industry, an effective platform support has been formed, solving many bottleneck problems and meeting the talent needs of the information industry upgrading. Through the deep collaboration between schools and enterprises, the content and form of collaborative training are diversified, achieving true transformation of professional groups, and effectively connecting the education chain with the industrial and innovation chains.

4.3. Effectively improving the ability of professional group construction in serving the regional information industry

Collaboration with enterprises, especially leading companies in the industry to establish a research and development platform in the form of “three sharing and three integration” enabled teachers to build professional skills in electronic information and helped engineers to build teaching skills. Therefore, the transformation of engineers into school lecturers and lecturers into engineers could be achieved, and a “school-enterprise” mixed research service team could be created, which solved the problems of difficulty in improving the “double-qualifications” of school teachers and the incapability of upgrading the information industry.

5. Conclusions

Through the reform, the ability of the electronic information professional groups of vocational colleges to serve the upgrading needs of the regional information industry has been improved, and technical professionals and skilled talents have been trained to be more in line with the needs of enterprises. The establishment of professional groups has become a reform practice of the integration of industry-education, school and enterprise sports personnel, and apprenticeship in China. It is of practical significance to further promote the research on school-enterprise collaboration, industry-education integration, and combination of work and learning. In this way, the ability of professional groups of vocational colleges in China to serve regional industrial upgrading can be improved, and the research on vocational type education can be enriched. Besides, school-enterprise collaboration, industry-education, and the combination of working and learning in vocational education can be improved.

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Disclosure statement

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