Journal of Asian Vocational Education and Training
Vol. 9, pp.40-51, 2016

ISSN 2005-0550

Case Study on the Implementation of "School-Enterprise-Farm Cooperation" Model in Rural China

Li Yujing*
Faculty of Education, Northeast Normal University, China

Yu Zhijing
Vocational and Technical Education Academy
Jilin Teachers' Institute of Engineering and Technology, China

**Corresponding author: ChinaJournalVTE@126.com*

ABSTRACT

As a large agricultural country, China is developing its rural vocational education and training. The development of rural areas is focusing on building competent human resources. In order to produce skilled human resources, vocational education and training is vital. Taking Jilin Industrial and Trade School in Jilin province as a case study, this article analyzed the implementation of its School-Enterprise-Farm Cooperation model in the school. The research found that the implementation of rural vocational education faced with several challenges. Nevertheless, the support of the enterprise and the local government is found to be the main determinant to the success of the School-Enterprise-Farm Cooperation model in the Jilin Industrial and Trade School.

Keywords: Rural vocational education, agriculture, case study, school-enterprise-farm cooperation, China

INTRODUCTION

China is a large agricultural country. Without agricultural modernization, the prosperity and stabilization in rural areas in China will be at stake. In 2003-2016, the Central Committee of the Communist Party of China has successively issued specific emphasis on the "three rural issues", namely, agriculture, rural development, and farmers in the course of national modernization. Hence, without farmers' modernization, it is difficult to develop agriculture sector in rural areas in China. China's National Medium and Long-Term Education Reform and Development Plan (2010 - 2020) issued in 2010 clearly stated the emphasis on the development of vocational education and training in the rural areas. The Ministry of Education, combining with other nine ministries and commissions including the Ministry of Agriculture and Ministry of Finance issued statement on Accelerating the Development of Vocational Education in Rural Area in 2011 to enhance the quality of rural development and its human resources. This new historical development proposed by the central government to improve vocational education and training in the rural areas is the strategic height of overall planning of the rural social and economic development. In 2014, six ministries and commissions including the Ministry of Education jointly issued the "Modern Vocational Education System Construction Plan (2014-2020)" which emphasized the development of modern agricultural education and to propel farmers' continuing education project to produce new type of farmers. Creating new type of farmers by accelerating agricultural modernization via rural vocational education has become the core theme of the plan. As such, rural vocational education is getting the attention of experts and scholars to conduct research in this sector. Previously, some researchers have embarked on studies to provide certain theoretical basis and practical guidance for the development of rural vocational education in China.

The purpose of this article is to report about the development of vocational education and training in rural agriculture sector in China. The first aspect is about the development of agricultural economy in China by utilizing advanced production technology to diversify agriculture products. To achieve this, the government has planned to organize and implement vocational training for new type of farmers; enhance modern cultivation methods; and to establish certification and support system for the new type of farmers (Sheng, 2015). The second aspect is about the enhancement of the quality of the farmers. Based on human capital theory, the increment of the quality of the rural farmers will bring them more employment opportunities and economic revenues via modern vocational training. The purpose of producing new type of farmers through rural vocational education is to promote the overall quality and agricultural production efficiency of the labor resources in rural areas (Luo, 2008).

The third aspect is about the obstacles to produce new type of farmers. Compared with western advanced countries, China has lagged behind because it has lower quality of farmers, wide gap in urban-rural dual structure, and slow development of rural vocational education (Zhang, 2013). The fourth aspect is about the new methods to produce new type of farmers. Some researchers indicated that with the acceleration of agricultural industrialization in China, the need for a holistic and balanced development of basic education, vocational education and adult education will be more critical (Gao & Wang, 2014). According to Zhao (2009), to enhance the quality of vocational education and training in the rural areas, a strong regional cooperation is needed. The desired outcome is the new type of farmers who are well-educated, technology literate, civilized, disciplined and law-abiding citizens.

The fifth aspect is about the talent development of rural farmers. With regard to educate new type of occupational farmers, different researchers have proposed varied models and suggestions from different perspectives. For example, Zhou (2007) suggested that the issue of new type of farmers should be discussed from a new perspective, and new farmers should not be treated as "ploughing and weeding" as being practice in the traditional farming. To nurture the existing farmers to become new type of farmers, the rural farmers need to be transformed into new type of farmers in modern organization. Zhao (2009) asserted that to cultivate new type of occupational farmers, relevant education and training should be provided to them. New agriculture methods should also be exposed to them.

According to Yin (2009), to produce new type occupational farmers, the role of agricultural cooperative organizations and agricultural associations should be optimized. There are several suggestions to enhance the efforts to educate and produce new type of farmers in rural China, the relevant authority should: (a) make the farmers engage in modern agriculture, (b) implement guidelines of industry re-feeding agriculture with due diligence, (c) increase agricultural products price appropriately, (d) prepare preferential policy in favor of the training of modern occupational farmers in the rural areas, (e) deepen reform of rural collective property system and land operation system, and (f) invest in capital and technology. Xia (2014) believes that to nurture new type of occupational farmers, the vocational school administrators should improve the quality of vocational education and the farmer's lifelong education system. Also, the local government should set up farmer public welfare training system to produce more modern farmers.

PROBLEM STATEMENT

In general, there is weak relationship between rural vocational education and training with industry. Hence the agro-technology used in vocational schools are outdated and not up-to-date. Another main problem is the aging farmers in the rural China. In addition, the weakness of rural vocational education and training from different perspectives, which provided strong foundation for further research. The findings of these research could be used to develop rural vocational education and training and to produce skilled farmers. Furthermore, there is a lack of an effective model of partnership of school-enterprise cooperation for rural China. In terms of enterprises participation, lack of interest in the part of industry to assist in the training of agriculture apprentices is also a significant challenge. Poor practicality and low occupational farmer education and other problems existed in the rural areas have exacerbated the Chinese human resource development (HRD) problem. Moreover, farmer's quality and professionalization has not been reported. Under this background, the problem of aging of

rural laborers is serious. Therefore, how to effectively educate farmers is an important question to be asked and need to be answered by the stakeholders. Nevertheless, the strength of the Jilin Industrial and Trade School lies in its agriculture-related enterprises and the local government is actively extended its assistance to the district.

THE CONCEPTUAL FRAMEWORK

In this study, the community engagement model of vocational schools and enterprises is used as the underpinning theoretical framework. This model suggests that in order to develop vocational education, a partnership with community-based enterprises is critical. Local government also plays an important role in the training of the farmers. Tang (2015) asserts that rural vocational education is essential to produce modern farmers in the rural areas. This case study was designed to examine the implementation of school-enterprise-farm cooperation in rural China. The aims of vocational education reform in rural areas are to enhance "agriculture, science and education" domains and to cultivate new talents. With the supports from local government and industry, the improvement of rural vocational education to produce new type of farmers is viable. However, Wang (2012) held the view that producing new type of farmers is a complex and arduous task, which requires a systematic planning and management with coordination of relevant departments; cooperation from local enterprises; and support from local government.

The conceptual framework in this study (see Figure 1) consists of several stakeholders such as local government, vocational schools, enterprises and farmers. Motivational factors are pertinent in this framework where collaboration or cooperation can only occur if all parties are motivated to participate. In other words, cooperation of vocational schools and other stakeholders is formed to achieve the common objectives of shared vision, benefits-sharing, resources-sharing, and talent development. In sum, school-enterprise-farm cooperation model is appropriate to be used as a conceptual framework in this study.

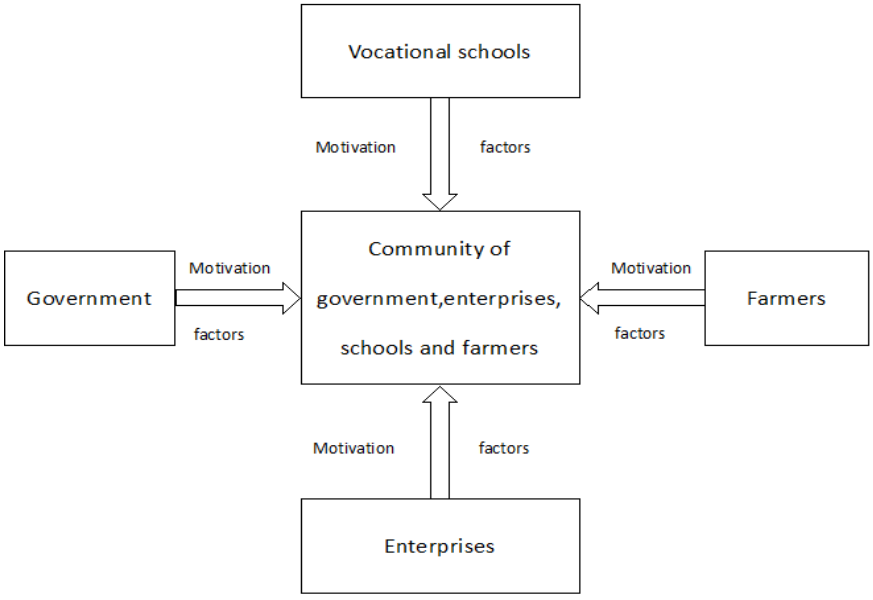

Figure 1: The conceptual framework

CASE STUDY

Northeast Tiger Pharmaceutical Co. Ltd. ─ a famous, large local Chinese medicine enterprise has signed an agreement with Jilin Industrial and Trade School in 2010. According to the agreement, vocational schools or teaching centers are to be established in the towns or townships where the Northeast Tiger Pharmaceutical Co. Ltd. is located, so as to supply talents and materials to the enterprise for its medicinal production. Under the support of the local township governments, they established three branch schools in Huangsongdian town (in Jiaohe Municipality), Sandaohu town (in Jingyu County) and Hongshi town (in Dunhua Municipality) respectively in 2010, and enrolled altogether more than 1,100 students. The cooperative model is known as "school-enterprise-farm cooperative education". One year after the implementation of the cooperative education, the result showed that schools, enterprises and local government have had high enthusiasm in the cooperative education, and the farmers were eager to participate therein, which demonstrate good momentum, and at the same time, some positive trends also arose from the cooperation.

The school

Jilin Industrial and Trade School is located at the center of Jilin city of Jilin Province, around which the Songhua River flows. It is a typical middle-sized urban vocational school, whose precursor was the No. 6 Jilin Middle School established in 1956. From the beginning of 1980s, the school began to run vocational education. For the time being, it has had more than 3,800 students, engaged mainly in those specialties including Chinese medicine making, automotive maintenance and repair, tools making, welding, electronic technologies, computer application, e-commerce, and garment making. Chinese medicine making, automotive maintenance and repair and electronic technology are the three major specialties at the municipal level, and the Chinese medicine making is a top priority in Jilin city. In 2000, the trade school, on the basis of its Chinese medicine making specialty, started "order-based education" in cooperation with Jilin-based Northeast Tiger Pharmaceutical Co. Ltd. Since then it has trained more than 600 students in Chinese medicine making and marketing and supplied them to the company. Through this cooperation, tacit recognition and acceptance was formed between the school and the company ─ this serves as a good foundation for cooperative education.

The enterprise

Northeast Tiger Pharmaceutical Co. Ltd. was established in 1998 and was listed on Hong Kong Growth Enterprise Market in 2002. It is a comprehensive company that integrates development, production and marketing of Chinese medicines. It is among the best 10 Chinese medicine companies in China. It is also a hi-tech company specializing in pharmaceutical production. So far, it has had seven lines of formula, more than 100 varieties of products, where the "Northeast Tiger" has won the title of provincial famous brand for several times ─ it is rated as highly competitive company in the pharmaceutical market in China. To meet the needs of the steadily increasing production capacity according to the brand development strategy, medicinal herbs growing bases have been built in Jiaohe county, Jingyu county and Dunhua municipality where the climate and geographical conditions are quite suitable to grow northern medicinal herbs. The total area of the farms has exceeded 2000 hectares, and the farm's modern greenhouses have exceeded 3000 m^2 and the sheds exceeded 3000 m^2.

The township

Huangsongdian town is located in Jiaohe municipality where Jiaohe municipality is located in eastern Jilin province at the west-side foot of the Changbai mountain. The township situated in cold high-altitude mountain area. Huangsongdian town is located 50 km east of downtown Jiaohe, has 12 administrative villages, with 623 km^2 of land area and 91% of forest coverage rate. The town has 4,860 households with 15,000 people. It is a nationally known home of edible mushrooms and a major town of black fungus. In the town, more than 95% of the peasant households are engaged in production, processing and sales of edible fungus, more than 90% of the farmers' income come from this industry. In 2010, the total fiscal revenue was 8.317 million Yuan, and per capita annual income was 10,000 Yuan. Another town is Sandaohu which located in Jingyu county. Jingyu county is located in southeastern Jilin province at the west-foot of the Changbai mountain; also belonging in cold high-altitude mountainous area. It has four streets, 17 administrative villages, 32 natural villages,

14,000 population, including 2,776 peasant households, 8,051 agricultural population. Its arable land is 23,000 hectares, forest area is 33,400 hectares. Its feature industry is growing of medicinal herbs, shed-cultured vegetables, blueberries, raspberries, as well as raising of animals and husbandry. In 2010, the town's fiscal revenue was 7.5 million Yuan and per farmer income was 3,880 Yuan.

Hongshi town of Dunhua municipality is located in eastern Jilin province in the mountainous area east of the Changbai mountain. It is a county-level Korean autonomous municipality. Hongshi town is located in southwestern Dunhua municipality with 187 km^2 of land, 12 administrative villages, 19 natural villages. It is an ethical town, with 2,758 households, more than 10,000 population, 3,645 hectares of arable land, including 345 hectares of dry farmland. Its traditional crop farming is the dominating industry, paddy rice growing is its primary agricultural activity. Growing variety of fungus and vegetables is also widely cultivated here. The packaged edible fungus has reached seven million packets with medicinal herb growing areas have reached 200 hectares. In 2010, the town's aggregate economic income was 143.36 million Yuan, per peasant income was 7,900 Yuan.

METHODS

This case study was designed to explore the implementation of school-enterprise-farm cooperation and local government participating in countryside-oriented vocational training. There are four main target populations in the research: the staff of the enterprises, the staff of the vocational schools, the staff of local government and farmers. In 2014, the researchers have made several field studies at the schools, the cooperated enterprises, the school's branches established in towns. During the field studies, they have made interviews and investigation of the teachers and managers of the schools, the staff and managers of the cooperated enterprises, the leaders of the townships as well as the agriculture students. The instruments consist of structured, semi-structured and individual interviews, questionnaires and on-site observation.

RESULTS AND DISCUSSION

Motivation to participate in "School-Enterprise-Farm" cooperation

The campus area of Jilin Industrial and Trade School is 14,000 m^2, with a floor area of 18,000 m^2. It is an average-sized school. In recent years, the school has achieved a good teaching quality and a good reputation, and attracted many students. It enrolled more than 1,000 students every year. It has now more than 3,800 students at school; its per student campus area is less than 8 m^2, per student floor area is less than 10 m^2, much lower than the national standard. It is located in busy street areas and there is no space for extension of the school. How to increase the school area, give play to the school's educating capacity, and maintain the school's social influence is an imperative question for school development. To establish school-based on professionalism and to strengthen the school based on quality, and to revitalize the school based on feature is an important philosophy raised by the school. Along with the changing in student source structure and the popularization of education, vocational schools face increasing stress, from both internal and external. So, the school hopes to, through "school-enterprise-farm cooperative education" in herbal medicine ─ to improve the specialty organization; to enhance this specialty's advantage and social influence; to solve the limited-size problem; and to seize a advantage point in new education mode to realize a breakthrough in the school development.

Motivation from enterprise

Mr. Wang, the general manager of the Northeast Tiger Pharmaceutical Co. Ltd., who is responsible for the company production and human resource development said Chinese medicine making is known as the most optimistic industry in 21st century. So far, more than 170 large companies and more than 40 research institutes are engaged in natural medicine development, the competition being very fierce. This industry has a requirement on the quality of raw materials, so all enterprises pay high regard to their raw material assurance system. In recent years, Northeast Tiger worked hard on this fate-deciding strategy by building a batch of medicinal herb growing bases in the Changbai mountain

areas. With these bases, the local farmers got educated and trained, and human resource support was supplied to the enterprises, and the enterprise-farmer relationship are strengthened and expanded. The responsible person of the enterprise said, the shizandra berry, black fungus, blue berry, raspberry and more are as important health-care edible source of food. More specialized growers should be trained to have advanced growing techniques, fine varieties should be developed for building healthcare materials bases, and cooperation with enterprises should be strengthened to facilitate the re-arrangement of product structure, so as to realize sustainable development.

The general Manager Mr. Wang of the company said, "building a century-old Northeast Tiger" is the company's brand development goal. In former years, the company has built its brand image on the strength of some good products, whereas further development requires that the products should contain more cultural elements and human-oriented elements, the products should be oriented to the human and their livelihood, thus, to build the enterprises' human-based cultural image. In this aspect, the enterprise believe that it is the best way to participate in education development, and that it is more significant to train and educate the local farmers as is necessary, to popularize the enterprise's technologies and managerial models, to spread the enterprise's managerial philosophy, to train production and managerial personnel for the enterprise, and to maintain the company's lasting influence in the production base. The questionnaire surveys indicated that 49% students answered that their major purpose of study is to "learn technologies to get rich". Interviews also testifies this results, (see Table 1). 16% of the students responded that their major purpose is to "work for enterprise". The Northeast Tiger is an influential enterprise in the locality. It has good working environment, good wages, good employee benefits, thus it appeals to some young students. For the company has order with the school for its students and will employ a batch of excellent students from the school, so some children hope to work for Northeast Tiger through this channel.

The national policies on assisting secondary vocational schools and on exempting fees for peasant students also have marked appeal. Questionnaire surveys showed that 14.6% of the students entered the school mainly because they "need not to spend any money". And interviews reflected that relatively less well-off students would choose to study for this reason. About one-tenth (10.4%) of the students responded that they studied there mainly for they wanted to finish senior middle school and obtain a diploma there, most of which were girls fresh graduate from junior middle school. The Northeast Tiger and the school often offer training in medicinal herb growing bases. Their lessons are practical and useful and, therefore, are very popular among the farmers. Hearing that the teachers are from enterprise, the local farmers would be interested to attend the class. About one-tenth (8.3%) of the respondents of the questionnaire survey choose to study mainly because the teachers' lessons are easily understood.

Table 1: Motivation of the agricultural specialty students of Jilin Industrial and Trade School

Items \ Gender	Age group	Above 40		36-39		31-35		26-30		21-25		16-20		Total
		male	female	male	female	male	female	male	female	male	female	male	female	
Master technology for getting rich	quantity	2	2	4	3	7	5	8	8	4	3		1	47
	proportion	4.2%		7.3%		12.5%		16.7%		7.3%		1%		49.0%
Work for enterprise	quantity					3	2	3	2	3	1	2		16
	proportion					5.2%		5.2%		4.2%		2.1%		16.7%
Obtain learning assistance	quantity			2	1	3	1	3	3		1			14
	proportion			3.1%		4.2%		6.3%		1%				14.6%
Finish senior middle school education	quantity									2	1	3	4	10
	proportion									3.1%		7.3%		10.4%
Teachers ' lessons easily understood	quantity	2		2		2		2						8
	proportion	2.1%		2.1%		2.1%		2.1%						8.3%
Other reasons	quantity					1								1
	proportion					1%								1%
Total		6		12		24		29		15		10		96
		6.3%		12.5%		25%		30.2%		15.6%		10.4%		100%

"School-Enterprise-Farm" cooperation

The school and the enterprise will sign an order-like agreement according to which the enterprise will choose about 200 graduates from the school jointly run by the school and the enterprise. The enterprise's responsibilities are to provide technological teachers, planting bases for practical and practice guidance, as well as scholarships for excellent students. The school and enterprise jointly formulate training programs, compile textbooks, prepare examination standards and administer examination. The school's responsibilities are to apply for assistance and fee exemption for students according to related national regulations, organize and manage nationally specified and non-technological teaching and learning and offer textbooks, and apply for and issue diplomas for the graduates. The school and township government also signed joint-running agreement. The township government's responsibilities are to annonnce enrollment publicity, mobilize school-age rural children to go to the school. The school and township government should jointly discuss about making teaching plan, and jointly organize and manage teaching.

The enterprise and farmers have signed herb growing agreement, according to which the enterprise is to be responsible for giving technological guidance for growing, care-taking, picking, etc. The enterprise, township government and villagers committee have signed agreement on construction of planting base, according to which the township government and villagers' committee should give assistance for the enterprise to conduct training-related activities. The branches of the school should be built in the medicinal herb and edible fungus growing bases. The branches of school are to be run jointly by the school, enterprise and government. Students are enrolled from the peasant households who have signed agreement with the enterprise and from the growers' households in the enterprise's planting bases. The enrolled students are mainly boys and girls aged between 15~35 with junior middle school education and above as shown in Table 2.

Table 2: The age group of agricultural specialty students of Jilin Industrial and Trade School

Age group / Campus	Above 40		36-39		31-35		26-30		21-25		16-20		Total
	student quantity	proportion	student quantity	proportion	student quantity	proportion	student quantity	proportion	student quantity	proportion	student quantity	proportion	
Jingyu	10	1.60%	93	15.42%	169	28.03%	144	23.88%	155	25.60%	33	5.47%	603
Dunhua	8	2.55%	15	4.6%	63	19.43%	107	32.89%	94	28.83%	38	11.76%	326
Jiaohe	7	3.10%	58	25.66%	48	21.24%	61	26.99%	43	19.03%	9	3.98%	226
Total	25	2.16%	166	14.37%	280	24.24%	312	27.02%	292	25.28%	80	6.93%	1155

Theoretical lessons

The theoretical lessons are given at the branches of school, mainly in the slack farming seasons. The "major lessons" (cultural lessons and fundamental lessons) are given at the township conference room. The "minor lessons" (specialty lessons) are given at the middle and primary schools of the township. The teaching is organized and managed jointly by the school and township government. The school is to dispatch teachers for the cultural lessons. The enterprise is to dispatch teachers for the (fundamental) specialty lessons. The hands-on or field practice is scheduled for busy farming seasons. The students go to the farm to practice at the enterprise's planting bases or at their own home, totally of their own accord. The enterprise is to dispatch technicians as guiding teachers to offer on-site assistance to the students. The school and the enterprise are jointly responsible for organization and management of the program.

Learning schedules

The school stipulates that all branch schools should apply 3-year education system. The system features 1,792 periods, including 224 periods of cultural lessons, 288 periods of fundamental lessons, 1,280 specialty lessons, 540 periods of theoretical lessons and 1,252 periods of practice lessons. The school shall strictly ensure the learning periods are completed. Those who have failed to complete their learning periods are not allowed in the graduation examination. A students union is to be created through democratic election by the students, so as to realize autonomy by the students. The union is responsible for reflecting the students' requirements and opinions, communicating for and between the teaching and learning sides. The township's CPCC is to establish a temporary party branch at the school to give play to the party members' exemplary and leading role, to give support to the students union's work, and to coordinate the relationship between the teaching side and learning side. The school and township government are to, respectively, dispatch specialized personnel to administer management and service for the class.

Alternate class and field work

The teaching and learning are scheduled in the manner of "doing fieldwork in busy farming seasons and class-work in slack farming-seasons". Under this system, the students will, in slack farming seasons, go to the township's classroom to take cultural and specialty theoretical lessons, where "full-time" system is practiced. There are attendance management, class-work, examination, cultural and sports activities. In the busy farming seasons, the students will go to the enterprise's planting bases or their own home to study while doing field work, where there are guiding teachers to offer guidance for any questions raised by the students. The teachers can give lecture at the planting base or at the students' domestic fungus shed on growing medicinal herbs and edible fungus, thus the teachers can teach and demonstrate at the site and the students could watch and practice at the same time. Thus, to measure the effectiveness of learning and practice, the examination is focused on theoretical and practical skills.

One major and minors

The contents of the specialty courses should focus on the major varieties of herbal plant grown in the locality. For example, the branch school in Huangsongdian offers lessons mainly on growing of black fungus; the branch school in Sandaohu provides lectures mainly on growing of blueberries; the branch school in Hongshi offers course mainly on shizandra berry. At those branch schools, the teachers' lectures consist of theory and practical components. The specialty teaching contents should feature one major field, as well as other related practical subjects. For example, when black fungus growing technologies are taught as a main course, other related technologies as for growing ginseng, glossy ganoderma, gastrodia, northern gentian, blueberries and schizandra berries could also be taught. Special products marketing, information technology, public relation etiquette and other courses related to planting technologies are also offered as options for the students. The survey also indicated that most students satisfied with their study. The interviews also revealed that most interviewees gave good evaluation of the teaching and learning (see Table 3).

Table 3: The learning effects of agricultural specialty students of the Jilin Industrial and Trade School

Items	Age group	Above 40	36-39	31-35	26-30	21-25	16-20	Total
Great achievements	quantity	3	5	11	16	10	4	49
	proportion	3.1%	5.2%	11.5%	16.7%	10.4%	4.2%	51.0%
Relative great achievements	quantity	2	5	8	10	3	3	31
	proportion	2.1%	5.2%	8.3%	10.4%	3.2%	3.2%	32.3%
General	quantity	1	2	4	2	1	2	12
	proportion	1	2.1%	4.2%	2.1%	1%	2.1%	12.5%
No achievements	quantity			1	1	1	1	4
	proportion			1%	1%	1%	1%	4.2%
Total		6	12	24	29	15	10	96
		6.3%	12.5%	25%	30.2%	15.6%	10.4%	100%

The enterprise's response

Northeast Tiger's general manager Mr. Wang said, the enterprise hopes to achieve three kinds of results through this collaboration: first, to produce a batch of frontline production and management force for the enterprise; second, to produce a batch of local peasant workers who are experienced and loyal to the enterprise; and third, to attract a batch of (potential) specialized peasant trainees to consolidate and expand the enterprise's farming bases. These results are being achieved. As far as learning results have shown, the farmers have learned the enterprise's products, technologies, management and cultures. Some trainees have clearly stated they are willing to work at the farm bases, and some have signed contract with the enterprise. This is a good beginning for the enterprise.

The CPC Jingyu County branch secretary Wang Bing said, it is Sandaohu Town's construction objective to form an agricultural industrial pattern featuring "one village with one special product" and "many villages with one special product". Hence, the township government has made a governmental work plan in 2010 for the Jilin Industrial and Trade School to train 600 students. Now, more than 600 students are actively studying in the Trade School. The township party branch assigned a deputy township head to act as the school's deputy principal to cooperate with the school in talent training. The school headmaster Chen Mo said, more than 400 students enrolled at the beginning of the spring. The farmers are not only required to study at the branch schools, they also sent their children to the farm base schools to study other specialties. This year, more than 20 local junior middle school students enrolled at the school.

Challenges of the "School-Enterprise-Farm" cooperation

The local government's support to vocational schools is critical. However, the local government has widely varying understandings of vocational education. So in some localities, vocational education is easy to be implemented as compared to other localities. Therefore, it is still necessary to correct the understanding of vocational education and training to the grass-root government, especial their leaders. So far, the farmers at the three branch schools, the oldest one is 40, the youngest one is 16, the age difference is quite large. Similar to age, the students' educational level also varies widely: some with senior high school qualification, others with primary school qualification, which poses difficulty to the teaching and management. In teaching, the biggest problem is with the cultural and fundamental theoretical courses, where the teachers can only lecture on some simple knowledge, and not very complex. No unified standards can be applied in the examination.

The national policies on offering assistance to and exempting fees for agriculture-related courses

are attractive to farmers in order to accelerate the rural-oriented vocational education, which may also reduce the school's and the enterprise's burden. However, in recent years, various misconducts occurred, and excessively strict standards were practiced in policy application, for example, the participants above 25 are not entitled to assistance and fee exemption. So, it is critical to find a flexible management model, which would assist the farmers' education in future. Compared with a powerful, high-quality herbal medicine making specialty in industry, the school's software and hardware are poor and inadequate and both have a fairly long way to be at par with the industry. As far as the school's software is concerned, the problem lies with the competency of the teachers. There are few teachers who are competent in both teaching and technology and serve as a bridge between the school and the enterprise. It is necessary to have a batch of "dual-qualification" teachers and their number should increase eventually. As far as the school's hardware is concerned, the biggest problem lies with the training bases. For the time being, the school is using the enterprise's production base, which makes it difficult to standardize the teaching. The school hopes to establish a standardized teaching base under the support of the government.

CONCLUSION

The school-enterprise-farm model in this case study features collaborative efforts by multiple entities. Each entity has unique role rather than subordinate to the others. Each entity has its own pursuit of interest. For example, the enterprise hopes to obtain better human resources to consolidate its competitiveness; the township government hopes to enhance the local industrial production capacity to enhance the economic agility of the town; the school hopes to have better specialties to increase the social influence and thus be able to enroll more students. The cooperation among the entities with different focus could be bind by common interest. As far as this case is concerned, each entity is not only shared common interest but each has developed *esprit de corps* toward other entities. That is the biggest driving force for the cooperation to move forward. Hence, the schools, enterprises and the local government have cooperated well in training the apprentices to produce new type of farmers.

This case study indicates that the farmers were receptive toward the training provided by the tripartite cooperation – school, enterprise and farm. However, the farmers' needs and interests should be identified earlier. The rural farmers also have diversified pursuits of interests just like in their counterpart in urban areas. In this context, it is necessary to discover the farmers' interests and to respect their will and to meet their expectation. Hence, the cooperation among the schools, enterprises and farmers should proceed to fulfil its goals. The finding in this case study reveals that an enterprise has the most important role. First, the enterprise is powerful in guiding the industrial production; second, the enterprise has a profound understanding of technologies; and third, the enterprise is highly capable in integrating resources. With these capabilities, enterprises could assume a dominating role in the collaborative efforts. In addition, the schools and the enterprises have signed agreements to specify their respective responsibilities and rights, whereby the enterprises' role is institutionalized to avoid one-off strategy. By letting the enterprises to play a dominating role, it could spearhead in innovative endeavors in terms of producing creative goods, services and products. The vocational schools are focusing on skills training. The vocational schools in this case were running smoothly because of the government policies to assist vocational education and to exempt fees for agriculture-related courses. In practice, these policies would have a significant influence on school's initiatives. The stakeholders appreciate the assistance and fee-exemption policy as they are benefitting the people. In the interviews, several township government leaders said, if the national assistance and fee-exemption policies continue, then the rural farmer education condition would be better. It gives the following enlightenments: national assistance and fee-exemption policies provide basic assurance for rural vocational education. Good policies should be implemented well before they can be really people-benefiting policies.

Findings also indicate that, in this case study, the farmers were satisfied with the education and training they received as evidenced by their high attendance rate. Without good teaching quality, the farmers would dropout. The school has three ways to assure teaching quality: First, engaging good teachers. The enterprise-engaged teachers are familiar with the industry, the technology, the locality and the farmers. Hence, their lectures are closely related to the actual circumstances and therefore are

easily understood by the farmers. Second, the school has organized the training systematically and carefully. There were lesson plans for teaching, requirements for lessons, and rules on the number of teaching periods. Farmers said the teaching is "something regular". Third, the service is in place. For those who cannot understand the lesson, the school will dispatch teachers to offer individual coach to the farmers. For those who cannot do or cannot do well, the school will dispatch teachers to the home to offer hands-on teaching. It is worth noting that the farmers' recognition has nothing to do with the written examination results. Their recognition is based on a good production of fungus and blueberries. If the lecturers can make the students master the technologies and create profits, it is great to the students and the schools. A program that can make the farmers reap their labor is an effective vocational training.

This case study also shows that the rural farmers who came to training have wide variation in age, knowledge, and purposes; thus, they require varied teaching methods. Hence, it is a significant challenge to the teaching personnel. Although restricted by various conditions, the teachers have found out viable solutions, they implement the balance between standardization and flexibility; and a harmony between strictness and convenience. The rural vocational education should be pertinent and convenient so that the training program could incorporate the cooperative spirit and flexibility. Flexibility is always the core of the cooperation. The teaching model of alternating is based on farming seasons. Next, is the importance of the school's initiatives. Without the school's initiatives, the cooperation would lose its core, and thus turn out to be a failure. The school's initiatives are manifested mainly in school planning, organizing and coordinating, executing, and evaluating. The initiatives are a manifestation of school's sense of responsibility. In this case, either the school, or the principal, or the teachers are enthusiastic about the vocational training and its products. In the interviews, we saw the teachers at the branch schools working hard without any complaint. When talking about the training success, the farmers displayed a heartfelt happiness and a sense of fulfillment ─ very moving, indeed. It is the result of effective cooperation of the schools, enterprises and farmers. To achieve this, a great cooperation, dedication, enthusiasm, and a high-quality team is necessary.

REFERENCES

Gao, J. & Wang, J.J. (2014). Research on the training of new professional farmers and development of rural vocational education. *Chinese Vocational and Technical Education*, (12), 65-69.

Luo, Q.W. (2008). Research on the development of rural vocational education under the perspective of new farmer cultivation. *Anhui Agricultural Science*, (14), 6098-6100.

Medium and long-term national planning outline for education reform and development (2010—2020). The Ministry of Education of China (2010).

Sheng, Z.Q. (2015). New type agricultural modernization with Chinese characteristics and development strategies of rural vocational education. *Chinese Vocational and Technical Education,* (24), 40-46.

Tang, Z.B. & Shi, W.P. (2011). Enhancing transfer level of rural labor force: The function, restriction and counter measures. *Vocational Education Forum*, (13), 4-7.

Wang, H. (2011). Study on the development of rural vocational education under modern agricultural trends. *Vocational and Technical Education*, 32(5), 57-60.

Wang, X.H. (2012). Analysis on management of new professional farmers. *Education,* (4), 179-180.

Xia, J.X. (2014). Training new professional farmers by development modern vocational education. *Chinese Vocational and Technical Education*, (21):260-263.

Xu, C.F. (2006). *Prospect for the development of vocational education in new countryside*. Beijing: Educational Science Press.

Yin, Y. (2009). Discussion on the construction of professional farmer training model. *Guangdong Agricultural Science*, (10), 239-242.

Zhang, Z.Z. (2013). New rural vocational education development model for training new professional farmers. *Vocational Education Forum*, (19), 37-41.

Zhao, P.C. (2010). *Study on the interaction between rural vocational education and rural economic development.* Beijing: People's Press.

Zhao, Q.S. (2009). Analysis on approach for training professional farmers. *Journal of Socialist Theory Guide,* (3), 56-59.

Zhou, Y.T. (2007). Discussion on agricultural labor division and new type farmer cultivation. *Agricultural Economy*, (2), 14-17.