

International experiences in TVET training as a catalyst for cooperation in training – Insights from TVET Vietnam

Abstract

Shortages in recruiting skilled workers have made many Foreign Direct Investment companies (FDI) in Vietnam engage with training at the workplace. Training on the job has become a highly effective solution in TVET Vietnam. It has, however, been considered an informal learning model concerning Vietnam TVET law, applied mostly in the logistics and engineering branches. Besides efforts from industry, TVET Vietnam has also received support from partner countries via foreign agencies such as JICA from Japan, KOICA from South Korea, GIZ (German development agency), and DIHK from Germany, which research on human resources and the impact of labour force quality on industry's skills demand. This is in order to give advice concerning TVET policies or provide solutions for bridging gaps between TVET stakeholders, such as strengthening cooperation in training via the development of a dual training model or a tripartite model between vocational schools and enterprises as well as promoting TVET trainers and teachers' training in order to upgrade their qualifications and acknowledge informal training. This paper summarizes the author's observations and participation in TVET Vietnam to sketch out insights into cooperation in training programs and introduces some lessons learned from international practices that have had an impact on changes in policy and TVET training in Vietnam. It will also discuss how TVET Vietnam can learn from international practices in setting up cooperation in curricula development and organizing cooperative training operations between important main TVET stakeholders: companies and state-run vocational schools. Finally, the paper offers suggestions on applicable cooperative training solutions, such as the dual model and clustering in cooperative training operations related to international experiences.

Keywords: international experiences, cooperative training, skills demand, dual training

1 Introduction

International collaboration on research is crucial for TVET Vietnam, particularly in view of globalization and TVET reform. Collaboration brings valuable support to the TVET reform process due to increasing accessibility to international resources and experts who advocate new breakthrough ideas and efforts in order to refine TVET system management, foster industry involvement, and build interconnection with international partners. In the case of TVET Vietnam, the Government has an obvious awareness of human resource development and the importance of a qualified workforce supply for economic development by establishing a new curriculum, retraining TVET teachers, making efforts to strengthen partnerships between businesses and training institutions, establishing a qualification framework, as well as publishing an initial TVET law. However, these efforts have had

insufficient impact on attempts to innovate the TVET system. For example, the TVET law, introduced in 2006, became subsequently obsolete because making policy on developing and strengthening the TVET system involving relevant matters such as strategy planning, funding mechanism designing, socialization of TVET, institutions and relevant stakeholders networking, and system management should be investigated and researched carefully and scholastically to avoid shortcomings. In research on the value of collaboration between public training institutions and private industries, Rashidi (2013) has designed research very carefully by establishing research questions, based on applying qualitative and quantitative research methods to signify that the most important factor affecting TVET collaboration is setting cooperation goals. Meanwhile, other factors, such as management in cooperation or partnership development, are less decisive in building collaboration between other sides in the TVET system. Consequently, the goal is primarily building good cooperation and “needs to be explained and discussed and be transparent to all individual partners” (Rashidi 2013, 14).

Dr. Vinh, former researcher of Ministry of Education and Training has pointed out the root causes of the mismatch between the supply and demand of the labour workforce in his conference paper, held in Bangkok, Thailand, that “some existing policies show many shortcomings partly due to limited competences of managers and partly because of not being based on scientific research” (Vinh 2002, 4). The importance of the vocational educational scientific approach, defined as “access to work, work processes, changes in the work and the related implications”, the result of which can be used for “the design of curricula and consequences for learning processes” (Schröder et al. 2013, 5). Therefore, experiences, especially, exchanged within Regional Cooperation Associations such as the Regional Centre for Vocational and Technical Education and Training Southeast Asian Ministers of Education Organization (SEAMEO VOCTECH), the Regional Cooperation Platform for Vocational Teacher Education in Asia (RCP) and UNEVOC, are essential to providing guidelines for TVET Vietnam to make policy on TVET based on research on mechanism in cooperation of schools with industry, privatization of TVET schools, introduction of vocational higher education, law and regulation of TVET, standardized qualifications, accreditation. With international support, TVET Vietnam has been accelerating reform to build a better TVET institutional network, better the skills of TVET teachers and trainers, as well as generate partnerships with industry.

2 Experiences of the “In-house training” model from foreign direct investment (FDI) companies in Vietnam were the first catalysts for the idea of coordinating training between enterprises and state-run vocational institutions

TVET plays an important role in providing human resources for industry, delivering an impulse to development in each country. TVET has even become a backbone in developing countries such as Vietnam, where state-run vocational schools dominate the training system as the main human resource provider for the labour market, but the labour pool cannot fulfil

industry demand because of a skills mismatch in training. The Vietnam TVET system, with over 200 technical vocational colleges and 125 vocational schools, has exposed a deficiency in skilled workers in a wide range of industries when the training is organized and provided only in schools without involving companies or with a minority of industries providing short-term internships or a traineeship. Consequently, trainees can only learn theory and practices related to the job at school through workplace-simulated training activities. This causes a gap between what trainees can learn about occupations at school and the skills expected from an employee at the workplace. The absence of authentic scenarios in the professional qualification frameworks is still a major issue in TVET Vietnam when upskilling to a better-qualified industry workforce. The Agency of Japan International Cooperation (JICA) has indicated the cause of this shortage, which is a lack of information on skill requirements from the labour market that can be used as material for a training program or curriculum. The imbalance between skills needs and skills supply has its roots in the difficulty of determining the skills needs of industry (JICA 2014, 1). Accordingly, experiences in conducting adaptive solutions such as an “in-house training” model to overcome skills shortages, which is assumed to be an ideal suggestion for policy making and is concerned with TVET system management and curriculum development such as enhancing interconnection between two main stakeholders of TVET system in providing internship or traineeship.

The first example of in-house training can be considered MUTO's. When MUTO, a foreign direct investment (FDI) company, came to Vietnam to set up and operate its plant in Vietnam, it already had to handle the challenge of a skilled workforce shortage and had to conduct in-house training to solve this problem immediately because there was no TVET institution or school that provided manpower for precision moulding and die-processing at the time. Therefore, MUTO Vietnam, a Japanese company based in Vietnam since 1995, have had to train their workforce internally since 1998 and have since expanded its training capacity to support other companies in the same professional field. The model of in-house training and training by job rotation are notable characteristics of Japanese enterprises, where novices are guided by experienced workers at the workplace and can learn requisite skills to fulfil their duties after recruitment. The skilled worker acts as a mentor who will show and train their mentees through detailed working operations at the workplace. Training activities are also divided into phases in which training results are recorded and reported as references for following training activities and are used to assess how the novices are qualified step by step. The Japanese FDI enterprises applied a holistic training system like in Japan when they arrived in Vietnam. In the case of MUTO, a company with 2600 workers, the in-house training operations have initially been firstly conducted privately. Then, they established a training institute for moulding and die-processing. After 30 years, the company now has two training centres, one in Bien-Hoa industrial zone in Southern Vietnam and one in Hanoi in Northern Vietnam. Its model has set an example for other companies in their sector. In-house training and training by job rotation are now also implemented in many Vietnamese companies in the same sector, such as Duy-Tan precision mould company, which has a local version of this training model. At Duy-Tan, newly recruited design engineers, considered as novices, will participate in 12-month modular additive training. The training is divided into

four sections where the novice will be sent to each functional department such as milling, turning, mould assembly and mould trial procedures respectively. In each stage of adaptive training, the junior engineer will be mentored by a senior worker or engineer who is responsible for leading the junior engineer step by step to handle complex operations with machines and tools. The in-house training operation in Vietnamese companies such as Duy-Tan company can only be organised in the company separately.

Furthermore, the model of in-house training has been upgraded in the case of Samsung, an FDI from Korea, where the training is now operated with intersections between the company and state-run vocational schools. In the case of Samsung, its workers can deepen their knowledge and even acquire a professional degree by participating in evening classes which are coordinated with local vocational schools. This kind of in-house training differs from training activities at MUTO Vietnam or Duy-Tan where the training programs are purely internal with no collaboration with TVET schools. In contrast, the training process at Samsung is conducted in parallel at two locations: company and schools. Theories and practices are transferred within the framework of an official curriculum as a result of collaboration between the company Samsung and Vietnamese local vocational schools. The process of collaboration between two main important stakeholders in TVET – company and state-run vocational schools – begins with skills need analysis for each working position to define the exact learning content that needs to be taught before training courses are designed and take place in night schools after work. The training model at Samsung Vietnam is similar to the model of quality apprenticeships applied in the USA by German automobile companies such as Volkswagen and BMW and large international corporations in the automation field, such as Siemens (Aring 2014).

From its experience of in-house training model and its expertise on skills mismatch at Japanese enterprises, the Japanese non-government agency JICA Vietnam has supported many consultants to improve training programmes at vocational schools and technology universities such as Hanoi University of Industry (HaUI) by revising their current curricula. In the case of HaUI, curriculum analysis has revealed that students cannot read or draw mechanical drawings in third-angle projection and are weak at reading the symbols of geometric tolerance, surface roughness, and fitting and tolerance. Based on the above findings, JICA has run a project to improve the mechanical drawing courses at the vocational college, professional secondary, professional college, and university levels by adding learning content to current curricula on the third angle projection method, which Japanese companies generally use, as well as the fields of fitting and tolerance, geometric tolerance, and surface roughness. This provides students with more drawing exercises for third-angle projection and drawing with symbols of fitting and tolerance, geometric tolerance, and surface roughness. The improvement has also had an effect on textbooks by adding the third-angle projection method and drawing symbols of fitting and tolerance, geometric tolerance, and surface roughness. In addition, the project also supports lecturers who teach mechanical drawing by developing simulators such as a transparent box, which enables them to easily teach the

difference between the first angle projection and the third angle projection (JICA 2014, 20-21).

As a result, the in-house training model in TVET Vietnam has encouraged collaboration between industry and state-run training institutions in establishing training programs and having workers train together while exchanging teachers and trainers. There are many training centres placed in industrial zones to provide manpower for companies within the industry zone. This model also provides material for many research papers; Dang and Nguyen have evaluated the impact of the training programs industry on workers' qualifications. According to the research of Dang and Nguyen, training in Vietnam' manufacturing sectors comprises two types: pre-employment and in-employment training which are seen as "noteworthy contributions" and play "a crucial role in fulfilling their industry's skill requirements" (Dang & Nguyen 2024, 8). These training types are normally organized on the job or in service and need to transform into formal training operations of the state-driven TVET system with reference to the national qualification framework in order to formalize the informal "in-house" training model and acknowledge it subject to Vietnam TVET law (Vo 2018). Work-process qualification research is also conducted by applying qualitative and quantitative methods in coordination with an in-house training model (Vo 2019). Finally, the in-house training model ignites the development "strategies and frame conditions to improve the design and delivery of demand-oriented vocational training" in cooperation between the Federal Ministry of Economic Cooperation and Development, the GIZ and the General Department for Vocational Training, an important department of Ministry of Labour, Invalids and Social Affairs which is responsible for the Vietnamese-German Programme Reform of TVET in Vietnam. This collaboration will be discussed in the next part of the paper.

3 Researches on human resources and skills demand of foreign agencies as guideline for TVET curriculum development

Foreign agencies such as KOICA (Korea International Cooperation Agency), JICA (Japan International Cooperation Agency), GIZ (Deutsche Gesellschaft für Internationale Zusammenarbeit), as well as the World Bank, also play a relevant role in advancing know-how on skills mismatch in TVET Vietnam. The Japanese non-government agency JICA, for example, publishes reports annually on the human resources of TVET Vietnam based on research at Japanese enterprises in Vietnam, which can be used as material for curriculum design and as guidelines for Vietnamese ministries with regard to vocational issues to align better skills requirement from industry. In its latest report, JICA informs readers on the demand for human resources, which it has collected via quantitative surveys and in-depth interviews at Japanese companies in Vietnam and states that basic cognitive skills should be added to ICT skills and knowledge. This is noteworthy because ICT skills and knowledge have become a part of the workplace in all sectors, including the manufacturing sector, and these skills and knowledge have become an essential skill requirement from an industry perspective besides other skill groups such as speciality skills and knowledge involved with job-specific technical skills; soft skills (creativity, teamwork & cooperation, ability to work

independently, effective communication, negotiation, organization management, leadership & coaching skill, emotional intelligence) and advanced cognitive skills (active learning, problem-solving, logical thinking) (JICA 2022, 141). On the other hand, JICA Vietnam often issues advice on reducing the mismatch of skills demands by raising awareness of technical and vocational education and training (TVET) institutions and recognizing the necessity to improve training programs based on industry skills demands. The Vietnamese TVET system should accordingly lay the foundation for a social partnership between stakeholders consisting of TVET institutions, industry, and the Government to coordinate capacities between these stakeholders in implementing the workforce training. Moreover, TVET Vietnam should be transformed from a supply-driven skills development concept in which TVET institutions provide training merely based on their perceptions, not paying sufficient attention to employers' skills demands to skills development through social partnerships, in which training curriculum and content are designed in alignment with employers' skills demand (JICA 2014, 1).

Vietnam's vocational education and training report is also a publication on human resources and skills demand, as well as the achievements of TVET Vietnam as a result of the collaboration of Vietnam National Institute for Vocational Education and Training with the Federal Ministry of Economic Cooperation and Development, with the financial support of the Federal Institute for Vocational Education and Training (BIBB). The report provides a summary of the TVET sector's performance highlights such as policies for TVET, TVET for the labour market, networking in TVET and between TVET institutes, etc. In its latest issue, it devises TVET development strategies for the period from 2021 to 2030 with a vision to 2045 to guide the sector's advancement and define specific targets to be achieved by 2025. The system makes an effort to enrol school leavers to increase the rate of qualified workers, enhances training activities by advancing the qualifications of TVET teachers and managers, and standardizes learning outcomes of training occupations aligned to the National Qualifications Framework's classification of qualifications levels. The system also accredits TVET programmes and institutes and establishes rankings for TVET institutes from national and regional TVET centres to high-quality TVET institutes as well (GIZ 2023, 11). The report describes the development of national occupational skill standards (NOSS) in TVET Vietnam, which includes 199 sets of NOSS and 96 sets of NOS tests built and ready for use. NOSS and NOS tests are key factors in qualifying the workforce because all training components should be fixed in reference to NOSS. The association between the Federal Ministry of Economic Cooperation and Development and the Vietnam National Institute for Vocational Education and Training also produced a handbook for setting up effective partnerships with companies in vocational training, which can be used as a guideline for TVET Institutions in Vietnam to prepare collaboration with companies: Project-oriented cooperation such as the maintaining air conditioning systems on the company's shop floor; setting up internships with potential industry partner to send students for some weeks in designated fields inside the company; as well as inviting representative of the company as advisors on the board of the college (Buechelem 2014, 15). In addition, the association has promoted analysing current and future industry demands to develop and integrate Industry 4.0

training modules into initial training TVET programmes, which comprise four training units: Object Oriented Programming, Microcontroller Programming, Database Systems, Data visualisation with dashboards. This module is an addition or adaptation of the knowledge and skills of the Vietnamese workforce in the new competence requirements on digitalisation and Industry 4.0, resulting from collaboration in research between vocational school Lilama2 and Bosch Rexroth, a FDI company. Consequently, foreign agencies such as GIZ and JICA play a crucial role in the whole system by playing the role of coordinators of the state-run TVET system and private sectors. These agencies normally conduct research on human resources in cooperation with the Directorate of Vocational Education and Training (DVET) in the case of GIZ and within the framework of the Vietnamese-German Programme “Reform of TVET in Viet Nam”, which is implemented to upskill the workforce and complete training system based on partnership with industry. In the case of JICA Vietnam, it mostly visits Japanese companies in Vietnam to analyse demand for the labour workforce, predict future employment requirements, and implement projects with Vietnamese colleges and universities to qualify better-skilled workers.

4 Partnership between Germany and Vietnam: Projects of GIZ on TVET and Dual training model of AHK/DIHK Vietnam as catalyst for Public Private Partnership between Industry and state-run vocational schools and colleges

Collaboration in research has generated many ideas to build a better and more efficient TVET institute network. Germany contributes significantly to the development of TVET Vietnam. InWEnt – abbreviation for German “Internationale Weiterbildung und Entwicklung gGmbH”, founded in 2002, is an institution with worldwide operations in the field of bilateral development and international cooperation, with a focus on building capacity in TVET, especially of the workforce, in order to teach and design TVET law. It has operated many projects to support development for advanced education and training, engaging in dialogue and networking advisory services for Human Resource Development for TVET Vietnam as well. Processing Water Programme (2005 to 2008) focused on relevant factors such as providing professional knowledge on water resources, providing methodical competence to preserve water resources, fostering regional cooperation, assessing capacity-building-related needs, raising awareness on water management-related topics, and disseminating best practices. The main aim of the project is to build the capacity of personnel in water sector institutions in order to improve the efficiency of these organisations (Palenberg 2009, 3). In addition, InWEnt has also begun many operations to develop better-qualified trainers and teachers for TVET Vietnam, augment the capacity of technical and vocational schools, and bridge gaps between human resource providers and the demand from the industry by setting up partnerships between them. In the case of TVET Vietnam, collaboration with GIZ has a long tradition in the relationship between the two countries, Germany and Vietnam. Besides projects to strengthen Vietnamese teachers and instructors and the whole TVET system as well, GIZ has also conducted projects to assist the law-making competency of the

government, such as the project “Enhancement of law-making capacity in the Government Office” to help the Government Office improve law-making work in the period of 2008. The Project also contributed to strengthening mutual understanding and enriching experience and legal knowledge. Furthermore, innovation and reform projects conducted within TVET Vietnam from 2020-2024 by GIZ include the following key areas: digital transformation, greening TVET, industry cooperation, promoting TVET, rehabilitating, quality assurance in TVET, reforming policy on TVET, supporting high-quality TVET institutions (see Fig.1). These areas have had a major impact on aligning TVET better to the changing world of work, which will be more involved in new areas, such as digitalization and greening in the TVET schools network, where GIZ has become a partner. TVET reform initiated in collaboration with GIZ has been developed and expanded to more profound solutions such as transforming modern modular training programmes at intermediates and college levels in order to align with the same curriculum as in Germany in order to meet German or even international standards and in line with Vietnamese requirements and regulations as well. Within the framework of the project, nine of eleven colleges also received modern technical facilities to fulfil training requirements at international standards (see Fig 1 below for more details).

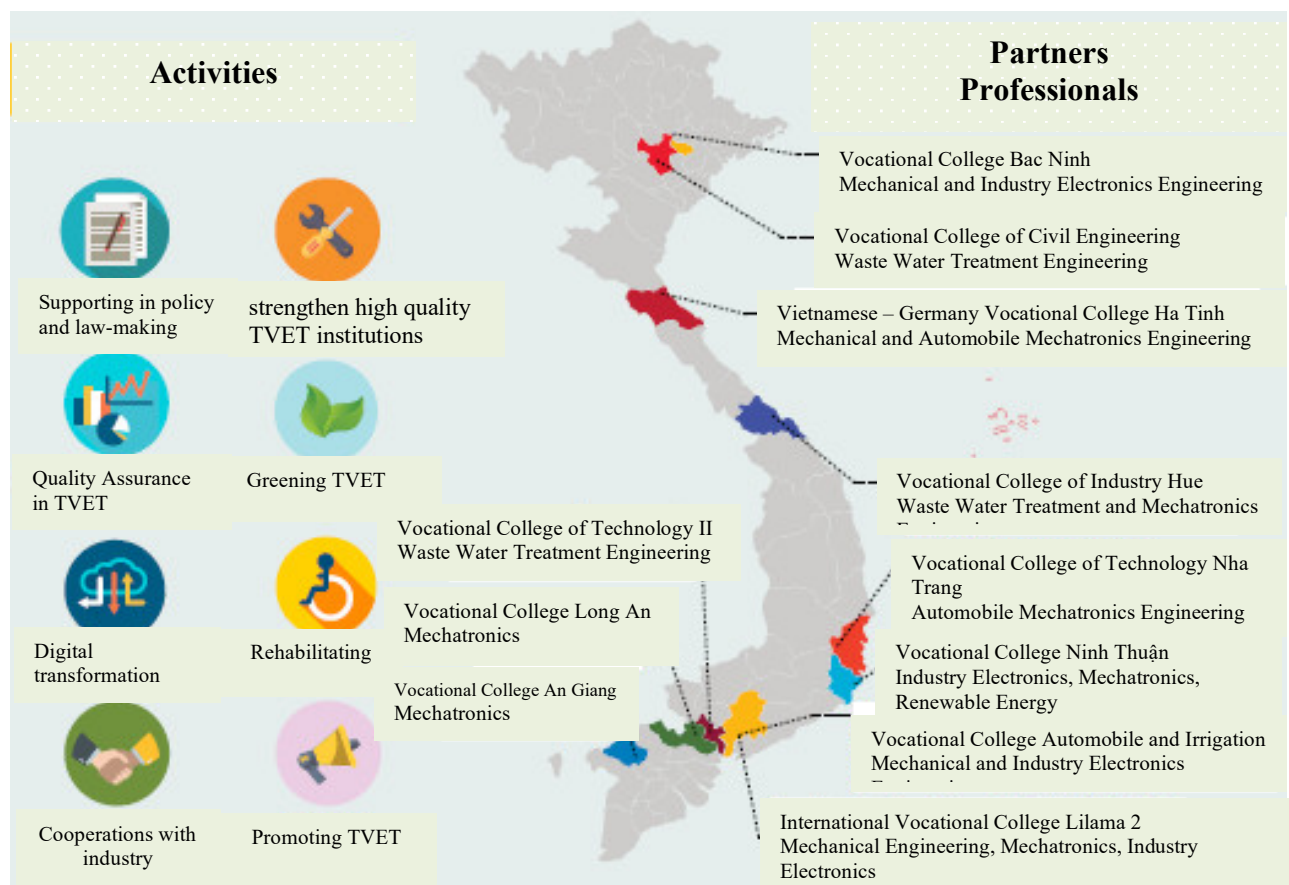


Figure 1: GIZ and its Activities with Partners in Projects on Reforming TVET Vietnam (source: GIZ Vietnam)

Moreover, GIZ with its experience in workplace training, has also collaborated with business and industry sectors to promote the development and update of demand-oriented standards and training programmes for in-house training activities. GIZ has supported companies in qualifying in-company trainers and examiners and in conducting joint training at TVET institutes and at enterprises, as well. GIZ has encouraged networking between stakeholders in TVET by building and strengthening skills councils and industry advisory boards. In addition, GIZ can be a bridge between internationally and nationally renowned companies by developing partnerships between them to found high-quality TVET Institutes – the international vocational college Lilama 2 in Long-Thanh commune, Dong Nai province, as an example. GIZ also holds annual meetings and conferences on the topic of cooperation in TVET Vietnam to exchange experience in coordinating training between companies and vocational schools according to the model “one plus one in one training system”, a replica of the dual training system in Germany, considered a well-known originator of the system. Collaboration on training between Bosch Vietnam Co., Ltd and Lilama 2 International Technology College is best practice for a partnership in TVET. Bosch, with its experience in dual training, has established a partnership considered a model of public-private partnerships with the International Vocational College of Technology Lilama 2 to train 35 mechatronics students every year. Training operations are organized and managed the same as with the dual training in Germany or in Bosch Training Centres all over the world. Students can learn the required knowledge at the vocational school Lilama 2 and practise their occupational skills at Bosch Training Centre before they are sent to a real workplace in the company in the last academic year.

Another shining example of cooperative training in TVET is DIHK, the Delegation of German Industry and Commerce in Vietnam, founded in 1994, an organization representing German companies in Vietnam. DIHK comprises business representatives of German organizations in Vietnam, such as Messe Düsseldorf, the Federal State of Saxony-Anhalt, Messe Berlin, the Free State of Bavaria, the Spielwarenmesse eG, Messe Nürnberg, etc. The organization has great experience in dual training and has recognized the shortage of skilled labour force in Vietnam, especially in logistics. It has likewise executed dual training programmes in Vietnam. DIHK’s principle of dual training operation is similar to Germany’s. DIHK acts as a coordinator who assists German companies that want to operate dual training according to German standards in the company and helps find suitable Vietnamese partners such as vocational schools, colleges, and even universities who can be the best in finding dual training (see Fig.2). The DIHK/AHK Vietnam is the first contact point when finding partners for German companies, i.e. training consultants for each dual training activity according to standard A, B or C of DIHK, and coordinates the training process as well. Moreover, DIHK ensures education quality during dual training process by monitoring training activities, as well as the structure and administration of the training. The DIHK services not only include finding Vietnamese vocational training centres as cooperation partners but also advising interested companies about the establishment, development, and implementation of suitable training programs in Vietnam. The DIHK/AHK Vietnam also manages examinations and generates and manages certificates and qualifications based on German DIHK standards to

assist companies with the development of qualified specialists by passing on success factors of the German education, including a combination between the theoretical training phase and working process in firms (see Fig 2 below).



Figure 2: Cooperation model in dual training activity, provided by DIHK (source: GIC/AHK Vietnam 2021, 8)

DIHK’s dual training model focuses on freight forwarding and logistics. In this program, German industry members such as A. Hartrodt Logistics Vietnam Co., Ltd; Bollre Logistics Vietnam; CEVA Logistics Vietnam Co., Ltd; Gebrüder Weiss Co., Ltd; Logwin Air + Ocean Vietnam Co., Ltd; Pepperl + Fuchs Vietnam Co., Ltd; Rhenus Freight Vietnam LLC; Schenker Vietnam Co., Ltd. Former partners: Geodis Vietnam Co., Ltd; IN DO Trans Logistics Corporation; Karl Gross Logistics Vietnam have contacted and recruited the best candidates, who are normally 2-year students from Ho Chi Minh City University of Transport, via an event such as an open day held at the University every year. After that, students who join the dual training will learn theory at the University as usual and spend most of their time in partner companies as apprentices. The proportion of working time spent at the company will increase steadily during the academic year before students can work as full-time members of the company in the last academic year. Training contents are agreed upon and organized in cooperation with DIHK Vietnam. The program members, the companies, should transfer essential knowledge and skills of the occupation, adapted into learning fields such as the process-oriented delivery of freight forwarding and logistics services, the transport and shipment of goods, logistics services, agreements, liability and insurance, marketing and learning objectives, information and communication systems, transport and shipment of goods, consolidated cargo and general cargo, as well as warehouse logistics. Skills and knowledge that must be transferred are described comprehensively for each

learning field, for example “Warehouse logistics” learning field, students should show competencies after finishing such as:

- explain services in warehouse logistics;
- describe types of warehouse organization, and present the warehouse system which is used by the training company;
- present the warehouse workflows and integrate them into logistical processes;
- assess the potential of plants, machines and equipment in the warehouse due to transport, conveying and packaging;
- distinguish goods due to storage facilities;
- use warehouse documents;
- supervise the record of warehouse data and the forwarding of them within the transport chain.

During the training process, The DIHK observes the process to ensure that learning contents should be taught at the university and, conversely, skills should be trained in the company. References for the dual training are the curriculum used at the university and the training outline used at the company in parallel in which skills and knowledge are derived from vocational training occupational profile, built and consulted according to German standards in consultation with DIHK. Both skills and knowledge required should be agreed upon by the two main stakeholders of the program: partner universities and logistic companies. All information about the department where apprentices will be sent, the duration of the training operation, and the name of the trainer must be made clear, and training results are checked annually.

Public-private partnerships and the dual training model are breakthroughs in TVET Vietnam, as a result of the collaboration in research and making an effort to build a more efficient TVET networks in which training should be driven by both sides of TVET. Obviously, training should happen in two places: TVET institutions and enterprises. In addition, training content should also be conducted by TVET schools and partner companies. However, the partnership and dual training model could not be extended to the whole system of TVET Vietnam due to the mind-set of the industry, especially Vietnamese companies, as they have not recognized the advantages of dual training in training a qualified workforce and shy away from the training costs.

5 Conclusions

At present, TVET Vietnam is still in transition from a supply-driven skills development through a demand-driven skills development towards the training model of skills development by social partnerships. The transformation was first initiated by FDI companies that had to overcome skills shortages and skills gaps as quickly as possible. With their experiences in managing in-house training, these companies have achieved some singular results in building their own qualified workforce capacity to maintain and develop

manufacturing processes in their enterprises. In-house training was then expanded widely to include Vietnamese companies that demand highly qualified skilled workers. However, the Public Private Partnership (PPP) and dual training model could not be broadened to the whole system due to the financial capacity and experiences of domestic companies. Therefore, the impact of the PPP and dual training model is not so significant in TVET Vietnam, although coordination between two important stakeholders of TVET – industry and TVET institutions – is prescribed in the law of technical and vocational training, and contributions by industry in TVET are acknowledged and protected by law. The difficulty in promoting PPP may be due to a lack of a full National Vocational Qualification Framework in TVET Vietnam, which can be used as a commitment for coordination in training at dual learning places: TVET schools and workplaces. On the other hand, Vietnamese companies that have limitations in finance and in training human resources are still not engaged in dual training. Therefore, collaboration with vocational institutes in training the workforce is still constrained. This is a huge barrier to making a more efficient TVET system, which needs the involvement of some professional associations such as DIHK to promote a combination of training between industry and schools or colleges.

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