

School-Enterprise Collaboration Oriented Model of Skilled Worker Training in Mekong Delta Region, Vietnam

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Abstract School-enterprise collaboration to technical and vocational training is an important solution to develop and improve the quality of human resources. Basing on the analysis of school-enterprise collaboration factors in training process, and labors characteristics in Mekong Delta, this article proposes the model of skilled worker training. Accordingly, enterprises join in the training process of vocational schools under the supportive from local policies. In training process, the vocational schools focus on teaching students in professional ethic, labor discipline and industrial-style, basic technical knowledge and professional skills. After that, the enterprises support students to practice in technical capacity improvement, professional ethic and industrial-style development. If the school-enterprise co-operation in technical and vocational training bases on the supporting of policies from the state authorities, it will ensure the interests for students, vocational schools and enterprises. Thus, this collaboration also contributes to develop the human resources in Mekong Delta, Vietnam to match with the current context.

Keywords: human resources training, school-enterprise collaboration, skilled workers, vocational schools

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1. Introduction

The Mekong Delta region has abundant human resources, especially young labor resources, with health, dynamism and creativity advantages. With the multi-sectorial trend and the diversification of the manufacturing sector, the southwestern provinces created jobs for local workers. In addition, the vocational management and training is increasingly interested, especially high quality vocational training. The network of vocational training institutions is growing in both size and quality, meeting the diverse learning needs of workers and in line with the socio-economic development planning of each locality. However, in the current context of Vietnam in general, the Mekong Delta region in particular, the quality of labor force meeting the social needs is very limited, directly affecting the labor productivity of the region. One of the main reasons is that vocational training has not been closely linked with the actual production of enterprises in the area; the training program is not flexible compared to the diversity of the manufacturing sector of society. Therefore, the training program of the schools is necessarily associated with the demand of labor use of enterprises and must be flexible in accordance with the variety of industries in production, to create labor products with the best ability to meet the needs of the business.

The School-enterprise collaboration to vocational training has long been practiced in Germany and German-speaking countries such as Austria and Switzerland through the Dual Training Model [1]. This model has confirmed its superiority, because learners are trained the labor discipline, industrial style and professional capacity in accordance with business needs. In addition to the dual training model, the enterprise-based training is demonstrated in a number of other training models, including a flexible Norwegian training model. Accordingly, the vocational training institutions of this country can flexibly apply the time of training according to one of the following formula: formula 2 + 2, in which two years studying at the school and two years of vocational training at the factory; formula 1 + 3, one year at the school and three years at the factory; or formula 0 + 4, four-year vocational training at the factory [2]. Vocational training in Norway is based on the close cooperation between the training institution and related subjects such as enterprises, trade unions and state management agencies in charge of vocational training. Thus, enterprise-based training has been successfully applied in many countries around the world in various models, depending on the characteristics of each country, and confirmed efficiency in training, also the ability to meet the demand for human resources for production. In Vietnam, some recent studies have also confirmed the importance of enterprise-based training in the human resource training. In 2015, assessing the need for sustainable

cooperation between schools and enterprises in human resource training, Nguyen Dinh Luan stated: One of the reasons for the inadequacies in the school-enterprise cooperation is because 'the state has no specific policy to develop and maintain the school-enterprise cooperation' [3]. Accordingly, the author recommends: It is important to renovate and strengthen the state management in building strong school-enterprise cooperation. When studying the training of human resources at the vocational level with the orientation of linking schools and enterprises, Bui Van Hong (2015) stated: "The training of human resources for society is not only the responsibility of the training institutions, but also the responsibility of the employers themselves and the state management agencies". From that, the author has proposed a model of human resource training based on school-enterprise collaboration, including the relationship between schools and enterprises in the training process and the support of the regulator, or state policy [4]. In 2017, Bui Van Hong and his colleagues used this model in training Module 'Train driving techniques' and linking vocational training for elementary level between vocational training institutions. Practical results show the feasibility and effectiveness of the model [5,6].

From the analysis above, the school-enterprise collaboration to vocational training is one of the important orientations for worker training according to social needs. Especially for the Mekong Delta region, school-enterprise collaboration oriented vocational training is still a new issue in research, as well as in practical implementation.

With the objective of proposing a school-enterprise collaboration oriented model of skilled worker training in the Mekong Delta region, the article presents the relationship between the factors of the school and enterprise cooperation, labor characteristics in the Mekong Delta region, the structure of skilled worker training model, and the training process.

2. Content

2.1. Research Methodolog

Researching and analyzing the structure of the school-enterprise collaboration to vocational training to find the relationship between the vocational school, the enterprise and the state management agency on laborers; collecting and analyzing data on human resources and percentage of trained workers, and analyzing characteristics of labor characteristics in the Mekong Delta region, Vietnam. Based on the results of analysis of the relationship between vocational school and the enterprise on vocational training, and local labor characteristics, the article proposes the model, process and skilled worker training curriculum suitable to the current context of the Mekong Delta.

2.2. Concept of School-enterprise Collaboration to Vocational Training

- Relationships mean *close, interconnected relationships* [[7]; p. 1361].

- Cooperation means *working together, helping, supporting each other in a job, a field for the common purpose* [[7]; p. 848].

- "Human resources" refers to "*the strength, skills, talents and knowledge of those directly involved or potentially involved in the production of products or the provision of useful services*" [8].

- "Human resource training" is "*the process of equipping employees with the professional knowledge and skills to formulate attitudes, beliefs and ethical behaviors so that they can undertake certain tasks*" [[9]; p. 28].

In actual production, the majority of enterprises recruiting workers with vocational training always set very specific requirements, such as the labor discipline, professional ethics and industrial style; Having good health, knowledge and practicing capability corresponding to the training degree; Being capable of creating and adapting to the working environment in the context of integration, ensuring the increase of labor productivity and quality.

From the definitions and analysis above, the school-enterprise collaboration to vocational training can be understood as *the combination between the vocational school and enterprise to carry out the equipping of specialized knowledge and skills, formation of attitudes, beliefs and ethical behaviors for learners, so that they are able to take up jobs and get jobs at enterprises after completion of training courses* [10,11].

2.3. The Relationship of Key Factors in the School-enterprise Collaboration

The key components of the relationship between schools and enterprises to vocational training, including: *vocational schools, enterprises, and state management agency on laborers* [4]. The relationship between these components is illustrated in Figure 1.

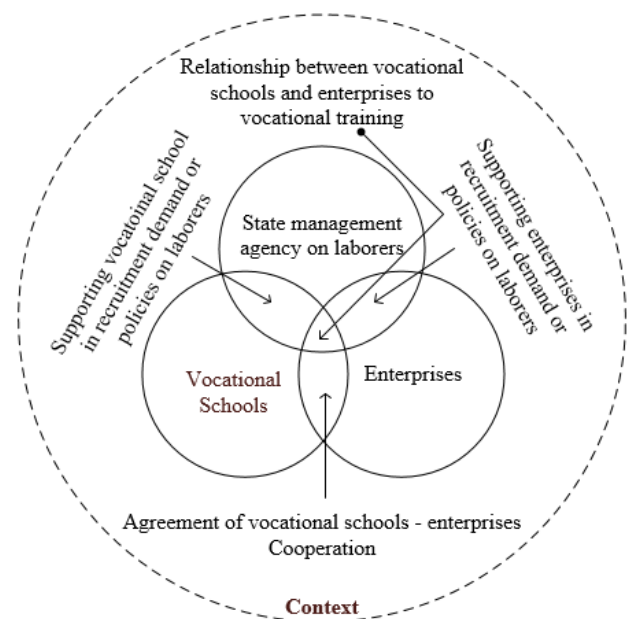


Figure 1. Components of the relationship between schools and enterprises [4]

In which:

- Vocational schools are vocational education institutions with the function of training human resources for enterprises.

- Enterprises are production and business units with the function of employing trained laborers according to their demands and production characteristics.

- The state management agency on laborers is the bridge between the schools and enterprises and laborers. This agency has the function of developing a policy mechanism based on state law to protect workers, support the schools in training and bind enterprises to participate in the training of human resources with the schools, as well as pay training fees when using labor without joining the training process, and at the same time, stipulate the working period of workers with the enterprises.

In the relationship between the components illustrated in [Figure 3](#):

- The relationship between the school and the enterprise is made through comprehensive cooperation agreements. Thereby, enterprises supply recruitment demand and requirements, participate in the process of developing training programs, in charge of training the capacity of advanced practice for learners. The school recruits students, develops training programs tailored to the needs of the enterprise, and organizes the training of basic knowledge, skills for professional practice, and educates professional ethics, labor discipline and industrial style for learners.

- The relationship between the school and the state management agency on laborers is carried out through mechanisms and policies in conformity with the law. Schools receive additional training and education through this agency, and at the same time, provide trained human resources to the enterprises. State management agencies on laborers shall have the duty to protect the rights and benefits of laborers and training institutions for enterprises employing personnel without joining the training process.

- The relationship between state management agencies on laborers and enterprises is also implemented through mechanisms and policies in line with the law. The enterprise provides recruitment needs and requirements to state management agencies and, at the same time, is allowed to recruit employees through this organization. State management agencies shall develop mechanisms to bind enterprises to pay fees when recruiting workers without joining the training process and at the same time tie working time for enterprises to laborers engaged by enterprises.

Comment:

From the analysis above, the intersection of the three components in the model is the relationship between the school and the enterprise in training. Therefore, the school-enterprise collaboration oriented human resources training must be based on equal cooperation between schools and enterprises and support on mechanisms and policies of state management agencies.

2.4. Labor Characteristics in the Mekong Delta Region

The Mekong Delta region is located in the South West of Vietnam with a total area of about 39,000 km² and a

population of about 18,000,000 by 2015. This is a region with abundant human resources, especially young labor. In 2013, the vocational training in the South West region is going behind others of the country. Accordingly, the workforce of this region is 10,322,900 people, accounting for 19.4% of the labor force in the country. Of these, the labor force is 77.2%, the lowest in the six economic regions. The rate of trained workers in the country in 2013 is 17.9%. At the same time, the rate for the South West region was only 10.4%, the lowest in the country, with about 5% of the university degree and above and 5.4% of the vocational college, intermediate level, and primary level [12]. According to the Mekong Delta Research and Development Institute, the labor quality in the South West region is the lowest in the whole country. Current laborers in the region generally do not meet the requirements for development in the new period. The number of professional workers has only met some traditional professions, using medium technology; most of the laborers do not meet the requirements of using labor in enterprises and production institutions using new technologies [13].

From the above analysis, the labor quality in the South West region is low, directly affecting labor productivity. The training is not suitable with the actual production; Training programs lack flexibility compared to the diversity of the manufacturing sectors in society. Meanwhile, the demand of labor for production varies, depending on the sectors and characteristics of each enterprise. Enterprise-based training in these areas has many limitations, as follows:

- The design and development of the training program does not have the participation of enterprises in the design and feedback. Most of the current training programs are still based on the direction of the General Department of Vocational Education.

- Training institutions are not really active in building cooperation with enterprises in training and no cooperation specific plans and content yet.

- The enterprise has not directly participated in the training with the school. Currently, only a few schools send students to enterprises for vocational orientation and graduate internship. There is no specific cooperation in training and resource sharing between schools and enterprises yet.

- There is no good support from the state management agencies in promoting the cooperation between schools and enterprises in training activities as well as creating equality in this relationship.

2.5. Skilled Worker Training Model in the Mekong Delta Region

In order to achieve the socio-economic development goal of 2020 and 2030 vision in the Mekong Delta region, high quality human resource and vocational training will be paid attention. Through policies on attracting and using human resources, it is expected that in the coming time, this region will have high demand for trained human resources. Therefore, the enterprise-based training model of high quality human resources is a suitable solution for the task of training high quality human resources to meet the socio-economic development goal of 2020 and 2030 vision in the South West region.

2.5.1. The Structure of Skilled Worker Training Model

From the relationship between the components of school-enterprise collaboration to vocational training as shown in Figure 1 [4], and the results of analysis of labor characteristics in the South West region, the model of skilled worker training includes the relationship between the components as described in Figure 2.

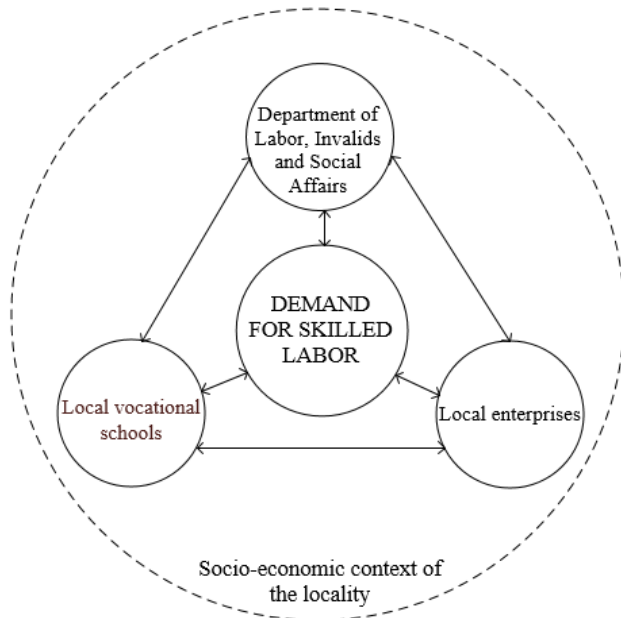


Figure 2. Model of skilled worker training in The Mekong Delta region

In which:

- The demand for skilled labor of the locality is the demand for trained labor resources in each field or production line of the locality. This demand is forecasted based on the socio-economic development orientation of the locality, the demand for human resource development of the enterprises and the survey data from the schools.

- The local Department of Labor, Invalids and Social Affairs shall be the agency performing the function of advising and assisting the provincial People's Committee in performing the State management over labor, employment, job training and vocational institutions of the locality. The provincial Department of Labor Invalids and Social Affairs is also the bridge between the school and the enterprise in training labor for the local.

- Local vocational training institutions are colleges, vocational schools and vocational education centers. Vocational education institutions are units that train skilled labor sources for localities and enterprises in the locality.

- Local enterprises: Domestic and foreign production and business institutions operating in the provinces of the region. Enterprises are units directly using trained products from vocational education institutions.

With the socio-economic characteristics and labor resources in the South West region as analyzed in section {2.3}, the establishment of cooperative relations between schools and enterprises in vocational training as shown in Figure 2 is necessary and appropriate. In which:

- Based on the socio-economic development orientation of the region and the forecast of human resource needs, the local Department of Labor, Invalids and Social Affairs

shall provide the school with the demand for labor training volume, qualification of each production sector. As the state management agency, the Department of Labor, Invalids and Social Affairs promulgates or advises provincial People's Committees to issue appropriate policies for the training and employment of laborers after training for the school and enterprise, to create equality in the relationship between the school and the enterprise and promote this relationship sustainable development.

- In the equality between schools and enterprises, in order to carry out training tasks according to the needs of local and enterprise recruitment, vocational education institutions shall take the initiative in establishing cooperative relations with enterprises, invite enterprises to participate in building programs, organizing training, sharing resources and supporting learners. On the enterprise side, in order to recruit qualified employees in line with the recruitment needs of each job position, establishing a cooperative relationship with the school is an important task in delivering personnel development. Enterprises provide the school with the demand for recruitment in both quantity and professional competence according to each job position and share the contents of cooperation with the school in training such as training programs, organizing training, resource sharing, support for students in the study and recruitment process after graduation. In the training, the school focuses on training the students on the professional ethics, industrial style, labor love; basic professional knowledge and skills. Enterprises support learners to improve their professional capacities and develop their industrial style. The cooperative relationship between the school and the enterprise is established voluntarily, co-developed and based on policies promulgated by state management agencies.

2.5.2. Training Process

Derived from the relationship between the components in the model illustrated in Figure 2 and the equality of the cooperative relationship, the vocational training process is based on the cooperation between the school and the enterprise illustrated in Figure 3 [6], where:

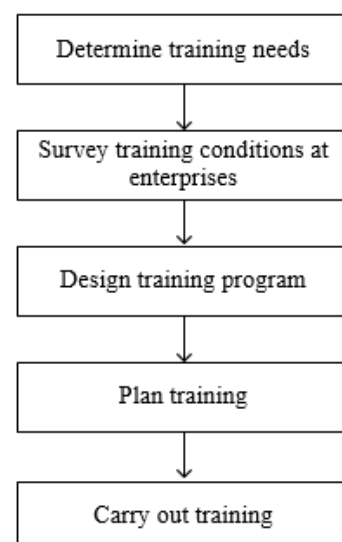


Figure 3. Primary and short-term training process [6]

Step 1: Determine training needs

- This is the process of gathering and analyzing information to clarify the training needs that should help to achieve the objectives of the enterprise. The training need determines how training is done. Training programs are selected on the basis of harmonizing the desires of the individuals with the objectives of the partners, in which the business performance is given as the decisive factor.

Step 2: Survey training conditions at enterprises

- The school assigns teachers with professional knowledge and experience on vocational training to directly survey enterprises; to survey information on the labor demand of enterprises; to agree on objectives, outcome standards, and training requirements, both in terms of number and professional capacity by job position, on the form of training cooperation.

- The results of the survey were calculated by the school's specialized department, drafting the terms of cooperation for the school and the enterprise on jointly training agreement.

Step 3: Design the enterprise-based training program

- Plan the development of the training program on the basis of analyzing the training needs and conditions for organization of training at the enterprise; Design the necessary curriculum framework and content for the training.

- The content of training can be flexible according to the needs of the learners, but still ensure the minimum credit requirements of the training program. The training program clearly defines the modules studying at the school and the modules studying at the business units. Accordingly, at school the learners are equipped with the basic knowledge and professional skills; practice professional ethics and industrial style. At the enterprise, the learners are able to practice professional competence development; development of industrial style, professional ethics and love of labor.

Step 4: Design a training plan

The purpose of the joint training is to promote cooperation between schools and enterprises in training, to improve the professional capacity of employees, meet the recruitment needs of enterprises. Therefore, the training plan agreed between the two sides in the cooperation agreement, including: the school's lesson plan, resource sharing and financial responsibility, such as:

- Assign teachers and technical staff to teach;
- Teaching equipment and tools;

- Time and place of training;
- Subjects and number of the subjects to be trained;
- Forms of training;
- Cost of training course.

Step 5: Carry out training

- *Subjects to be trained:* Learners with vocational training needs are recruited in accordance with the conditions of the training program.

- *Teachers:* Teachers of vocational education institutions and technical staff at the enterprise. Teachers participating in theoretical and practical teaching must meet the following professional requirements:

+ Having professional qualifications and pedagogical skills suitable to the training program;

+ Having knowledge of the subject and the content of the unit assigned.

+ Having good knowledge of production practices, experience in different working environments.

+ Proficiency in job skills;

+ Mastering occupational safety and hygiene techniques;

- *Organize training:* follow the plan for the contents studying at the school and at the enterprise. The organizational style and teaching methods selected by the teacher are consistent with the characteristics of the content, learner needs and teaching conditions.

- *Examination of study results:* Examine the learners' ability at the end of the course and the training program to assess the level of satisfaction of teaching objectives of learners

2.5.3. Structure of Skilled Worker Training Program at Intermediate Level

The program offers 70 credits for the entire course and is held in 3 semesters. The structure of vocational program is as follows (Table 1).

3. Conclusion

In the context of the increasing demand for trained labor in the Mekong Delta region, that the training has not met the social demand, that the learners have not really paid attention to the education levels in the education system, the orientation of training human resources based on the cooperation between schools and enterprises is considered as one of solutions suitable both theoretical and practical.

Table 1. Structure of skilled worker training program at intermediate level

No.	Course Name / Module	Number of credits	Study time (hours)			
			Total	Theory	Practice	Test
Contents studying at school						
1	Modules of general knowledge, and soft skills development	18	390	207	170	13
2	Modules of basic knowledge and skills.	28	690	238	400	52
Contents studying at enterprise						
3	Modules of professional competence development.	20	1095	15	1070	10
Optional contents (<i>learners may choose to study at the school or at the enterprise</i>)		4	120	30	85	5
Total		70	2295	490	1725	80

The school-enterprise collaboration oriented skilled worker training model is reflected in the relationship between the schools and enterprises in the training cooperation of laborers. This cooperation is based on the establishment of a comprehensive partnership between the two sides and support from government policy to create a fair and sustainable cooperation between schools and enterprises in training. At the same time, the training program must be designed flexibly, and the teaching equipment is invested at the basic and sufficient level, with the establishment of the state management agencies on labor.

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