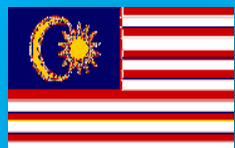


# REGIONAL COOPERATION PLATFORM

## Project Report P1.1

### Public Private Partnership



**Project Title:**  
**Theoretical Approach On  
Public Private Partnership  
For Universities / Training  
Institutes In Technical  
Vocational Education And  
Training (TVET)**



Implemented by



## Contributor

### Research Coordinator:



1. **Universiti Tun HusseinOnn Malaysia (UTHM),**  
*Assoc. Prof. Dr Razali Hassan, Dr Affero Ismail, Dr Mimi Mohaffyza, Dr D'oria Islamiah Rosli, Dr Nor Lisa Sulaiman & Dr Saifullizam Puteh*



2. **Rajamangala University of Technology Lanna (RMUTL),**  
*Assoc. Prof. Dr Numyoot Songthanapitak, Niwat Moonpa, Tarapong Karnjanaparichat, Banpot Horbunluekit & Suchin Ingkapradit*



3. **Ho Chi Minh City University of Technology and Education (HCMUTE)**  
*Prof. Dr Do Van Dzung*

### Researcher:

- i. **Ho Chi Minh City University of Technology and Education (HCMUTE), Vietnam ,** Representative: *Assoc. Prof. Dr. Duong Thi Kim Oanh*



- ii. **Namdinh University of Technology Education (NUTE), Vietnam,** Representative: *Dr. Phan Sy Nghia, Mrs. Tran Van Khiem, Mr. Nguyen The Manh, Mr. Doan Tuan Nam and Ms. Tran Hong Van.*



- iii. **University of San Carlos (UOSC), Philippines,** Representative: *Dr. Jun Javines & Christie Ann Jaca Delfin*



- iv. **The State University of Surabaya (UNESA) , Indonesia,** Representative: *Prof. Dr. Eko Hariadi, Arie Wardhono & Lilik Anifah*



- v. **Indonesia University of Edcation (UPI), Indonesia,** Representative: *Dr. Agus Setiawan*



- vi. **National University of Laos (NUOL), Lao PDR,** Representative: *Prof. Dr. Boualinh Soysouvanh, Dr Bounseng Khammounty, Phannavong Bounphasouk & Soukkaseum Saleumsy*



- vii. **National Technical Training Institute (NTTI), Cambodia,** Representative: *Dr. Yok Sothy*

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The purpose of this document is to suggest the Regional Model of Public-Private Partnerships based on the existing PPP frameworks at the national level. National best practices have been applied individually or blended in the process of the regional framework development. The framework suggests three levels of PPPs to consider in the development of the Regional PPP Model, depending on the nature of collaboration and other factors such as curriculum, economy growth, policies and training needs.

This Theoretical Framework of Regional PPP models is intended to promote consistent and cohesive development of collaboration among countries in the region. It will be an important document to guide the Implementation of the Regional Model for PPPs. Several appendixes are included to serve as a guide for the development of further PPPs programmes.

Thank you to all researches from seven (7) countries in the ASEAN+3 region involved in this project for the successful contribution of the country reports, for providing first-hand information and sharing materials which was meaningful for the study results.

## Executive Summary

This conceptual framework has been developed to serve as a guide for the Regional Public-Private Partnerships Model development, especially given that it was created based on the national existing practices of PPPs. Also, the framework provides a vision on how to engage the industry, TVET institutions and the government based on the concept of public-private partnerships.

The concept basically aims at ensuring that a student is able to get to know the real work environment and to get an industrial experience, which is the interest of all parties involved in PPP. In fact, over the course of the research, there were no specific policies mentioned with regard to the PPPs implementation which would lead to a successful collaboration with the industry. Even though, the guidelines were developed by the Quality Agency for TVET institutions to ensure that students are able to get the benefit of the training and fulfill the needs of the curriculum, there are still no specific model which would include collaboration among the three major PPPs' stakeholders comprising the government, the industry and TVET institutions.

Malaysia, Indonesia, Vietnam, Thailand, Lao PDR, Cambodia and the Philippines have considerably contributed to the study by providing their input based on the concept of PPPs implemented in these countries. The purpose of the study is to investigate the PPPs' models that have been applied within the ASEAN region and at the same time to look into the successful examples of collaborations between the government, the industry and TVET institutions. In this study, six criteria such as accountability, efficiency, relevance, responsiveness, cost-effectiveness and sustainability have been used as performance indicators to investigate the effectiveness of the existing PPP models in the countries participating in the study. Apart from the research and education institutions, other organisations such as the Ministries of Higher Education, the Ministries of Labour, the Ministries of Youth and Sport, the Ministries of Human Resources as well as the Ministries of Rural and Regional Development from different countries have been involved in the research project. The action research project involved participants in theorizing and reflecting on their country's own Public Private Partnerships' best practices. In short, the action research can be seen as a form of an enquiry conducted by a certain organization and applied to solve real

organizational problems or issues. Therefore, in the context of this study, we are trying to also boost changes with regard to the PPP at the national level as well as contribute to the development of the PPP theoretical concept. In addition, the long-term goal of this research is to encourage the creation of the positive examples of collaborations and a co-inquiry with regard to PPP. As for the methodology, document analysis was used in order to learn about the PPP policies at the national level and their implementation processes. Secondly, the opinions of TVET institution principals, trainers as well as industry representatives and students with regard to PPP were investigated through observation and interviews. Thirdly, a short survey based on the six characteristics such as responsiveness, relevance, cost-effectiveness, efficiency, accountability and sustainability was carried out in order to further explain the performance indicators of PPP. Structural Equation Model has been used as the method of data analysis for this study. As a result of the study, 4 models for PPP were suggested. Most of the models were retrieved from the successful examples of PPPs implementation at the national level. It is also recommended that the government might consider to make an adjustment with regard to the following criteria. For instance, by lowering taxes, providing welfare services and incentives to attract industries for PPP programmes. Previously, education systems were more supply-oriented with an emphasis on the learning process at the institutions. However, the emphasis has to be changed to a demand-driven orientation because current students need to discover real working experiences in the industries so that they skills correspond to the demands of the 21<sup>st</sup> Century. In fact, this study could serve as a stepping stone to achieve best practices of PPP programmes that will be beneficial for all parties.

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## Acronyms

ADB – Asian Development Bank

CSO – community service organization

DMC – developing member country

DCT – Dual Cooperative Training

FDI – foreign direct investment

GASTPE – Government Assistance to Students and Teachers in Private Education

ICT – information and communication technology

IFC – International Finance Corporation Lao

PDR – Lao People’s Democratic Republic

PPP(3P or P3) – Public Private Partnership

NFE – nonformal education

NFP – nonformal provider

NGO – nongovernment organization

NDTS – National Dual Training System

PPP – public–private partnership

SES – special evaluation study

WBL – Work based Learning

TVET – technical and vocational education and training

SIF – School in Factory

WIE – Work Integrated Education

MoE – Ministry of Education

MoHE – Ministry of Higher Education

MoL – Ministry of Labor

MoRRD – Ministry of Rural and Regional Development

BLT- Build -Lease-and-Transfer

BOO - Build-Own-and-Operate

BOT - Build-Operate-and-Transfer

BT - Build-and-Transfer

BTO - Build-Transfer-and-Operate

CAO - Contract-Add-and-Operate

RCP – Regional Cooperation Platform

RECOTVET – Regional Cooperation for Technical and Vocational Education and Training

RAVTE – Regional Association for Vocational Teachers Education

## 1.0 Introduction

### 1.1 Public Private Partnership

A public–private partnership (PPP, 3P or P3) is a cooperative arrangement between two or more institutions from public and private sectors, typically of a long term nature. Governments have used such a mix of public and private endeavors throughout history. However, the past few decades have shown a clear trend towards governments across the globe making greater use of various PPP arrangements. There is no consensus on how to define a PPP. PPPs can be understood both as a governance mechanism and a language game. PPP as a language game, or brand, concept covers hundreds of different types of long-term contracts with a wide range of risk allocations, funding arrangements and transparency requirements. PPP is also closely related to the concepts such as privatization and the contracting out of government services. Particular types of arrangements have been favored in different countries at different times (*Wiki's, 2016*).

The role of the government is to stimulate economic growth, to generate sufficient job opportunities and to produce the appropriate skilled and qualified workforce in order to meet the needs of the industries. For this reason, continuous sustainable development through training and employment must be at the forefront of the government's and a TVET institution's agenda as the government strives to improve competitiveness in the international marketplace and to prepare the people to work in higher value-added occupations.

Most of the countries in the ASEAN region suffer from a serious skills mismatch between labour supply and labour demand. The TVET delivery systems are characterized by outdated or irrelevant curriculum, outdated skills of instructors, inadequate resources and a lack of substantive industry involvement in training. The major problem is compounded even further by a strong preference for an academic education and generally poor image of TVET.

In addition to the challenges noted above, ASEAN countries have fragmented TVET systems, wherein responsibilities are divided among various ministries (e.g. Ministry of Labour, Ministry of Higher Education, Ministry of Education etc.), TVET institutions (e.g.

UTHM, HCMUTE, RMUTTL, UNESA, UPI, NUOL) as well as a number of private sector institutions with little or no coordination among the delivery agents.

In higher TVET system, both quality and quantity are seriously deficient. Generally, if a TVET system wants to succeed, it needs to have strong connections to the labour market. The industry knows what skills are needed and they need to be a partner in all aspects, from programme planning and curriculum development to on-the-job training, and ultimately, employment. In the fast-paced world of work, it is only through the continuous collaboration between industry and a flexible training system that programmes will remain relevant providing the needed skills for the workforce. A strong, well-trained workforce will, in turn, contribute to strengthening the economy through increasing the prosperity of companies, generating job opportunities and increasing entrepreneurial activity.

In the advancement of skills and technology in Twenty-First (21st) Century, the demand for producing high-quality human capital is the most important agenda for most countries. Therefore, TVET continues to play the role in accommodating supply and future demand of economic development, labour and human resource needs. However, TVET will not be a success without support and motivation from its main key players which include government, university and industry that can subsequently influence the economy of a country, especially in low-income countries. Not only that, the lack of accountability and risk-sharing among public, private and academic sectors in providing Public-Private-Partnership services can lead to major complications for TVET actors in sustaining TVET development. In addition, it can be also the main implication for the world economy since countries' economic performances depend on the skills of the workforce and therefore, on the TVET system development. Today, the need of PPP is growing rapidly due to the future requirements and awareness of respective key players of the fact that the effectiveness of TVET ecosystem of a country has to be ensured. Successful PPP examples involve policy development, project establishment and service delivery.

The partners in the application are prominent TVET providers in education service delivery from 7 countries in the ASEAN region. Therefore, it is essential to gain

substantive supports from national and international stakeholders, especially from business and industry that can support and sustain public TVET sector environment in terms of planning, budgeting, organising and monitoring of any activities related to TVET development not only at national level but also in the ASEAN region. The intention to become a TVET hub in ASEAN requires TVET providers to carefully investigate the influence of socio-economic impacts, investments and prospects, task efficiency and service enrichment, whereby PPP should be in place in providing support with regard to inter-linking design, finances, construction and operations – these are the main determinants of a TVET hub success in the ASEAN region.

Given the necessity for new relationships between education, world of work and the community as a whole, technical and vocational education and training (TVET) should exist as a part of a lifelong learning system adapted to the needs of each particular country and to the world technological development in general.

Therefore, it is significant to investigate this question which can add value to society by sustaining long-term contractual arrangements, and also build awareness among the government and the private sector of the importance of a TVET hub in ASEAN countries and promote maintenance culture among the government, private and academic sectors in the respective region. There is a need of the industry involvement to ensure that students receive knowledge and skills in accordance with industry demand.

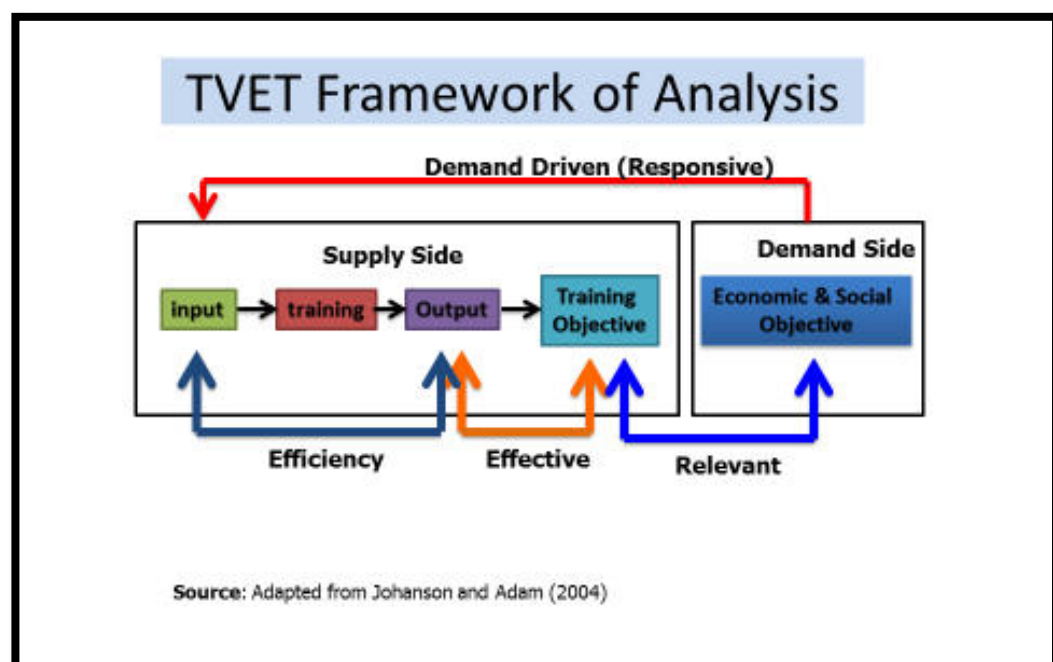


Diagram 1: Explanation of the PPP framework with regard to the needs of demand-driven TVET

## 2.0 Research Background

ASEAN countries have a potential of a vigorous economic development in key economic sectors in the nearest future. Thus, if a country strives to prepare a market-oriented skilled workforce, a fundamental change in the approach to training has to take place. It is now recognized worldwide that a supply-side oriented TVET system is simply not sustainable or affordable: it quickly falls into obsolescence, unable to keep up with the rapid pace of change required by the industry.

As the national existing models of Public Private Partnership have demonstrated, PPP is one of the critical factors in transforming the system from its persistent supply-driven orientation to a demand-driven one. Through public private partnerships, it is hoped that ASEAN will be able to bridge the skills gap deficit of training delivery in almost all sectors of private industry, transforming the outmoded TVET system into a modern responsive one. Regional PPPs, supported by an enabling environment, can create a win-win situation for all parties: government will have an effective, efficient and affordable training system and industry will have the trained and skilled workforce. The main benefit is that the students will gain the needed skills to be fully involved in a modern society.

PPP involves in transferring the responsibilities to private sector in financing and managing a package of capital investment and services including the construction, management, maintenance, refurbishment and replacement of public sector assets such as buildings, infrastructure, equipment and other facilities, which creates a standalone business. In these PPP projects, there is a contract for the private party to deliver public infrastructure-based services over a long period of time. The private party will raise its own funds to finance the whole or part of the assets that will deliver the services based on agreed performances. The public sector, in turn, will compensate the private party for these services. In some PPP projects, part of the payments may flow from the public users directly. Though ownership of assets plays a less important role in PPPs, many of the modalities see a transfer of the assets to the public sector (revertible) as a matter of

course. There are some PPP projects where the assets are not transferred to the public sector at the end of the concession period. These usually relate to facilities or projects that have little value at the end of the period due to their technological obsolescence.

### 3.0 Research Objectives

Public-Private Partnerships play a key role in the development of the Asia Pacific region. As a "culture of partnership working" extends further throughout international organizations, governments and the private sector, innovative solutions are being developed all the time. In an effort to improve the quality of TVET training in order to meet industry needs, and to support the development of the ASEAN Economic Community (AEC), the establishment of models and approaches to Public Private Partnerships between governments, universities and industries in TVET is essential. Some of the main questions relevant for the survey are:

- Suggest a Regional model for Public Private Partnership in ASEAN in terms of requirements (physical, financial and human), common needs for RCP members and individual members including operational guidelines, policies, procedures, processes, structures and mechanisms to be able to achieve the characteristics as identified above.
- Conduct an in-depth analysis of the PPP models implemented at the national level in countries participating in the research project based on National Country reports (including a document attached to the report).
- Develop an instrument / tool for assessment of the models proposed by countries in the region.
- Develop a draft of a Regional PPP model with a requirement to be implemented by RCP members. The draft of a Regional PPP model will be based on the best practices derived from the national reports. The newly developed Regional PPP model and processes, has to include the aspects such as governance, organization structures, business plan, timelines, schedules, training programme, trainers, venues, etc.
- Support the implementation of the Staffing and Redeployment Plan.

Design and disseminate the Regional PPP model to all RCP members according to the suggestions of the implementation plan.

#### **4.0 Research Questions**

PPP objectives are often ignored when it comes to a PPP arrangement. At the same time, to ensure a successful implementation of a PPP programme, it is essential to determine its objectives from the outset.

To achieve the research objective of the study, the following research questions have to be answered:

- a) What are the current practices related to PPP models including its governance, business, training models and types of collaboration;
- b) How the business and training processes are organized within the existing PPP models;
- c) What are the current practices with regard to resources allocation, including physical, financial and human resources, within the existing PPP models.

#### **4.1 Sub question**

The following sub-questions have been designed to investigate the current implementation of PPPs in each of the participating countries:

- i. How PPPs are organised in partner countries? What kind of PPP programmes do exist and how are they implemented?
- ii. Which economic and institutional elements are crucial for a successful implementation of a PPP in TVET? What are the relationship and interactions among them?
- iii. How do firms get involved in PPP?
- iv. What benefits and costs do they expect to have and do they actually have?
- v. How is the power distributed among the participating stakeholders in a PPP in TVET?

- vi. How are they defined and regulated in the process of programme design?
- vii. What are the government's expectations and concerns with regard to the PPPs in TVET?
- viii. Which functions should the government take (and is actually taking) during the PPP development and implementation stage?
- ix. What are the most important policy implications?

Report should be made on the economic landscape that foster the implementation of PPP. Effective institutional elements need to be explained to support PPP. Furthermore, these questions will give an answer on how the relationship and interactions between the industry, institutions and the government occur. The researchers should look into how the industry get involved in PPP and what are the benefits that they could get. The costs of the PPP implementation, which is one of the most important questions, need to be discussed. These questions will also explain how the power is distributed among the stakeholders participating in a PPP. Another issue raised is how the process of programme design is regulated. In terms of government function, there are certain expectations and concerns with regard to PPP that need to be discussed. This includes, development and implementation stage and the policy implications.

## 5.0 Socio-economical and policy framework

The use of PPPs as a beneficial prescribed arrangement for the provision of economic and social infrastructure has grown sharply in recent decades. Both the governments and the private entities have provided a numerous of reasons for pursuing infrastructure and operational funding projects as PPPs rather than as purely public or private investments. The rationales for PPPs fall broadly into the categories such as policy framework, finance, risk transfer, efficiency, development and ideology. This includes the development and implementation stage and the policy implications among local and regional countries collaboration.

Partnering with the private sector also allows governments to diversify financial and non-financial risks. Since the private sector may be responsible for the financing, construction, and operations of the project, the government's exposure to market and

product risks is minimised. This does not imply that PPPs are a vehicle to transfer all risks from the public to the private domain. Instead, risks are borne by the party best able to manage them. For the private sector partners this may include financial, construction, and operational risks, whereas the public sector is typically better-positioned to manage political risks. It is the responsibility of all parties to assess the various risks prior to and during the contract negotiation phase to adequately allocate and manage them. Therefore, it is important for both parties to have clear vision of policy framework before the agreement to collaborate for further investment.

### **5.1 Socio-economic framework in the country**

Economic conditions are crucial to ensure that private partners can recoup their investments. Prior to any contractual agreement, a realistic cost-benefit analysis of the project should be undertaken by all parties – a TVET institution, the private sector and the government. This ensures that there is sufficient demand for the services that are to be provided and agreed by all parties. The government must recognise the private sector's need to attain the profit and allow them to fill their entrepreneurial role. The socio-economic framework of a country needs to be studied before the implementation of any partnership model. Strong support from the economic structure will ensure that the mission or vision of a programme is successfully executed.

In practice, Cambodia, Vietnam and Lao PDR are facing the similar issues since the private household contribution to TVET through tuition fees is developing into an important source of income for TVET institutions in MLVT. In the absence of a centrally developed policy on student fees – exemptions for students from marginalised and poor households are not available – institutional income from fees is not effectively monitored and what is more, equal access for poor students and unemployed workers is undermined. This is caused by the unregulated situation when the funding received by TVET institutions is not transparent – the lack of integrity has implications for financial management, efficiency and unit costs.

The national reports from Indonesia, Thailand and the Philippines suggest that Industry associations and private enterprises claim to expend significant budget on the in-

company training component of TVET programmes. There is no definitive evidence for this, but subjective evidence strongly suggests there might be some truth to the declaration.

In the context of Malaysia, the model of WBL makes sound economic sense because the costs of achieving learning outcomes are transferred from publicly funded educational institutions to enterprises, thus reducing public expenditure and freeing up funds for other priorities. The results of studies that have compared the lifetime benefits of completing an apprenticeship in terms of employment and wages with the cost of the programmes point to significant surpluses of benefits over costs. Another economic rationale for WBL is the relationship between the technological upgrading of an economy, its potential for innovation and creativity, and the learning needed to foster both.

## **5.2 Policy Framework for PPP**

Policy framework for PPP stands on the support and collaboration between the government and stakeholders. Malaysia is among the countries targeted for the policy review. There are some interesting examples of how partnerships were built into vocational education through new legislation. The Malaysian authorities crafted a new piece of legislation in 1992, the Human Resources Development Act. This Act, which funds the Human Resource Development Fund (HRDF), has distributed money to firms which they can use to train incumbent workers. Money is transferred by manufacturing firms, and the budget is subsequently spent by firms on apprenticeships and other training activities. The primary focus of the Malaysian 1992 legislation was to create a new agency, the Human Resource Development Council. The Council is composed of a fixed number of employer's representatives, governmental representatives and independent members. The primary work of the council is to collect a levy from employers and provide the money back to companies to pay for training in the workplace. There is relatively little impact on the public vocational or technical education system. The emphasis is on funding human resource training in the private sector. The outcomes of this process have been evaluated. Hong Tan reported that the HRDF has been successful since 1992 in increasing the likelihood that firms will train workers,

especially for medium-sized firms. The larger vocational and technical education system in Malaysia was also fundamentally restructured in the 1990s and later in the year 2011. Technical and Vocational education in Malaysia has been passed through TVET transforming era. In 2011, the government 11<sup>th</sup> plan converted at least 15 piloting TVET institutions and many of the vocational schools to technical schools. By the year of 2000 there were over 70 technical schools and only 4 vocational schools for the whole country of over 20 millions of people. Moreover, some technical subjects were introduced to general secondary schools to improve the preparation for the labour market in general secondary education. The reasons this shift happened are important to note. Firstly, Malaysia's economy was growing rapidly in the 2011, particularly in more highly educated professions. Secondly, there was a rapid increase in the average educational attainment of the population. Finally, the government made a strategic decision that industry could train workers in the "blue collar" professions that used to be the work of vocational schools (Mustapha & Abdullah, 2001). The implications of the Malaysian move away from secondary vocational education are useful for the current situation in Central Asia. Firstly, this refocused the TVE secondary system on academic preparation and brings it away from narrow technical or vocational skills. Secondly, it did create some negative feedback from the vocational education sector, as teachers and administrators traditionally focus on occupational specific instruction (Mustapha & Abdullah, 2001). However, it remains unclear, based on the evidence that is available, what the consequences of this decision were for larger policy issues such as labour supply or social partnerships. There have been no specific studies on this issue in particular.

### **5.2.1 TVET legislation in the context of Malaysian practices**

The National Skills Development Act 2006 (Act. 625) has established the National Skills Development Council and the National Occupational Skill Standards.

- The **Education Act (1996)** covers all education levels but focuses on pre-primary, primary, secondary and post-secondary education. The Act stipulates the use of the national language (Malay language) as the medium of instruction and calls on all schools to implement the national curriculum, unless they are exempt from this requirement.

- The **National Accreditation Board Act (1996)** institutes the National Accreditation Board responsible for ensuring that high academic standards and quality are maintained in public and private education institutions.

### **5.2.2 TVET legislation in the context of Vietnamese practices**

- Article 59 of the Law of Labour (2012) stipulates that: The State encourages highly qualified employers to establish vocational training courses for their employees;
- Article 20 of the Law of Labour (2012) defines the responsibilities of the employer with regard to training: The employer plans the annual budget for training aiming to foster skills for workers;
- Chapter V (Articles 55 and 56) of the Law on Vocational Training (2006), Chapter IV (Articles 51 and 52) of the Law on Vocational Education and Training and Chapter IV (Articles 30 and 31) of the Decree 48/2015/NĐ-CP of the Government define the rights and responsibilities of businesses in vocational education which are as follows:
  - Enterprises have the right to establish vocational education institutions;
  - Collaborate with vocational education institutions to organise vocational training courses;
  - Participate in the development of curricula, organise courses and assess the learning outcomes of students in vocational education institutions;
  - Invite learners and teachers to observe and practice occupational skills.

### **5.2.3 TVET legislation in the context of Philippinean practices**

In the context of the Philippines, a Policy and Legal Framework is subjected to the section 20, Article II of the 1987 Philippine Constitution which stipulates that: “The State recognizes the indispensable role of the private sector, encourages private enterprise, and provides incentives to needed investments.” In recognition of this role in sustainable

development, Congress enacted two primary laws to implement the same: The Government Procurement Reform Act (RA 9184) for the procurement of goods, supplies and services, and the RA 6957 as amended by RA 7718 or the Philippine BOT Law which provided a more focused framework in PPP infrastructure development. The enactment of RA 6957 allowed LGUs to enter into contractual arrangements with the private sector to implement infrastructure projects through two variants – Build-Operate-and-Transfer (BOT) and Build-Transfer-and-Operate (BTO). RA 7718 enhances the provision of RA 6957 by broadening the list of PPP government implementing agencies such as government owned and controlled corporations (GOCCs), government financing institutions (GFIs) and state universities and colleges (SUCs); putting in place incentives for attracting private sector investments to venture into PPP projects; and allowing negotiated unsolicited proposals provided that these comply with conditions outlined in the Law. More importantly, RA 7718 provided for the inclusion of other contractual arrangements or schemes to implement PPP projects.

#### **5.2.4 TVET legislation in the context of Lao practices**

In the context of Lao PDR, Human Resources Development in order to address skill shortages is one of the broad strategic directions outlined in the 7<sup>th</sup> Lao National Socio-Economic Development Plan for 2011 – 2016. Human Resources Development is also one of the four ‘break-through’ plans for accelerated socio-economic development, which were endorsed by the 9<sup>th</sup> National Congress of the Lao Revolutionary Party<sup>1</sup>. The Ministry of Education and Sports issued a Strategic Plan for developing the Technical Vocational Education and Training system in 2007, and the Ministry of Labour and Social Welfare developed its ‘Lao Labor and Social Welfare Strategic Plan’ which outlines priorities and goals for labor force skills development to meet ASEAN standards, and to develop an export-oriented and industrialized society.<sup>2</sup>

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<sup>1</sup> Press Release on the IV National Congress of the Lao People’s Revolutionary Party (March 21, 2011)

<sup>2</sup> Draft concept note Lao Development Report 2013

The Government of Laos has started to implement the strategies to improve the human resources base in the country, in many cases in cooperation with development partners. The current and planned support interventions for Technical Vocational Education and Training remain limited in terms of geographic and sector coverage. To date there is no overarching strategy which covers all sectors, including informal sectors, and which clearly outlines the role of the public and private sectors, and sets out actions under a comprehensive policy and institutional framework.<sup>3</sup> In this context, the development of a comprehensive National Qualifications Framework is also key, since it would link all levels of basic education, Skills Development, Technical Vocational Education and Training, and Higher Education under one framework with a recognized assessment and accreditation system.

The Asian Development Bank (ADB) has recognized the need for a more comprehensive cross-sector Human Resources Development approach, and has commissioned a study on the 'Renewal of the Lao PDR National Human Resources Development'<sup>4</sup>. The Australian Agency for International Development (AusAID) is in the process of developing a National Human Resources Development Program together with the Department of Planning at the Ministry of Education and Sports and the newly formed Ministry of Home Affairs, which is responsible for training of civil servants. Initially this national Human Resources Development Program was focusing on the Australian Agency for International Development (AusAID) Scholarship program for higher education. However, based on recent discussions with government counterparts it may include other components such as staff upgrading for officers at the Ministry of Education and Sports, and the program will be delivered through a 'Lao-Australia Centre of Excellence'.<sup>5</sup>

Most of the on-going and planned support interventions and analytical studies in Human Resources Development, Skills Development, Technical Vocational Education and

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<sup>3</sup> Draft concept note Lao Development Report 2013

<sup>4</sup> Lao Development Report HRD 2013, draft concept note

<sup>5</sup> Personal communication Australian Agency for International Development (AusAID), 27 April, 2012.

Training, and Higher Education recognize the need for an increased role of the private sector. Below are examples of current and future interventions by the World Bank (WB), the Asian Development Bank (ADB), the Japan International Cooperation Agency (JICA), the Luxembourg Agency for Development Cooperation (Lux Development), the German Society for International Cooperation Ltd. (GIZ), the International Finance Corporation (IFC), and the International Labour Organization (ILO), which all include components with support to Public Private Cooperation.

The concept notes for the WB Lao Development Report on Human Resources Development, which is being prepared for 2013, outlines four tentative gaps and weaknesses in the current analytical work underpinning the support to HRD in Laos:

- Insufficient evidence of the effectiveness of formal training and education, and limited ability to assess how education impacts the labour outcome of graduates;
- Most skills studies focus on the formal sector which only employs 15% of the Lao labour force in the current situation;
- Studies to date use years of education and training as a measure of skills, and do not differentiate between types of skills such as cognitive and non-cognitive skills, and do not take into account skills acquired through work experience;
- Most of the available information lacks descriptions of distribution of skills in the working-age population, and does not clarify how the labour market rewards and promotes skills development.

The draft concept notes outline three analytical components of the Lao Development Report 2013 on Skills development: i) Skills assessment of workers and firms, ii) Institutional Assessment of skill training institutions, and iii) Tracer study on labour market outcomes of graduates. The ongoing Asian Development Bank 'Strengthening Technical Vocational Education and Training Project's support to the National Technical Vocational and Skills Development Council focuses on developing four Trade Working Groups for furniture, automotive, printing, and construction. The work with the Trade Working Groups is in its initial stages. Workshops have been held to explore priorities of

private sector stakeholders. Over the coming months series of workshops will be held for each Trade Working Group to start the process of developing professional standards, curricula and teacher training.

## **6.0 Selected PPP Models (based on evidence from the country reports)**

PPPs can be regarded as a “set of institutional relationships between the government and various actors in the private sector and civil society.” They represent an arrangement whereby representatives of the organised non - governmental sector are brought into the governmental decision-making process. PPPs can be implemented in several forms; however, a PPP in the context of E-TVET refers to an agreement between the public TVET providers and the business sector to work corporately and collaboratively to develop an effective training program that meets industry needs. The objectives of the PPP in the E-TVET context is to create a balance between supply and demand, to identify the needs of the labour market and develop credible standards of training and combine business interests with development of policy goals. Such PPPs will be jointly planned, financed and implemented.

Flexibility is paramount when creating PPPs. Although each PPP exhibits common defining characteristics, each PPP will be unique, depending on the individual partners and their requirements, the nature of the training, resources available, etc. Partnerships should be developed with the goal of achieving complementarity of the partners. The contribution of partners must complement each other in such a way that all parties involved achieve their goals and gain the required benefits of such a partnership. Contributions by the private and the public sectors will be distinctly agreed upon each project. Each PPP will be done within the context of this Conceptual Framework according to one of the four business models. PPPs will fit within a national context including a National Qualifications Framework and an accreditation and licensing system.

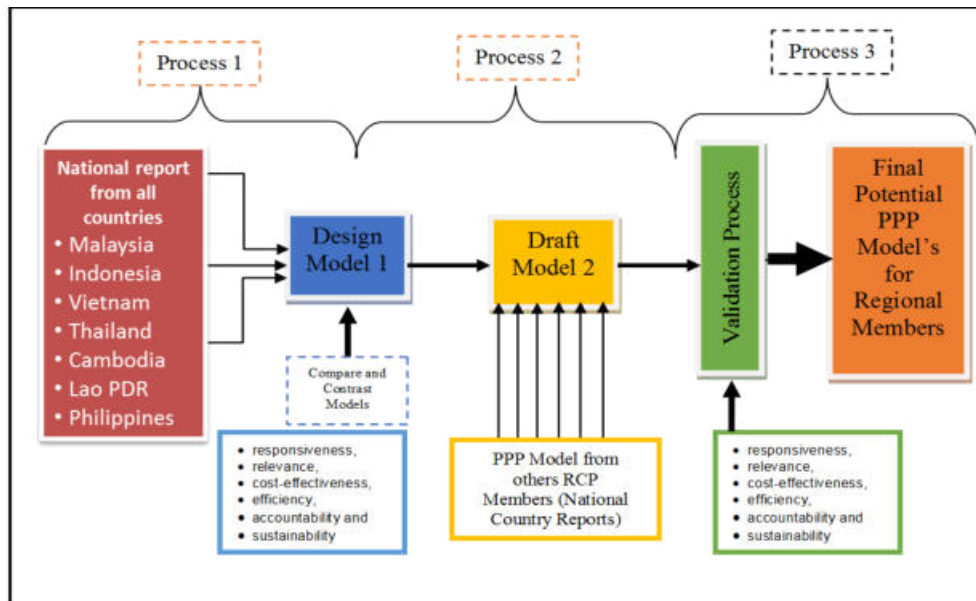


Diagram 2: Framework for the development of Regional PPP Model.

## 6.1 Indonesian initiatives in PPP

Indonesia is one of the countries in the region which is active in implementing PPPs. The country report suggests there are various models for PPP arrangement in Indonesia.

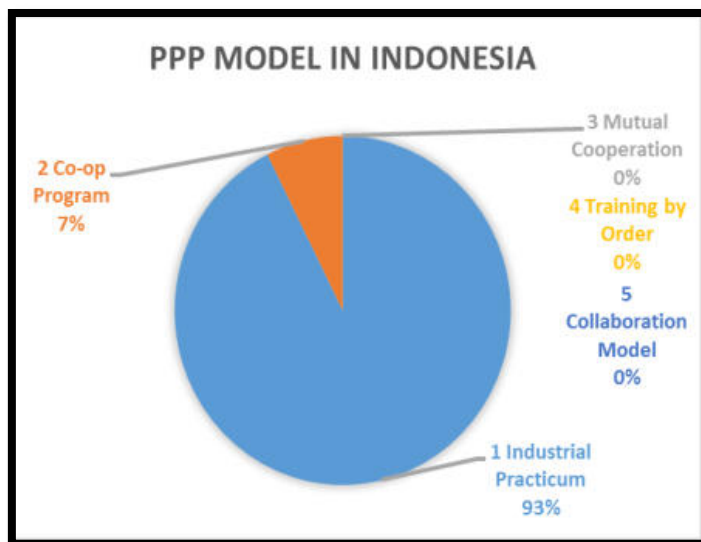


Diagram 3 : Model of PPP in Indonesia

The responsibility to produce better skilled students in PPP programmes lies primarily on TVET institutions. However, the role of the government is crucial in overcoming the skill

mismatch and providing a veritable tool to achieve national development. Furthermore, TVET institutions, government and industries believe that PPP programmes are very beneficial for enhancement of skills.

Furthermore, all stakeholders agree that the relevancy of the TVET courses offered by the universities and training institutes in cooperation with industry needs to be assured. This relevancy could be supported by the more active involvement of the industry. According to the study results, all stakeholders agree that periodic consultations with the industry have to take place in order to receive first-hand information with regard to current occupations and skills in demand, and therefore, to identify programme priorities for their sector. This will increase the level of trust among employers with regard to the skills competencies of recent graduates and therefore, enhance employability.

It can be concluded that strong cooperation between TVET institutions, the government and the industry has to be developed in order to overcome the gap between the level of TVET institutions' graduates skills and industrial skills requirements.

At the same time, TVET institutions, government organisations and industries barely believe that PPP programmes will ensure proper financial flows and lower the costs of operations due to the greater managerial efficiency PPP could ensure. This is attributed to the lack of government involvement and the fact that there is no established system to support PPPs. Moreover, TVET institutions and government organisations doubt that PPPs will be able to reduce administration costs borne by TVET institutions and the government. However, TVET institutions suppose that this might be overcome if a specific percentage of income tax generated annually by the government would be utilised for the provision of training facilities to universities and TVET institutions. Thus, such a policy would be able to cater to a much larger student population.

On the other hand, most of the industry representatives agree that PPPs are able to overcome the administration costs and cost operation problem which would lead to the revenue increase. Meanwhile, the government organisations merely agree that PPP programmes would help the industries to overcome their financial constraints. Thus, it

can be concluded that the cost-effectiveness of PPP is not yet fully realised due to the lack of the government policies to support PPPs implementation.

The implementation of PPPs would significantly improve the efficiency of TVET institutions, government organisations and the industry. It would provide shared cost savings, faster and more efficient services and information delivery, and it also would lower bureaucratic constraints. Moreover, decentralising roles and distribution of power and authority within PPP in TVET are important for effective delivery of training, particularly for TVET institutions and government organisations.

The implementation of PPP programmes would also contribute to the better learning outcomes, thus it should become the main goal for TVET institutions, the government and the industry. Moreover, the government has to ensure accountability of PPP programmes since to a greater extent it is responsible for supporting PPP in terms of finances and training facilities. However, the industry claims that the role of the government involvement in providing financial support or training facilities for PPP is still very low. Furthermore, TVET institutions and government organisations believe that universities and training institutions should have a lead in future planning of PPP programmes. However, this concept is not fully supported by the industry. PPPs should be implemented collaborative programmes between TVET institutions and the industry under the supervision and support of the government.

In terms of sustainability of PPPs in a long run, PPP programmes would enable universities and training institutions to produce competitive graduates and prepare students for employment in the recognised occupations. TVET institutions also strongly agree that PPP programmes have to be designed to train a skilled and entrepreneurial workforce in order to build wealth and reduce the menace of poverty and unemployment. The idea that PPPs help to reduce unemployment and diminish the skill gap is also supported by the government organisations and industries. Thus, it can be concluded that PPPs will provide ensure sustainability and build national welfare.

Based on the country report analysis, the following can be concluded:

1. The type of PPP model in Indonesia is the apprenticeship.
2. There is a big skill mismatch (unbalanced supply and demand).
3. The role of the government organisations in supporting the PPP programme is low. The role of the government as a bridge between universities and training institutions in TVET and the industry remains unclear. In addition, the government doesn't perform its regulatory function with regard to PPP arrangements well.
4. The bureaucracy system in Indonesia doesn't encourage the implementation of PPP programmes.

## **6.2 Cambodian PPP**

As TVET continues to grow and mature, new strategies are required to meet the NTB's policy directions. Cambodia TVET calls for increased emphasis on recruiting more secondary school graduates and out-of-school youth to Diploma and 28-degree level TVET. The development of a plan to re-organize and expand the existing institutional TVET system to increase its efficiency and effectiveness, especially in meeting the growing needs of the enterprise. The PPP in TVET calls for a review of the role the enterprise plays in the financing of TVET as a beneficiary and the place of public-private partnerships in the provision of skills development. With strength now imbedded in the system in the field of rural poverty reduction, NTB will seek ways to expand and sustain the Voucher Skills Training Program introduced in the Asian Development Bank supported TVET and to more closely link the training provided for new TVET staff to ensure that they meet the evolving needs of TVET institutions. Finally, it is clear that without a National mechanism to match TVET graduates and other job seekers with employment, the overall efficiency of the labour market is limited and the effectiveness of TVET in training for employment is not realised. Thus over the year ahead, the NTB will support the development of a national employment system to link job seekers with the enterprise seeking new employees and with training providers if the skills do not match the requirements.

Therefore, an effective type of PPP that involves the collaboration from the industry and TVET institution is really helpful in developing the economy of the country.

PPP models as good practice in NTTI, Cambodia can be classified into three categories:

- i. School – School model
- ii. School – Companies model
- iii. School – Development partners/ NGOs

School – School model means there is a MOU between NTTI and other institutes and universities at the national, regional and international levels, aiming at ensuring teacher and student exchange. NTTI organises teacher exchanges with HCMUTE experts who come to NTTI to train the teachers on robotic development. NTTI also sends their instructors to the RMUTL to get trained on survey skill development. Moreover, NTTI offers student exchange programmes in cooperation with universities in Thailand and Vietnam in the study fields such as robotics and electronics. NTTI also hosts students from domestic and foreign institutes and universities.

School – Company model is aiming to ensure linkages with private sector, and therefore create opportunities for students and instructors to get an in-company experience – internships for students to practice skills in a real working environment and possibility for staff to upgrade skills and competences with regard to e.g. new technologies the companies use.

As an example of a good practice in PPP could serve a cooperation between Battambang Institute of Technology (BIT), represented by Mr. Ouk Davandy, the authorized director, having its principal office at National Road no.5. nearby the Battambang Airport, Cambodia, and KUBOTA (CAMBODIA) Co., Ltd., represented by Mr. Weerapong Wirabutra, the authorized director, having its principal office at #42, Street No.306, Sangkat Boeungkengkong 1, Khan Chamkarmom, Phnom Penh City, Cambodia. Whereas, KUBOTA CAMBODIA wishes to support and develop the agricultural machinery curriculum in TVET in frame of the programme called the KUBOTA Technical Education Center (hereinafter referred to as the "KTEC") as a part of

KUBOTA CAMBODIA's policy on social contribution. Therefore, KUBOTA CAMBODIA cooperates with BIT on KTEC to support the development of Technical and Vocational Education and Training in Cambodia, especially in the field of agricultural machinery through their involvement in curriculum development.

School – Development partners/ NGO. In cooperation with UNIDO and the Ministry of Environment, NTTI offers a joint training programme for young people to develop their skills in electronic industry and teach them about business opportunities in e-waste industries for small business creation and start-ups. Teacher's upgradation is assured by sending instructors to Thailand, Korea, German, China, Vietnam with a purpose of field training and field visits to the companies such as Samsung Electronics Inc.

### 6.3 PPP models in the Philippines

The Public-Private Partnership Center of the Philippines is the sole body tasked to facilitate and coordinate the country's PPP programmes. A part of its task is to manage a revolving fund called the Project Development and Monitoring Facility. At the same time, the PPP Center provides Implementing Agencies (IAs) technical advisory support in project development and management and monitors the implementation of PPP priority projects. Another part of its task is to formulate policy guidelines for PPP transactions as well as develop and manage a central database of all PPP programmes and projects.

| PPP Modality                     | Role of the Private Proponent                                                                                                                                             | Role of the Government                                                                                                                         | Notes/Remarks                                                                                                               |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------|
| Build-Operate-and Transfer (BOT) | Finances and constructs; operates and maintains facility for a fixed term; collects fees and charges to recover investments plus profit; transfers facility at the end of | Provides franchise (if required) and regulates activities of BOT contractor; acquires ownership of facilities at the end of cooperation period | Includes a supply-and-operate scheme, a contractual arrangement whereby the supplier of equipment and machinery for a given |

|                                  |                                                                                                                                                                                         |                                                                                                                                                         |                                                                                                                                             |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
|                                  | cooperation period (maximum of 50 years)                                                                                                                                                |                                                                                                                                                         | infrastructure facility, if the interest of the Government so requires, operates the facility.                                              |
| Build-and-Transfer (BT)          | Finances and constructs; turns over after project completion ownership of the facility to government                                                                                    | Acquires ownership of facility after construction; compensates proponent at agreed amortization schedule                                                | May be employed in any project, including critical facilities which, for security or strategic reasons, must be operated by the Government. |
| Build-Own-and-Operate (BOO)      | Finances, constructs and owns facility; operates and maintains facility in perpetuity (facility operator may be assigned); collects fees and charges to recover investments and profits | Provides authorization and assistance in securing approval of BOO contract; possesses the option to buy the output/service provided by the BOO operator | All BOO projects upon recommendation of the NEDA-ICC shall be approved by the President of the Philippines                                  |
| Build-Lease-and Transfer (BLT)   | Finances and constructs; turns over project after completion; transfers ownership of facility after cooperation/lease period                                                            | Compensates proponent by way of lease of facility at agreed term and schedule; owns facility after cooperation/lease period                             | Akin to Lease-to-Own                                                                                                                        |
| Build-Transfer-and Operate (BTO) | Finances and constructs on a turn-key basis; transfers title of facility after                                                                                                          | Owens facility after commissioning                                                                                                                      | Minimizes construction risk delays                                                                                                          |

|                                                 |                                                                                                                               |                                                                                                                     |                                                                                                                                                                                                    |
|-------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                 | commissioning;<br>operates the facility<br>under an<br>agreement                                                              |                                                                                                                     |                                                                                                                                                                                                    |
| Contract-Add<br>and-Operate<br>(CAO)            | Adds to an existing<br>facility; operates<br>expanded project<br>for an agreed<br>franchise period                            | Collects rental<br>payment under<br>agreed terms and<br>schedule; regains<br>control at the end<br>of lease term    | There may or may<br>not be a transfer<br>arrangement with<br>regard to the<br>added facility<br>provided by the<br>Project Proponent                                                               |
| Develop-<br>Operate-and<br>Transfer (DOT)       | Builds and operates<br>a new<br>infrastructure;<br>transfers property/<br>facility at the end<br>of the cooperation<br>period | Regains possession<br>of property turned<br>over to investor<br>after cooperation<br>period                         | Project proponent<br>enjoys some<br>benefits the initial<br>investment<br>creates such as<br>higher property or<br>rent values; akin<br>to BOT with the<br>option to develop<br>adjoining property |
| Rehabilitate-<br>Operate and-<br>Transfer (ROT) | Refurbishes,<br>operates, and<br>maintains facility;<br>facility is turned<br>over after the<br>franchise period              | Provides franchise<br>to ROT company;<br>regains legal title of<br>property/ facility<br>after franchise<br>period  | Also used to<br>describe the<br>purchase of<br>facility from<br>abroad, importing,<br>refurbishing,<br>erecting and<br>consuming it<br>within the host<br>country.                                 |
| Rehabilitate-<br>Own and-<br>Operate<br>(ROO)   | Refurbishes and<br>owns facility;<br>operates facility in<br>perpetuity as long<br>as there is no<br>franchise violation      | Turns over facility<br>and provides<br>franchise to<br>operate; may opt to<br>share in the income<br>of ROO company | Period to operate<br>is dependent on<br>franchise<br>agreement.                                                                                                                                    |

## 6.4 PPP best practices in Thailand

Thailand is facing a lack of quality manpower in the industrial sector in the fields of technology, research engineers and technical staff (Parpart, 2015). The main reason being a shortfall in the curriculum design adopted in vocational colleges and institutes as they were found to be outdated and lacking in practical approaches. The second factor is the lack of interest in vocational education among young Thai people with high academic potential, largely due to the fact that technician positions provide low salary in comparison to other professions, despite long working hours and heavy workload.

In relation to the socio-economic landscape, Thailand, similarly to the most of ASEAN countries, is stuck at what is referred to as the middle-income trap (MIT) (Jitsuchon, 2012). This trap occurs when a country is stuck at the income dictated by given resources and initial advantages and cannot rise beyond that threshold (Maddison, 2003). One of the methods, in order to get out of this trap is to create an effective integration of public-private partnership in collecting and sharing industrial information between government, businesses and education institutions to improve the knowledge and skills of the workforce thereby allowing the country to increase the income per capita.

Thus, Work-integrated Learning - School in Factory (SiF) has been introduced in Thailand.

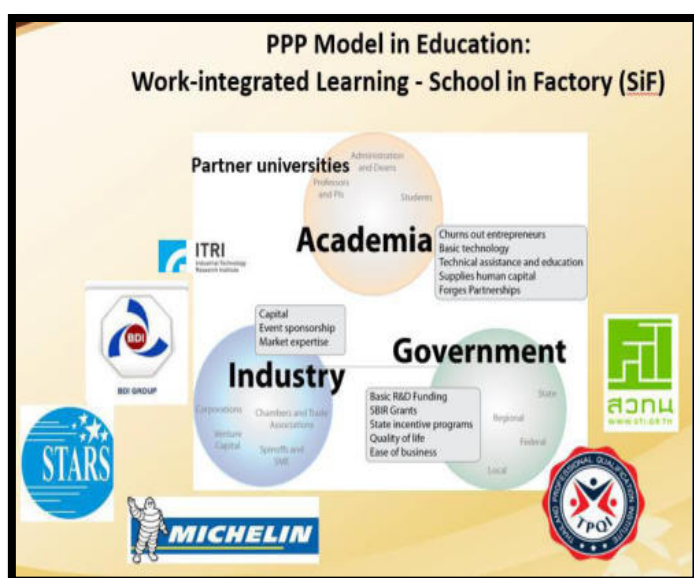


Diagram 4: The model was developed by RMUTL, STI and Siam Michelin Co, Ltd

The objective of the model is to produce graduates who have good foundation in science and technology and provide opportunities for further studies. Re-designing the work-integrated learning (WiL) curriculum with hands-on approach requires working together with the stakeholders: the industry, the instructors and the students. The university is responsible for teaching the theory and preparing academic units and the industry, in turn, trains students in their professional field as well as helps to develop their job competencies.

The results suggest that this project is a practical and successful educational management model that meets the needs of government, university and industry and should be expanded to other companies and institutions in Thailand.

The expense concerning the project advisor, project head, committee, site director and coordinators, are offered by STI. RMUTL contributes to the salary of the professors and the incurring costs of using the machinery and workshops on campus for the students.

The funding of the SiF came from three sources namely, the government STI, Michelin and RMUTL. The company budget, from Siam Michelin Co., Ltd. is paid to employees but converted into educational expenses. Those are teachers' salary, travel expenses of senior lecturers, school fees of SiF students, monthly allowances, accommodation cost, books, health insurance and transportation. After completion of the program of study, SiF students will not be required to pay the mentioned costs back to the company.

A model is a good example of how to ensure that students expand their intellectual horizons, acquire and constantly improve professional skills and knowledge and engage positively in society utilising the fruits of economic and technological change for the general welfare.

The results show that students had outstanding learning outcomes and gained work readiness skills or necessary employability skills. Abolishing barriers between levels and areas of education, between education and the world of work and between school and society through:

- The appropriate integration of technical / vocational and general education at all levels;
- The creation of open and flexible educational structure;
- Taking into account individuals' educational needs, the evolution of occupations and jobs recognizing work experience as a part of learning.
- Improving quality of life by creating a learning culture.

From the perspective of Michelin, the benefits of a SIF project are as follows: firstly, quality labour, secondly, they acquire workers who have worked full time efficiently. Speaking of the government, it also benefits by not having to seek expensive tools and equipment for universities. It is a win-win situation.

The study reveals that factories should provide the main expenditure, but universities might provide support in terms of teachers. Government might adjust some policy including lowering taxes, providing welfare and incentives to attract factories to the scheme. In the past, education and demands of the industry might not have been the same because the education system provided knowledge to students in one way, but the private sector needed human resources for a different type of work. But nowadays, work-integrated learning or in-company training for learners (refer Figure 14, 15, 16) will help foster cooperation between education and private sector in order to produce higher quality human resources for labour market. The PPP pilot project has produced positive results. With the modifications outlined in the national report and the satisfactory outcomes / benefits of the project, WiL/SiF would be advanced as a means of preparing students as a qualified and competent workforce.

## **6.5 PPP best practices in Vietnam**

The cooperation between enterprises and vocational education institutions is an important strategic element in the development of vocational education to meet the requirements of society. Privatisation will be an important component in the activities / programmes of cooperation between schools and businesses. The models of cooperation between schools and enterprises in vocational education include:

- By Place (from the public);
- By Place (from business);
- Practice skills in the enterprise;
- Dual Training System;
- School in Factory;
- Industrial Training.

In the context of Vietnamese vocational education today, the model “practice skills in the enterprise” to train students is a priority model selection with a lot of opportunities. Major models of cooperating between businesses and training institutions include the following: (1) Businesses accept students of training institutions as interns; (2) Businesses establish training institutions to train learners for the need of business and society; (3) Cooperative training (dual training); and (4) UBC model (University-Business Cooperation Model) is the model in which occupational skills are trained by enterprises and theory is taught at training institutions.

Current TVET PPP models / projects between the government, universities and enterprises:

- At the policy level the following forms of cooperation do exist:
  - Enterprises engage in making lists of vocational training;
  - Enterprises participate in developing national vocational skills standards;
  - Enterprises participate in developing the framework programme;
  - State orders manpower training provided by the TVET institutions.
- At the level of training activity, currently, there are many forms of cooperation between enterprises and vocational training institutions such as:
  - Student exchange between training institutions and enterprises;
  - Enterprises organise vocational training for students of vocational training institutions;
  - The assistance programme exists to provide scholarships for students;
  - Business training school order;

- Enterprises participate in developing training programmes;
- Enterprises establish the professional educational institutions.

In fact, this public-private partnership model was created based on vocational training models existing in the world (see Table 2)

|    | <b>Model of vocational training</b>                                                                | <b>Public-private partnership model</b>                                                                     |
|----|----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| 1. | Model of traditional vocational training                                                           | Cooperation model<br>"Training in the labor process"<br>(Industrial Training; On-the- job training)         |
| 2. | School model (vocational training takes place at schools, state management)                        | Model of cooperation<br>"State orders the form of training"<br>(By Place – from the public)                 |
|    |                                                                                                    | Cooperation model<br>"School links interns with the enterprise" (Practice skills at enterprise)             |
| 3. | Dual training model – Dual model (vocational training) takes place both at schools and enterprises | Model of cooperation<br>"Schools linking with business with the purpose of training" (dual Training System) |
|    |                                                                                                    | Cooperation model "Order from businesses " (By Place – from Businesses)                                     |
| 4. | Model training market – Market model (not managed by state)                                        | Model of cooperation<br>"Training at schools and enterprises" (School in Factory).                          |
|    |                                                                                                    | Cooperation model "Order training from the state" (By Place – from the public)                              |
|    |                                                                                                    | Cooperation model "Order from Businesses " (By Place – from businesses)                                     |

## 6.6 Lao PPP model

Dual Cooperative Training (DCT) is a German model of vocational education promoted by Vocational Education in Laos (VELA) which focuses on practical training of students by

partnering with employer enterprises. The DCT model provides work skills through training partnership agreements between employers, TVET schools, and/or student, where the TVET provides basic and theoretical training and the employer provides practical training in the workplace.

Currently DCT has been adopted only in the Lao-German Technical College in Vientiane. The other TVET schools implement other forms of workplace training or internship through the competency Based Techniques (CBT) or similar models.

Workplace training may take different forms and may be called by different names. This includes the DCT system at the Lao-German Technical School as well as apprenticeship and internship at other TVET schools. The generic term, workplace training will be used to refer to any of the above scenarios (Report of VELA-Project-Survey of Vocational Training Dual Cooperative Training, 2015, s.1).

Since September 2014 to February 2015, the project organized workshops with all relevant stakeholders from both the public and private sectors to develop the standard. Afterwards, in April 2015, the curriculum for In-Company Trainers was developed, the content of was later used for the 1<sup>st</sup> Pilot Training for Master Trainer Course in Vientiane, Lao PDR.

The qualified master trainers will then act as multipliers to train in-company trainers in their countries in order enhance their training skills and knowledge for more effective in-company training as a whole.

The project “Effective In-Company Vocational Training in the Mekong Region” funded by Federal Ministry of Economic Cooperation and Development (BMZ) on behalf of GIZ aims to promote Dual Vocational Education System by stressing the role of private sector in workforce development as an approach to tackle the lack of skilled labour in the region.

In-Company Trainers Training (ITT) Course is organized at Entrepreneurship Training Centre (ETC) Vientiane, Lao PDR with an aim to train the trainers from companies on pedagogical and didactical aspects of training by using the curriculum for In-Company Trainers and “The Standard for In-Company Trainers in ASEAN Countries” as baseline.

After the training, the trainers will be able to train trainees and employees in their respective companies. In-Company Trainers Training Course is a 2-week course (min 80 hours) created to enhance training skills of the trainers. The contents of 4 modules as follows:

Module 1: Analysing work tasks and defining learning requirements (8 hours).

Module 2: Planning and Preparing Training (16 hours).

Module 3: Conducting Training (40 hours).

Module 4: Evaluation and Further Development of Training (16 hours).

During the course, In-Company Trainers will be trained by a qualified Master Trainer. Practice-oriented training is the focal point of the course in which In-Company Trainers will perform on the basis of learning by doing.

It is very important for the university or educational institution to accept the proven fact that having meaningful and workable linkage with industry is one of the most essential requirements of modernization of higher education, and that safeguard the interests of both the university and industry, help the university to modernize itself and play a major role in improving the state of the economy of countries. This is how Higher Education can become more and more relevant to the needs of the country and keep up with fast pace of advances in science & technology which can be used in trying to find solutions the problems industry faces on daily basis.

The following procedure, which is a well tried and tested approach, may perhaps be the most effective one to be used in Lao PDR. The steps to be taken are:

- The university or institutional must accept that without linkage with the industry it cannot be able to play a significant role in the improvement of national economy of the country.

- The industry must accept that there are great deals of high level expertise and skills in the university the industry cannot afford not to use them if it wants to remain competitive and stay ahead of competition.
- The university or educational institution must establish Industrial Liaison Office (ILO) charged with the responsibility of establishment and management of all the linkage programmes between university or educational institution and industry.
- The university educational institution ought to show the industry that it is prepared to consider programmes of Programmatic Reviews (PR), every 2 years, aimed at upgrading its courses and bringing them more and more in line with the needs of industry.
- The Industrial Liaison Office must arrange meetings so that industry can tell university educational institution about the topics of courses and syllabi the industry wishes to be included in the teaching programmes of the university courses.
- The industry must agree to commit the necessary financial and technical resources to the programmatic Review programmes aimed at establishing linkages.

The Industrial Liaison Office must inform the Ministry of Education and Sport, Ministry of Industry and Commerce about the aims and objectives of the linkage programme. The Ministries must be enlightened about the benefits such programmes in the modernisation of Higher Education and Industry and the positive impact the linkage programmes can have on improvement of the state of the economy.

## **6.7 Malaysian best practices in employer engagement**

In the context of Malaysia, PPP involves transfer of responsibility to the private sector which means support in terms of funding for training and managing a package of capital investment and services, including construction, management, maintenance, refurbishment and replacement of public sector assets such as buildings, infrastructure, equipment and other facilities. In PPP projects, there is a contract for mutual understanding between a public and a private party to deliver public infrastructure-based services over a long period of time.

For example, one of the Government Linked Company (GLC) has been involved in PPP programmes. Method of delivery called Work-Based Learning includes both guided lessons at the Proton Training Centre (PTC) and on-the-job training at Proton Edar Service Centres (PESC). According to Tajul Ariffin (2009) the WBL programme should have elements of coordinated classroom and workplace learning, integration of occupational-technical and academic curriculum and also a relevant assessment system. This WBL approach is similar to Flanagan, Baldwin and Clarke (2000), Boud, Solomon and Symes (2000), Gary (2001), collaborative concept. The WBL programme designed for students at community colleges is based on guided lessons that involve theory lessons in which they have to undergo continuous lessons for 5 days each month at PTC. It concentrates on recapitulating the basic/intermediate knowledge in automotive industry as well as lessons at the advanced level in the Proton technology. Assessments are held at the end of each course. Following that, the students are allocated at the PESC for 3 weeks before coming back to the PTC. Speaking of the on-the-job part, their work is based on the students' 'Job Record'. One mentor is designated to one student and guides a student in executing the tasks. The skills and competencies of the student are monitored by the service head. Then, the lecturer and the trainer from PESC assess students on a regular basis.

To ensure the 'best fit' between knowledge and experience, a more flexible way of achieving the learning outcomes suggested by curriculum within an accreditation framework could be explored, using workplace methods of networking, peer learning and collaborative problem solving to co-investigate and interrogate relevant theories and ideas. Strategies for recognising existing learner strengths and needs and setting in place organisational and support frameworks may need more attention in preparing students for work-based learning. Use of a reflective learning journal as a focus for critical analysis and dialogue between a student and an mentor might help to bridge gaps between academy and workplace. To work in collaboration, a university and an employer need to be flexible, adaptable and prepared to learn from each other. Both could benefit from collaborative and participative research and continuing professional development initiatives, including training for mentors and work-based learning programmes. Investigating ways of developing a 'bottom-up', work-based, rather than a

‘top-down’, university-imposed curriculum might encourage cultural cohesion between an academy and an employer and help promote active, reflective, creative support for learners.

## 7.0 Impact of the existing PPP models on the economy

### 7.1 Data Analysis for Performance Indicators

This project explored an ideal theoretical approach to PPP model using six (6) indicators such as responsiveness, relevance, cost-effectiveness, efficiency, accountability and sustainability to measure effectiveness of PPP programmes. There are three main stakeholder groups: TVET Institutions, the industry and the government. 360 respondents from these groups (120 participants from each group) took part in the survey conducted in the frame of the study. A confirmatory factor analysis (CFA) was executed to ensure that the indicators defined can effectively measure PPP performance. The instruments for 6 performance indicators were developed (Table 1) based on 5-point Likert Scale. The following items were distributed through the questionnaire to the respondents.

| Performance Indicator | Items                                                                                                                                                                       |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relevance             | Courses offered at universities/training institutes are relevant (correspond to the industry needs).                                                                        |
|                       | The equipment used during training is up-to-date.                                                                                                                           |
|                       | Industries should be consulted periodically to provide specific advice on occupations and skills in demand and to identify key skills, project priorities for their sector. |
|                       | The company/industry welcomes graduates because they know the graduates obtain a certain level of skills and technical capabilities.                                        |
| Responsiveness        | PPP for universities/training institutes in TVET can produce more skilled students                                                                                          |
|                       | PPP for universities/training institutes can produce graduates who meet the demands of the industry                                                                         |
|                       | PPP remains a veritable tool to achieve national economic development                                                                                                       |

|                    |                                                                                                                                                                                    |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | PPP programme alerts of skilled training enhancement                                                                                                                               |
| Cost-effectiveness | PPP can ensure proper financial flows.                                                                                                                                             |
|                    | PPP help industry to overcome their financial constraints.                                                                                                                         |
|                    | PPP will reduce administration costs that are borne by institutes/industry/government?                                                                                             |
|                    | A specific percentage of income tax generated annually by the government should be utilized for the provision of training facilities ar universities/training institutions in TVET |
|                    | Cost of operation is expected to be much lower due to the greater managerial efficiency in PPP.                                                                                    |
|                    | Without investing a considerable amount of money upfront, government would be able to cater to a much larger student population.                                                   |
|                    | PPP will reduce costs and increase revenues.                                                                                                                                       |
| Efficiency         | PPP shares cost savings.                                                                                                                                                           |
|                    | PPP lowers bureaucratic constraints.                                                                                                                                               |
|                    | Decentralising roles, power and authority of PPP in TVET is important for effective delivery of training.                                                                          |
|                    | PPP promotes faster and more efficient delivery of services / information.                                                                                                         |
| Accountability     | PPP contributes to high achievement in TVET training.                                                                                                                              |
|                    | Private sector should be the key player in PPP activities/programmes.                                                                                                              |
|                    | Government is highly responsible for supporting PPP in terms of funding and training facilities provision.                                                                         |
|                    | Universities/training institutions should take a lead in future planning with regard to PPP.                                                                                       |
| Sustainability     | PPPs in universities/training institutions produce competitive graduates.                                                                                                          |
|                    | PPP in TVET is designed to produce the skilled and entrepreneurial workforce that is needed to create wealth and would help reduce the menace of poverty and unemployment.         |
|                    | PPP in TVET prepares persons for employment in a recognised occupation.                                                                                                            |

Table 1 : Index Items for Performance Indicator

According to Hair *et al.* (2010), Confirmatory Factor Analysis (CFA) shows how well measured variables can represent small number of constructs. Hence, the CFA for PPP constructs covers responsiveness, relevance, cost-effectiveness, efficiency, accountability and sustainability as in Figure 1.

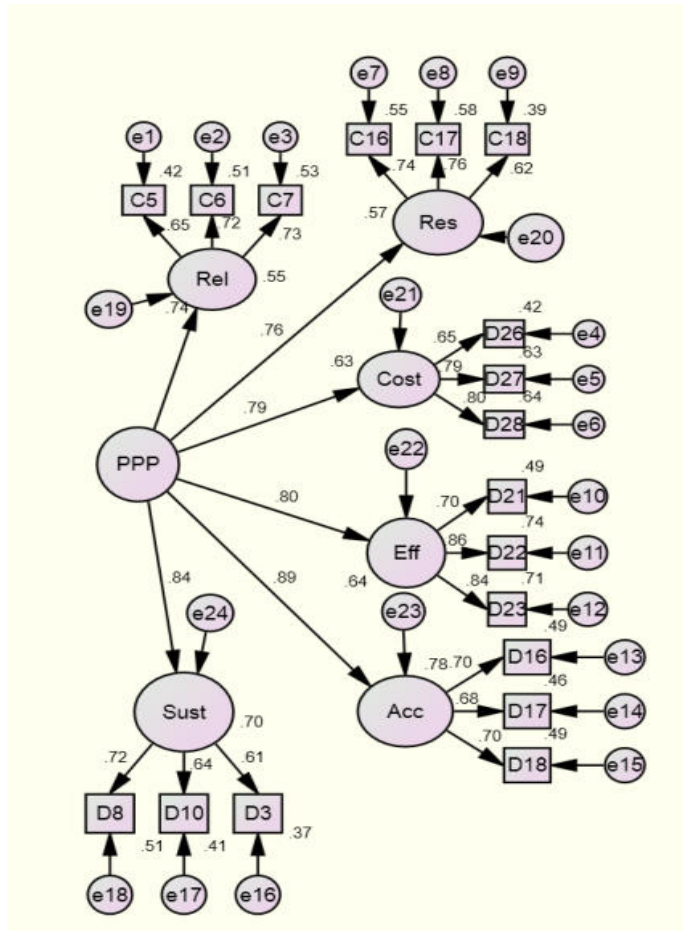


Figure 1 : The PPP Characteristic CFA related to Performance Indicator

To meet the Goodness of Fit (GOF), the items for each sub construct were amended to get the best model. The results indicated that the CFA model for SIS has sufficient and significant GOF at 0.05 level with AVE = 0.50 and CR = 0.93.

Hair *et al.* (2010) proposed to assess the measurement model validity before assessing a structural model. Measurement model is the specification of the measurement theory that shows how constructs are operationalised by sets of measured variables. Hence, the measurement model analysed in this research included the entire CFA model. Model fits for overall construct was tested and the result indicated that the measurement model fits the data. This shows that the characteristics (indicators) in this model are confidently

believed and can be used in developing PPP. From Table 2, it can be seen that the measurement model has a good fit with data. In addition, Hoelter's critical N is 245 that explaining the sufficient sample size. Hoelter's  $N > 200$  indicates the sufficient sample (Byrbe, 2010).

| <b>GOF Index</b> | <b>CMIN (X2)</b> | <b>Df</b> | <b>CMIN/df</b> | <b>GFI</b> | <b>CFI</b> | <b>RMSEA</b>          | <b>Hoelter's Critical</b> |
|------------------|------------------|-----------|----------------|------------|------------|-----------------------|---------------------------|
| Value            | 2788.11          | 1800      | 1.55           | 0.90       | 0.93       | 0.04<br>(PCLOSE=1.00) | 245                       |

Table 2 : Goodness-of-fit Indices for the Measurement Model

For reliability test, the model has internal reliability with Cronbach Alpha of 0.99, composite reliability with CR=0.99 and the Average Variance Extracted with AVE=0.51. The summary of fitness category is explained in Table 3 in terms of Absolute fit, Incremental fit and Parsimonious fit.

| <b>Name of category</b> | <b>Name of index</b> | <b>Index value</b> | <b>Comments</b>                |
|-------------------------|----------------------|--------------------|--------------------------------|
| Absolute fit            | RMSEA                | 0.04               | The required level is achieved |
|                         | GFI                  | 0.90               | The required level is achieved |
| Incremental fit         | CFI                  | 0.93               | The required level is achieved |
| Parsimonious fit        | Chisq/df             | 1.55               | The required level is achieved |

Table 3: The Fitness Indexes for Measurement Model

Meanwhile, the regression for the components was analyzed as in Table 4. This shows that all characteristics have a significant effect towards PPP with  $R^2$  more than 0.74.

|                         | Estimate |
|-------------------------|----------|
| Relevance <--- PPP      | .745     |
| Responsiveness <--- PPP | .757     |
| Cost-effective <--- PPP | .791     |
| Efficiency <--- PPP     | .803     |
| Sustainability <--- PPP | .837     |
| Accountability <--- PPP | .885     |

Table 4: the standardized regression weight

This analysis highlights how six defined performance indicators reflect Public-Private Partnership implementation. Accountability appears to have the most influence on PPP while the other characteristics have the significant effect on PPP. It is important to make sure that the PPP is successfully implemented based on these characteristics. Therefore, this analysis proves that relevance, responsiveness, cost-effective, efficiency, sustainability and accountability are performance indicators which can adequately measure the effectiveness of a PPP model. Table 5 indicates 3 most relevant out of 6 defined performance indicators:

|                |          |      |
|----------------|----------|------|
| Efficiency     | <--- PPP | .803 |
| Sustainability | <--- PPP | .837 |
| Accountability | <--- PPP | .885 |

Table 5: most relevant performance indicators

## 8.0 Factors of success

Country reports show similarity in perceptions of public and private sectors on the key success factors of a PPP project. For example, (1) good governance, (2) commitment of both a TVET institution and the industry, (3) favourable PPP model and a legal framework beneficial for both parties, (4) clear and good developed economic policy, and (5) available financial resources from both the private sector and the government, were defined as success factors of PPP implementation in Malaysia. Although many other factors could contribute to the success of PPP.

The most successful among existing PPP models is NDTs which has been implemented in most countries (Thailand, Vietnam, Malaysia, Laos and Cambodia). For instance, Thailand has listed following success characteristics for implementation of a PPP model they use (School in Factory (SIF)):

- Teachers who have good attitude in the SIF context;
- Work-integrated learning curriculum and teaching pedagogy;
- Manufacturing equipment and machinery for individual students;
- Understanding of how SiF programme is conducted by all stakeholders;
- Financial support from public-private partnership stakeholders.

Furthermore, Prof. Dr. Spoettl (2016) suggests the following criteria of a PPP programme which could contribute to the success of its implementation:

- Government services/ agencies, private sector (companies) and universities and private institutes agree to cooperate;
- financing of PPP is clarified;
- sector committees are formed;
- existence of typical qualification profiles of TVET personnel;
- theoretically underpinned standards that excel by a close proximity to the requirements;
- high sensitivity of the TVET personnel and those qualified within the TVET system for initiating innovations.
- Government realise about the important of graduate employability. Therefore, industries has been encourage to involve in PPP program.

It is exceptionally difficult to address funding of PPP in the sense of general financing. Normally PPPs are financing themselves by the partnership rather than by taxes collected by the countries. The following financing model should be considered:

1. Operative tasks (operation of offices, journeys, meetings): Financing will be shared by enterprises and the state.
2. Research: Will be financed by the state in order to guarantee the independence of research.
3. Concrete initiatives (such as pilot projects): Financing models will be negotiated case by case.

This financing model ensures that private sector and official bodies such as ministries and/or the government will participate in funding.

At a national and regional level, the practice of funding should be clarified within the PPP projects. As for international funding, there is a variety of available facets to be considered, e.g.:

- *Cooperation and PPP with Global Players.* In this case direct clarifications of the funding between the partners are suitable;
- *Cooperation and PPP with economic circles around certain regions.* In this case trans-sectoral clarifications of funding should be envisaged with the members of the economic circles.
- *Cooperation and PPP with international organisations.* There is a multitude of possible ways of funding which should be clarified individually.

In the context of Vietnam, PPP programmes were classified as cooperation between schools and businesses (industries) which is necessary and suitable to the trend of social development and brings practical benefits. Both businesses and training institutes benefit from such cooperations. Benefits for training institutes are defined as follows: (1) cooperation with business creates opportunities for resource mobilisation from private sector to increase the scale and quality of training; (2) enhances the connection between training and labour market needs. In the situation when the state budget is limited and does not meet the requirements of vocational training development, this form of cooperation is increasingly focused. With regard to “responsiveness” criteria, the following PPP models are defined as the most successful:

- Industrial training;
- Training at industrial school;
- Dual Training System;
- Transforming institute practice into enterprise skills;
- By Place (from businesses);
- By Place (from public).

In turn, benefits for enterprises include the following: (1) cooperation with training institutes will help capture capabilities and characteristics of the training institutes to coordinate and train students to meet their requirements; (2) products of the cooperation between enterprises and schools would suit the market’s need (both in quantity and quality); (3) enterprises will save additional training costs when recruiting recent graduates. To properly deal the interests of the parties is the basis for the development of cooperation programs.

| <i>Object</i>             | <i>Benefits</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <i>Students</i>           | <ul style="list-style-type: none"> <li>- Improving the knowledge of learners by experience</li> <li>- Creating more skilled learners with more expertise</li> <li>- Preparing the people who will work in a recognised profession</li> <li>- Improving soft skills of learners</li> <li>- Easily integrating into the work environment after graduation</li> <li>- Increasing income for learners</li> <li>- Having a better orientation</li> <li>- Developing relationships; increasing chances of finding a job</li> </ul>        |
| <i>Business</i>           | <ul style="list-style-type: none"> <li>- Improving the efficiency of business operations</li> <li>- Enhancing business image and prestige in society</li> <li>- Helping businesses develop / prepare long-term human resources</li> <li>- Reducing costs and increasing revenue</li> <li>- Having a potential staff to create competitive advantage in the market</li> <li>- Cost savings for recruitment, training and development</li> <li>- Expanding relations, business promotion and access to potential customers</li> </ul> |
| <i>Training Institute</i> | <ul style="list-style-type: none"> <li>- Increasing the competitiveness and reputation of schools</li> <li>- Improving the quality of the output of training institutions and quality of graduates</li> <li>- Increasing revenue for schools</li> </ul>                                                                                                                                                                                                                                                                             |

Table 6: Benefits of public-private partnerships between schools and businesses

### 8.1 Key Findings

As it can be inferred, there is a great variety of public–private partnerships models used in different countries – each model has different characteristics, design features and country contexts. For the purpose of this study, a PPP is classified in one of four delivery-based PPP categories:

- private management of public university,
- contracting for the delivery of education services,
- vouchers and voucher-like initiatives (win-win initiatives), and
- provision of capacity development services. The review analysed all models which have been reported by the country members.



Diagram 5 : Characteristic Performance Indicator for Regional PPP Model's

#### 8.1.1 Performance indicator – Relevance

As for the relevance indicator of public-private partnership for TVET institutions, the courses that were designed at the universities and training institutes are generally in line with the needs of the industry. Still, consultations with the industries need to be done periodically in order to identify key skills and competences. In fact, industries that were

willing to accept graduates at their workplaces, gave a new dimension for further collaboration.

Meanwhile, private sector considered courses offered by the universities as moderately relevant and showed their willingness to accept graduates to work at enterprises in order to gain experiences in the real working environment. In fact, the industries agreed that it was relevant to have periodically consultations in order to discuss occupations and skills, especially in the fields where the demands tend to change more often.

As for the government, they agreed that the industries should be periodically engaged in consultations. The courses offered by universities and TVET institutions seemed to be relevant from the government's perspective.

### **8.1.2 Responsiveness**

Responsiveness refers to the role of the private sector and the government in the process of human capital development. In conjunction of that, an assessment was made based on both parties factors that contribute to the integrity issues and contributions from the private sector and the government toward human capital development. TVET institutions still consider that PPP is acceptable as an effective method that can be used to achieve national and regional agenda for human capital development. TVET institutions should agree on a PPP model which can be used as a reference to produce competent and skilled workers. All parties in PPP activities and programmes should take responsibility to ensure that all related collaboration projects and activities are executed effectively. On the contrary, government agencies should be able to enable both parties – industry and universities/training institutes in TVET – to produce skilled professionals and therefore to design PPP programmes which will help enhance quality of skills training.

### **8.1.3 Cost-Effectiveness**

In terms of cost-effectiveness of the PPP model for TVET institutions and the government, it can be said that by and large the PPP model helps TVET institutions to manage appropriate financial flows between industries and government financial

constraints. Student involvement in real time experience at workplace not only is essential for students, but for the the whole community involved in the PPP project because cost operations could be minimised with a greater managerial efficiency. At the same time well-planned investments in PPP projects are considered by the government as an opportunity to cater to a larger student population. This also will reflect the goal to reduce the costs and increase the revenues by adopting the PPP model.

Furthermore, from the industry's perspective on the cost-effectiveness of PPP, there were some doubts with regard to the usage of PPP projects. Private sector had a concern on the PPP projects cost operations due to the industries financial constraints. Industries were particular in terms of financial support of PPP since it will help cater a greater number of student population in the industries which in turn will affect the production of the company. PPP projects need to be well-planned to lower financial bureaucracy and at the same time increase the revenues.

#### **8.1.4 Efficiency**

PPP model is believed to be efficient for the purposes such as cost savings, reducing the bureaucratic constraints and making sure that the PPP projects are run successfully. At the same time, decentralisation of the roles and distribution of power and authority in PPP in TVET are important factors for effective delivery of skills training to the students. In fact, both TVET institutions and government organisations believed that through PPP model the PPP training projects could be done with efficient delivery of services, what is more, information could be managed and shared with the whole PPP projects' community.

However, the only concern raised by the industry was regarding lowering the bureaucracy constraints that might hinder the implementation of PPP projects. The most critical goal that needs to be achieved by the industries is to meet their production goal. Thus, the industries need to ensure that PPP projects are implemented successfully so that industries could benefit from them.

Efficiency in PPP leads to cost-efficiency which results in the increase of competition, an improved proportion of risk transfer and a closer integration of different aspects. In this

research, efficiency focuses on shared cost, bureaucratic constraints, effective delivery of training and faster provision of information and services. Herein, the research findings present perspectives of universities/TVET institutions, the industry and the government with regard to efficiency indicator. The efficient collaboration should be developed at the early stage so that all parties could understand why PPP should be implemented. The initiatives towards efficient collaboration might be taken at the early stage, before proceeding to a higher level and involving costs. Decentralization of roles, power and authority in PPPs is important for effective delivery of skill training. All parties agree that PPP is about sharing costs effectively, however, academia also raises a concern with regard to bureaucratic constraints. Both the industry and the government agree that implementation of PPPs will be beneficial in the matters of delivery of faster and more efficient services and information. The industry and education institutions claim that a comprehensive and effective system should be created to sustain efficiency. PPPs could ensure that TVET institutions have the linkage with the industry in order to adjust the skills delivery standards to technical know-how, as well as help TVET graduates to acquire the skills required. There are several methods to enhance skills training either direct, in cooperation with industries, or indirect.

To sum up, the linkage between responses of institutions and industries are shown in a figure 2 below:

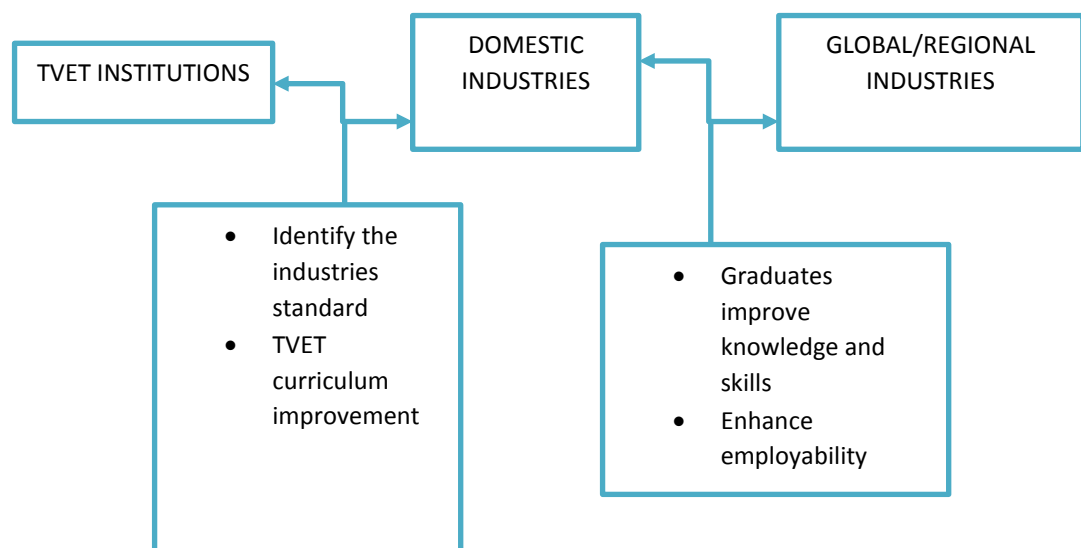


Figure 2: Institutions and industries linkages

### 8.1.5 Sustainability Performance

The involvement of private and public sectors in various models of PPP projects is characterised by many dimensions such as contractual arrangements, structure of management organisation, investment distribution and others. Nevertheless, the investment distribution between two sectors is the key variable to be considered in the process of successful collaboration and negotiation. The level of distribution between sectors will affect contractual arrangements and the organisational structure of the project implementation under the principle of PPP.

Also, technologies could be utilized as a medium of communication between institution and industry in order to control the factors of cost savings and efficiency of the communication process. The delivery of various services or information could be limited in field work, but the use of the various information technologies could be of help. Figure 3 illustrates how information technology will make PPP more efficient.

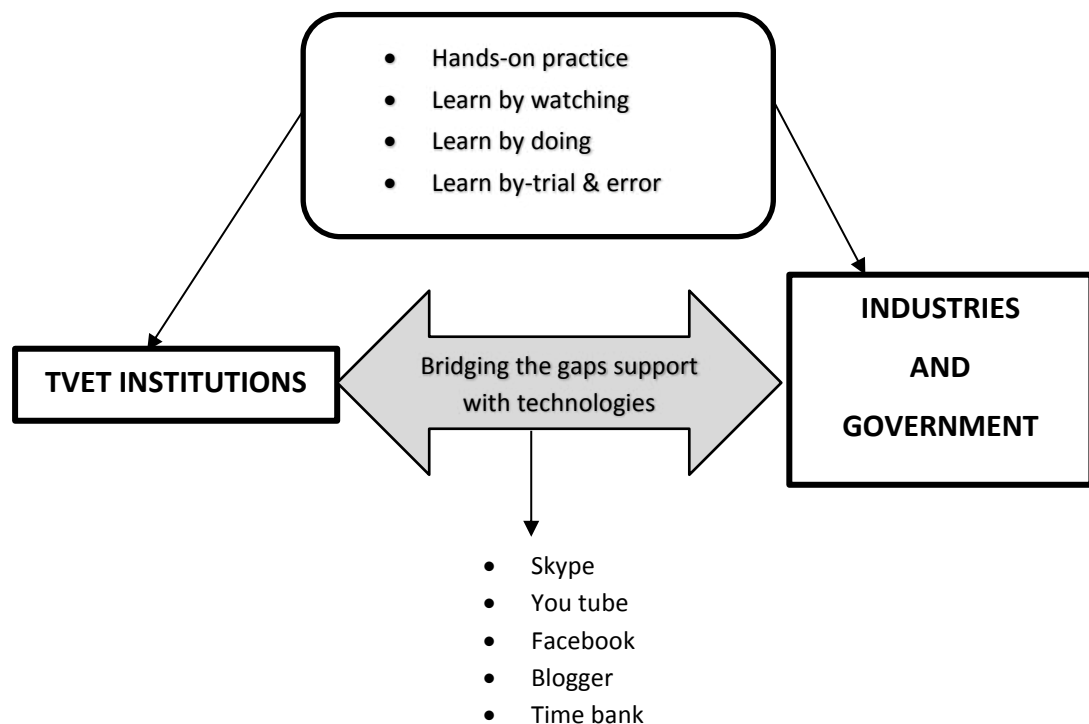


Figure 3: Strengthen efficiency and sustainability in PPP

### **8.1.6 Accountability Performance**

PPP contributes to the high achievement in TVET training. Private sector should be the key player in PPP activities/programmes. The government is responsible for supporting PPP in terms of funding and training facilities provision. Universities/training institutions should take a lead in future planning on PPP.

## **9.0 Suggestions for the new Regional PPP Model**

### **9.1 Regional PPP Model – policy implications**

- Improve innovative role of the faculty/TVET Institution in the development of policies/plans.
- Critical – in formulation of the basic programme and particularly in awarding of credit and in overseeing reflection design.
- Critical – faculties raise the prestige to ensure student and institutional involvement
- Permissive – need of support for detailed programme planning, but the details can be established by staff.
- Role of the faculty in later Implementation.
- Permissive – need of support for teaching of basic courses and some preparation
- Support of the government – e.g. review levies, tax deduction, act and grants.

In Thailand, for example, the government might adjust some policy including lowering taxes, providing welfare and incentives to attract factories to the scheme. The policy covers the roles of industry and academics as well. This includes the curriculum, teaching staff and co-investment (in-kind).

As previously stated, competent workers are considered to be an important factor for the development of the industry in Thailand. At the present, the industrial sector demands more professional workers who are proficiently equipped with skills in TVET. The following is a list of the policies applied for PPP programme prior to the real implementation period:

- To promote the Thai TVET policy through teaching and learning in the innovative PPP programme and to help the stakeholders understand and recognize the philosophy of PPP programme and understand new ways of curriculum design and pedagogy. Teachers who want to join the program must understand the PPP programme before they join.
- Teachers who are part of PPP programme need to understand the immediate needs of the industry and how to check if the learning outcomes are being achieved by the students. The assessment process of PPP programme should be a collaboration between the professionals from the industry and the instructors from the university who teach the course.
- A redesign of the up-to-date work-integrated learning curriculum and lesson materials.
- Expose students to the real world contexts to produce more responsible and mature students.

## **9.2 Critical Success Factors for the Regional PPP Model**

Among all of the abovementioned factors which might lead to the success of a PPP programme, the allocation of risks must be the most appropriate. Distributing risks among all parties will enable the provision of a reliable contractual arrangement which gives PPPs an advantage over purely industry- or government-oriented approaches.

The appropriate allocation of risks depends heavily on the legal and regulatory frameworks set up by the government and the transparent negotiation process between the parties involved. Regardless of the PPPs Model, there are several Critical Success Factors that cut across all models:

1. The PPP programmes must fill a defined need in the country and the institution;
2. The partnership must include three key parties: government, TVET Institution (education) and industry;
3. Each member or parties of the partnership must have something to offer and something to gain from the agreement;

4. The partnership must be developed according to business principles, with due consideration of programme costs and revenue generation potential;
5. The programmes must offer valued and recognized credentials.

### **9.3 Defining Characteristics of the New Regional PPP Model**

PPP models may be developed according to any of four suggestion models depending on who the partners are, what their contributions are, the type of training required, resources available, etc. Regardless of the PPP Model will possess the following characteristics:

- Based on and meets defined market needs of a particular sector
- Leads to employment
- Has significant and relevant input from all stakeholders
- Has strong participation from the industry including practical on-the-job training for students
- Provides an effective, relevant, high quality training that meets national and/or international standards
- Uses effective modern educational management techniques and systems
- Has quality assurance systems and mechanisms in place
- Has up-to-date and sufficient learning resources (equipment, training materials, etc.)
- Student-centered orientation
- Proactive and demonstrates flexibility, innovation and continuous improvement
- Based on a sustainable funding model/ Financially viable
- Has well qualified human resources (instructional, management, administrative) with relevant and up-to-date skills

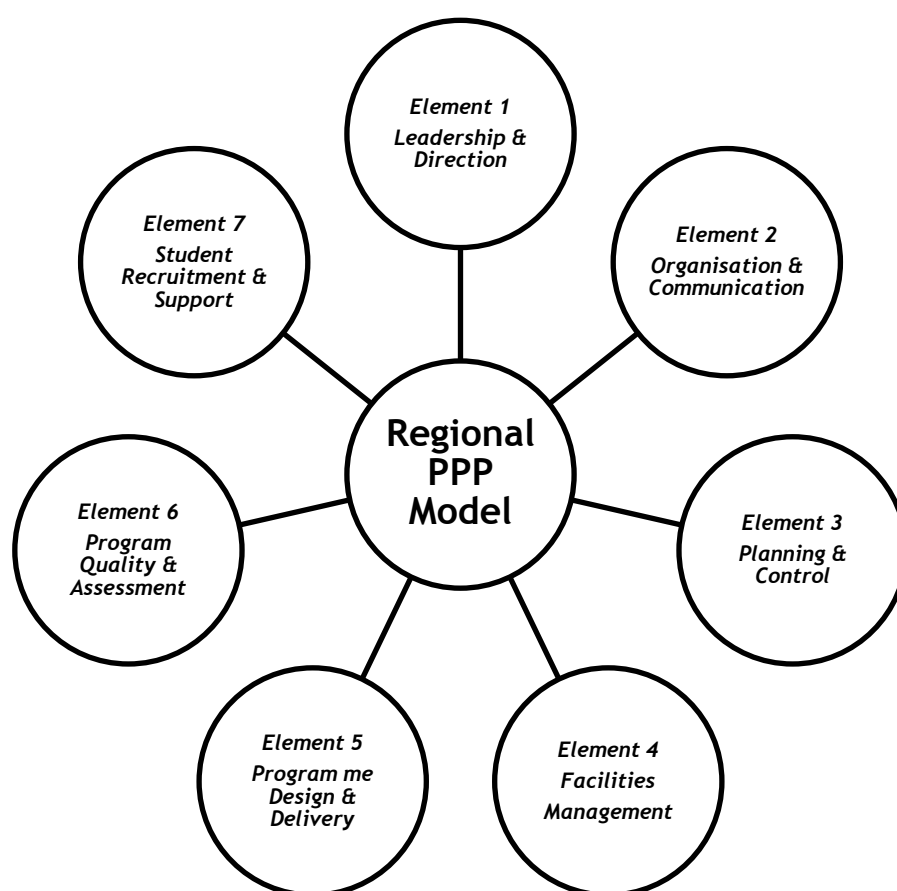
Three levels of PPPs have been developed based on criteria and selected attributes. The model integrated PPP best practices in different countries and was measured based on the criteria and performance indicators.

| Level                                                         | Characteristic/Concept of PPP                                                                                                                                                                           | Existing Model                                               | *Attributes                                                                                                                                                                                                                        |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Top Level</b><br>Highly structured                         | <ul style="list-style-type: none"> <li>Cognitive thinking &amp; experiential learning.</li> <li>A systematic approach to curricula development is adopted, which addresses stakeholder needs</li> </ul> | NDTS, WBL, WIL, WIE, SIF, Buying places,                     | Long-term, Allowance, Trained Supervisor<br><i>Experience, Curriculum integration, Student outcomes, Reflection, Structured Based Program (Accreditation)</i>                                                                      |
| <b>Middle Level</b><br>Intermediate                           | <ul style="list-style-type: none"> <li>Experiential</li> <li>Programme delivery is of high quality and enhances the learning environment</li> </ul>                                                     | Attachment, Internships, Transforming                        | No allowance<br>Block in duration of training. Medium/Short-term training<br><i>Experience, Reflection, Student outcomes</i>                                                                                                       |
| <b>Lower Level (Reflexes)</b><br>Initial stage implementation | <ul style="list-style-type: none"> <li>Programme delivery as part of Corporate Social Responsibility and to fulfill the co-curriculum contents.</li> </ul>                                              | Industrial training, Apprenticeship<br>Industrial attachment | No allowance<br>Short attachment, without supervisor, free time / short term, Accumulative duration.<br><i>Experience, Reflection, Student outcomes</i><br><br><i>*Attributes refer to Comparative matrix of Co-operative Edu.</i> |

Figure 4: Three Level of Public Private Partnership determined from the analysis of the different models

A Regional PPP Model of Excellence approach is to bring a commercial mindset to the management of the centers, so that the centers operate according to a standard that reflects the industry, whilst at the same time protects the educational goals and objectives of vocational training. The core elements of a Model Skill Center of Excellence are illustrated below:

Diagram 6: Core Elements of a Regional PPP Model (Center of Excellence for a PPP Programme)



Each of these elements is embedded into the criteria and key indicators of the Regional Model of PPP in the following framework:

| Level   | Model                                     | Attributes defines                                                                                                                                                                                                                                                                                                                                                                                                                          |
|---------|-------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model 1 | <b>Model of Emerging Industry Centers</b> | <i>Usually, an initiative to address a great need for skilled workers in an emerging sector or a sector for which training has not been developed. These Centers have strong industry involvement at all levels and usually involve a complex partnership among, industry, government, donors and education. Training is developed as either long or short-term and is aiming to meet the urgent needs of the participating industries.</i> |

|         |                                                |                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------|------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Model 2 | <b>Model of Replication</b>                    | <i>An international institution (or Programme) is introduced as a total package (copy/paste) including curriculum, business model, training model, key positions, etc. in the country, often through a partnership with an existing local institution which contribution is mainly buildings, land, etc.</i>                                                                                                |
| Model 3 | <b>Adaptation Model</b>                        | <i>Undertaken to upgrade existing programmes and systems by adapting them to international programme/models/institutions, usually initiated as part of a donor aid package. At the most complex level, it could involve twinning between local and international institutions.</i>                                                                                                                          |
| Model 4 | <b>Multi-Institutional collaboration Model</b> | <i>Collaboration between two or more educational institutions and industry partner (s) to create a vertically integrated model, providing a broader range of skill development and certification than either institution will do on its own. This model has a potential to substantially improve the country's training system through collaboration between different delivery agencies and countries.</i> |

Table 7 : Description of 4 PPP Models

| 6Performance Indicators           | Relevance | Responsiveness | Cost-effective | Efficiency | Accountability | Sustainability |
|-----------------------------------|-----------|----------------|----------------|------------|----------------|----------------|
| Multi-Institutional Collaboration | High      | High           | High           | High       | High           | High           |
| Adaption                          | High      | High           | Medium         | High       | High           | Medium         |
| Replication                       | Medium    | High           | Medium         | High       | High           | Medium         |
| Emerging Industry Centres         | High      | High           | High           | High       | High           | High           |

Diagram 7: Four Models of PPP according to sixth performance indicators

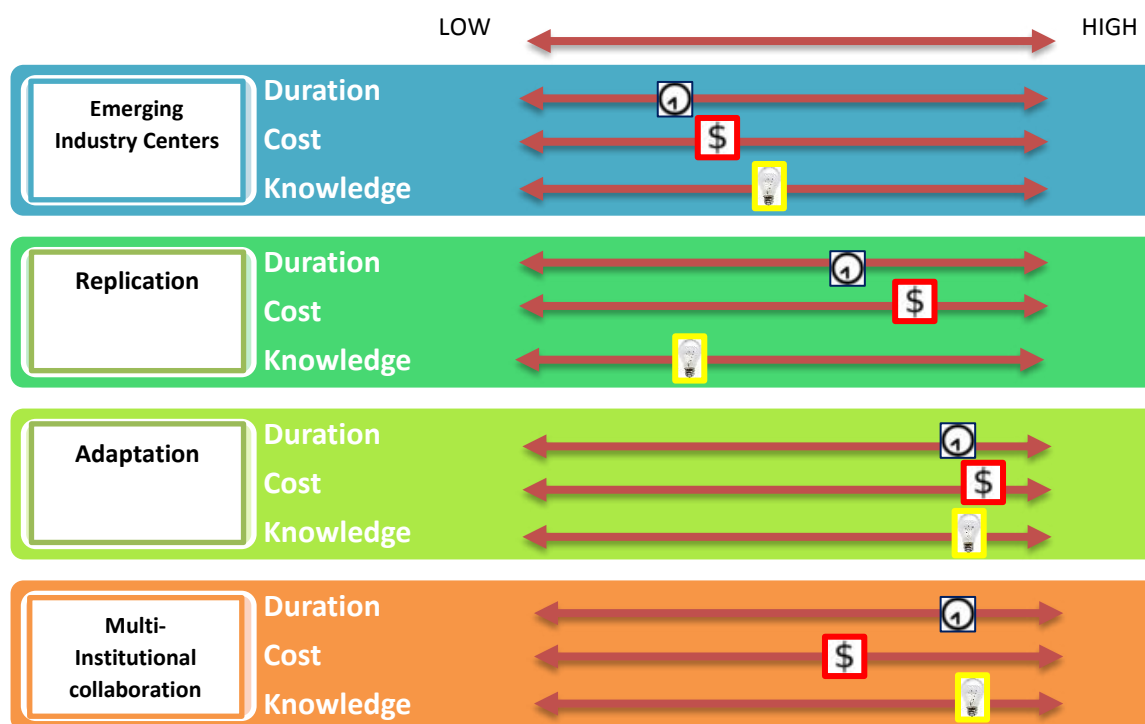


Diagram 8: Weaknesses and strengths of the new models of PPP

Diagram 8 shows strengths and weaknesses by the type of both public and private training providers. PPPs are able to compensate for the weaknesses by the type of public and private training providers. PPPs are able to compensate for the weaknesses and to complement the activities of both sectors. For example, the weakness of government-owned training institutions, such as “continuing to offer courses regardless of employment demand,” “tendency to obsolescence” “lack of cost-consciousness resulting in inefficiencies” may be improved by the effective introduction of PPP.

## Model 1 : Emerging Industry Center with TVET Institution

| Model Type                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Advantages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Disadvantages                                                                                                                                                                                                                                                                                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p><b>1. Emerging Industry Centers</b></p> <p>Usually, an initiative to address a great need for skilled workers in an emerging sector or a sector for which training has not been developed. These Centers have strong industry involvement at all levels and usually involve a complex partnership among, industry, government, donors and education. Training is developed as either long or short-term and is aiming to meet the urgent needs of the participating industries.</p> | <ul style="list-style-type: none"> <li>• Always industry-driven, often with participation of a sector-wide association, thus with relevant training and with strong employment prospects</li> <li>• Can provide customised programming, otherwise wouldn't be able to meet the ongoing needs of the current workforce</li> <li>• In addition to required local accreditation, also can provide highly valued industry accreditation</li> <li>• Flexible model with continuing programme and curriculum development to meet industry needs</li> <li>• Can be launched relatively quickly. Short relevant programmes can demonstrate 'quick wins'</li> <li>• Tied to employment</li> <li>• When several different industry stakeholders are on board, it leads to efficiencies in training, sharing and sector policy development</li> <li>• Developed due to a business model, often revenue generating by selling customised training, goods and services. Builds and sustains long-term industry-education-government partnerships</li> <li>• Highly suitable for megaprojects</li> </ul> | <ul style="list-style-type: none"> <li>• Short-term training, even though it is effective, is labour intensive to administer</li> <li>• Center usually must offer a mix of short- and long-term training in order to be sustainable and viable</li> <li>• Needs constant attention to revenue generation</li> </ul> |

| <b>Model 1: Emerging Industry Centers with TVET Institution</b> |                                                                                             |
|-----------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| <i>Scope</i>                                                    | <i>Mostly part-time for entry-level and existing employees and some full-time training</i>  |
| <i>Credentials</i>                                              | <i>Industry and local</i>                                                                   |
| <i>Standards</i>                                                | <i>Industry-set</i>                                                                         |
| <i>Ownership/<br/>Governance</i>                                | <i>Most likely a joint ownership between the industry and the government</i>                |
| <i>Knowledge<br/>Transfer</i>                                   | <i>Strong – training is provided by local trainers according to international standards</i> |
| <i>Sustainability</i>                                           | <i>High as long as industry has needs and these needs are met</i>                           |

Emerging Industry Centers Model is appropriate when there is a fast-growing or emerging sector that requires training for both new workers and existing workers. Very often the training is very specific and customised, and therefore, industry certification is provided. This sort of Center is most often initiated by the industry itself and therefore, guarantees industry involvement in all aspects. It is often a cooperative venture among related industries which need a similar training (e.g. oil and gas industry). This model is costly, but the funding is often borne by the industry. This model is highly appropriate for a megaproject, especially where funding can be levered from large contracts between the industry and the government. Industry will always have a strong role in this type of Center, in governance, programme needs identification, setting of standards and managing of operations due to the business principles. They will also provide on-the-job training and will hire the graduates. Flexibility and revenue generation are hallmarks of this model, and the training agenda will be dictated by industry needs and updated regularly.

## Model 2: Replication (One to One)

| Model Type                                                                                                                                                                                                                                                                                                                     | Advantages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Disadvantages                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>2. Replication</b><br>An international institution (or Programme) is introduced as a total package (copy/paste) including curriculum, business model, training model, key positions, etc. in the country, often through a partnership with an existing local institution which contribution is mainly buildings, land, etc. | <ul style="list-style-type: none"> <li>• Relatively quick to establish if funding is in place</li> <li>• Provides international certification and often industry certification as well</li> <li>• Implements best practices in training as well as business practices</li> <li>• Can significantly upgrade the workforce and set new standards for the country</li> <li>• Can revolutionise/modernise education and training system</li> <li>• Work especially well when there has been no existing system introduced yet or there has been an inadequate one in place</li> </ul> | <ul style="list-style-type: none"> <li>• Often works outside the existing public system, not significantly contributing to its revitalisation</li> <li>• Expensive for students or student support organisation (government incentives/scholarships, etc.)</li> <li>• Unless student subsidised often out of reach for an average student</li> <li>• Requires a long-term commitment to funding from the local government</li> <li>• Does not necessarily lead to transfer of skills and knowledge to host country</li> <li>• Subject to the vagaries of the marketplace (Institution can pull out if revenues fall)</li> <li>• Depending on the role of the industry, may or may not lead to employment</li> </ul> |

| <b>Model 2: Replication</b>      |                                                                                                                           |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| <i>Scope</i>                     | <i>Mainly full-time training</i>                                                                                          |
| <i>Credentials</i>               | <i>Industry and International organization</i>                                                                            |
| <i>Standards</i>                 | <i>International Organisation and/or Industry</i>                                                                         |
| <i>Ownership/<br/>Governance</i> | <i>International organisation will own intellectual property; either government or institution may own building, etc.</i> |

|                           |                                                                |
|---------------------------|----------------------------------------------------------------|
| <i>Knowledge Transfer</i> | <i>Weak. Efforts must be made to ensure capacity building</i>  |
| <i>Sustainability</i>     | <i>High as long as international institution is benefiting</i> |

The Replication model is appropriate when existing programmes do not meet the standards required by the industry. Replication institutions or programmes are often originated by the international institution as a business opportunity. The internationally-recognised institution will offer its programmes exactly as they exist in their country. The curriculum, certification and the management model will be that of the international institution. Such a model is most appropriate for a high demand skill area where there is a high and ongoing volume of training needed to develop skills according to international standards. The risks in this arrangement are that there may not be a high level of knowledge transfer to the local training system, and its sustainability depends on its continuing profitability.

### **Model 3: Adaptation (Upgrade TVET Institution)**

| <b>Model Type</b>                                                                                                                                                                                                                                                                                  | <b>Advantages</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>Disadvantages</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>3. Adaptation</b><br>Undertaken to upgrade existing programmes and systems by adapting them to international programme/models/institutions, usually initiated as part of a donor aid package. At the most complex level it could involve twinning between local and international institutions. | <ul style="list-style-type: none"> <li>• Often implemented as part of a donor project, wherein an institution from a donor country twins with an institution in a country from the ASEAN region, introducing new programmes, new systems, etc.</li> <li>• These are excellent vehicles for local capacity building, since technical assistance staff works alongside local staff in a mentoring capacity</li> <li>• Validates and builds on local programmes</li> <li>• A good vehicle for organisational reform, able to be implemented throughout the local system</li> </ul> | <ul style="list-style-type: none"> <li>• Time consuming and labour intensive to set up</li> <li>• Sustainability is at risk when donor funding stops, unless efforts are made to make necessary changes in institutional practices</li> <li>• Need strong local government support to make necessary systemic changes to accommodate the new practices (e.g. salary levels, qualifications levels)</li> <li>• Need a lot of relationship-building between the international and local institutions in terms of</li> </ul> |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                  |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <ul style="list-style-type: none"> <li>• They start 'where the local institution is' and build quality from that point</li> <li>• Offers either local, international or industry credentials depending on the partners in the agreement.</li> <li>• Where a twinning relationship is established between international and local institutions, there is a great opportunity for student and staff exchanges, joint certification, etc.</li> <li>• Can lead to business opportunities between countries</li> </ul> | <p>staff training, management systems, curriculum development, etc.</p> <ul style="list-style-type: none"> <li>• Require a long-term commitment with regard to time and finances, especially if there is joint certification involved</li> </ul> |
|--|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

| <b>Model 3: Adaptation</b>   |                                                                                                            |
|------------------------------|------------------------------------------------------------------------------------------------------------|
| <i>Scope</i>                 | <i>Mainly full time training</i>                                                                           |
| <i>Credentials</i>           | <i>Mainly local with aspirations to international standards</i>                                            |
| <i>Standards</i>             | <i>Industry-set</i>                                                                                        |
| <i>Ownership/ Governance</i> | <i>Government owns buildings/land; all stakeholders are involved in governance, including the industry</i> |
| <i>Knowledge Transfer</i>    | <i>Strong</i>                                                                                              |
| <i>Sustainability</i>        | <i>High as long as there is a government commitment</i>                                                    |

This model involves upgrading of existing programmes by adaptation of international best practices in curriculum, training model, management, etc. This model is often favored by donors that wish to draw on the skills of their countries as part of their aid package with the goal of building capacity of local systems and human resources. Credentials are usually local, with standards raised to higher levels and introduction of best practices such as Quality Assurance, standardization, improved industry involvement, etc. Such a model is excellent at building capacity and introducing systemic

change. However, sustainability is threatened, if local authorities do not make the necessary systemic changes to accommodate the new practices, or if they do not provide the necessary funding and other arrangements to maintain programmes and practices once the donor programme is over. The adaptation model is easily integrated into the existing education and training system. At its most complex level, this model could involve the twinning between a local and an international institution and could involve joint certification, student and staff exchanges, international work experiences, etc.

#### Model 4: Multi-Institutional Collaboration

| Model Type                                                                                                                                                                                                                                                                                                                                                                                                                                          | Advantages                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Disadvantages                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>4. Multi-Institutional Collaboration</b><br>Collaboration between two or more educational institutions and industry partner (s) to create a vertically integrated model, providing a broader range of skill development and certification than either institution will do on its own. This model has a potential to substantially improve the country's training system through collaboration between different delivery agencies and countries. | <ul style="list-style-type: none"> <li>• Contributes to the development of the country's training system (National Qualifications System, Institutional Articulation, Transferability, etc.) by encouraging different delivery agencies to work together to offer a broader range of skills and certifications.</li> <li>• Excellent vehicle for local capacity building.</li> <li>• Appealing to students because they can see progression along a ladder of credentials.</li> </ul> | <ul style="list-style-type: none"> <li>• Time consuming to set up since institutions need to work together on many areas where they may have different rules, regulations and standards (admissions, curricula, certification, etc.)</li> <li>• May require government approvals which could put result in delays and obstacles that block progress</li> <li>• Could be a challenge to keep a 'demand-side' focus when dealing with 'supply-side' institutions.</li> </ul> |

| <b>Model 4: Multi-Institutional Collaboration</b> |                                                                                                   |
|---------------------------------------------------|---------------------------------------------------------------------------------------------------|
| <i>Scope</i>                                      | <i>Emphasis on full-time training with cross-cutting skills across multiple industry sectors.</i> |
| <i>Credentials</i>                                | <i>International standards</i>                                                                    |
| <i>Standards</i>                                  | <i>Industry-set</i>                                                                               |

|                                  |                                                                                |
|----------------------------------|--------------------------------------------------------------------------------|
| <i>Ownership/<br/>Governance</i> | <i>Government-owned with industry involvement</i>                              |
| <i>Knowledge<br/>Transfer</i>    | <i>Strong</i>                                                                  |
| <i>Sustainability</i>            | <i>High as long as government facilitates inter-institutional cooperation.</i> |

This model is the purest version of a PPP implementation in that it offers vertically integrated skills development. It can contribute greatly to the development of a country's TVET system by encouraging institutions which have not traditionally worked together to collaborate, thus building up a ladder National Qualifications Framework. Usually, the reason for establishing such institutions is to respond to the needs of a new or emerging sector which requires rigorous standards with an emphasis on quality built on international best practices and standards. These institutions must guard against losing industry's support and confidence by getting 'bogged down' in government bureaucratic processes associated with inter-institutional collaboration.

**Recommendation 1: The implementation process should take this item into consideration.**

The development of a guide to implement (pilot) a PPP model has to be initiated. However, ten steps/phases should be clearly documented:

1. Identification of needs analysis;
2. Definition of contents and common work;
3. Setting up project work with industries;
4. Determination of quality criteria;
5. Identification of TVET providers;
6. Recruitment of target groups;
7. Work with target groups;
8. Evaluation of output (piloting);
9. Dissemination of output (piloting);
10. Assessment of quality of PPP TVET process.

## **Recommendation 2: Develop a PPP monitoring framework**

Complex questions need to be answered when developing a PPP. The prevailing logic is that the scope of a PPP is determined by the degree to which the interests of the partners correspond. However, this logic focuses on best practices and management challenges; it does not provide an understanding of the conditions under which PPPs emerge, the factors that drive them, or the factors that determine whether or not the PPPs show impact and sustainability. What is needed is a fact-based, comparative assessment of what PPPs can accomplish and what it takes to make them work, particularly in the provision of core education services.

## **Recommendation 3: Review implementation of policies**

Due to the demands for skilled workers, government tries to formulate and implement policies for TVET. A growing interest in TVET has been found in all types of businesses and has begun to struggle to create the indispensable bridges between vocational education and the world of work. Although government has the primary responsibility for TVET, in the modern market economy its policy design and delivery have been achieved through the new partnership between public and private organizations (PPP), including employers, employees, industries, professionals and also educational institutions. To tackle the problem of skilled labour shortages, the government has to change its mind-set for grading students, and businesses have to change their mind-set for investing in human resources. Therefore, further review and discussion on policies change might be honorable for all parties.

## **Perspectives for implementation**

Based on the developed models around two to three scenarios might be drafted for an efficient implementation – each scenario might be presented in min ½ page, max 1 page.

The four (4) models that have been developed through the investigation and observation from all members could be adapted and implemented due to the existing practices and the nature of collaboration among the government, institutions and the industry. Prior to the selection of a suitable PPP model, the involved stakeholders are required to

determine the type of partnership and the structure of the curriculum they want to achieve. For example, if they want to offer short-term training, they could go for Emerging Industry Center. If the institution is planning to upgrade its programmes, Adaptation Model could be used. Replication Model is a good approach to introduce a new programme with existing structure and partners. Meanwhile, Multi-Institutional Collaboration involves many institutions and industries for a single programme.

## 10.0 Conclusions

This study reveals that industries should provide the main expenditure, nevertheless universities might provide support in terms of teachers or instructors. The government might adjust some policies, including lowering taxes, providing welfare and incentives to attract factories to the scheme. In the past, education and the demands of the industry might not have been the same because the education system provided knowledge to students in one way, but the private sector required human resources for a different type of work. Nonetheless nowadays, work-integrated learning or learners learning in the related industry fosters cooperation between the TVET institution / education and private sectors in order to produce highly qualified and skilled workers for companies and industries. The PPP pilot project has to be produced to catch the positive results.

Regardless of the PPP Model, there are several Critical Success Factors that cut across all models. The PPP programmes must fill the defined needs in the country and the institution. The partnership must include three key parties: government, TVET Institution (education) and industry. Each party of the partnership must have something to offer and something to gain from the agreement. The partnership must be developed according to business principles, with due consideration of programme costs and revenue generation potential. The programmes must offer valued and recognised credentials.

Development of a Regional PPP Model for ASEAN would be a great contribution to the sustainability of TVET programmes. The involvement of tri-parties (institution, government and industry) is vital for the successful implementation of a PPP.

Moreover, countries need to establish or improve their institutional quality, with special emphasis on developing appropriately skilled human capital needed for negotiating and monitoring the implementation of PPP contracts. The setting up of PPP units as stand-alone entity either separately or within a government structure would help facilitate an enhanced capacity building on PPP related issues, including financial and human resources and a sharpened process approach to PPP that help develop human analytical skills to ensure that the right project is delivered at the right time and benefit to both government and countries.

Finally, Regional Cooperation Platform for Vocational Teacher Education and Training in Asia (RCP), Regional Cooperation in Technical and Vocational Education and Training (RECOTVET), SEAMEO VOTTECH, regional think-tanks and development partners should help countries with organisation of learning forums to exchange ideas and experiences, and help conduct research for better understanding of PPPs and how they can be used as delivery modalities for the needed public goods and services in the sub-region. Indeed, RCP has pledged to facilitate several meetings and forums to share ideas, learning from one another and bringing lessons from other regions to the ASEAN + 3 countries.

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**ANNEXS**  
Country Report on  
PPPs



**PROJECT TITLE:**

**THEORETICAL APPROACH ON PUBLIC  
PRIVATE PARTNERSHIP FOR  
UNIVERSITIES / TRAINING INSTITUTES IN  
TECHNICAL VOCATIONAL EDUCATION  
AND TRAINING (TVET)**

**TITLE**

The purpose of the research is to provide an information and feedback on understanding of the role of the Government, TVET institution and private sector in skills development, both as employers and as skills providers.

## **CHAPTER I INTRODUCTION**

### **1.0. Introduction**

The aim of the research was to find potential opportunities to support TVET (Technical Vocational Education and Training) institution and stake holder with private sector integration in all aspects of skills development, particularly in ASEAN countries. In addition, the research explored an ideally theoretical approach on PPP (Public Private Partnership) model with specific characteristic on responsiveness, relevance, cost-effectiveness, efficiency, accountability and sustainability for skills development; and financial support from the private sector for skills development programs.

### **1.1. Purpose**

The purpose of the research is to provide an information and feedback on understanding of the role of the Government, TVET institution and private sector in skills development, both as employers and as skills providers.

### **1.2. Objectives**

1. Identify the current best practice related to PPP models including its governance, business, training models and type of collaboration
2. Identify the detail process of analysis to understand how PPP models in Indonesia currently conducts its business and training processes.
3. Identify the PPP Models at current practice and system of resource allocations including physical, financial and human
4. Identify the limits of the current PPP models system including legal and resource limitations and make recommendations for regional PPP models improvements
5. Identify the PPP model at national level can be implemented to serve as the basis for the creation of a common regional PPP model

### **1.3. Research Questions**

The purpose of this questionnaires is to identify the best model of PPPs implemented at national/institutional level in Indonesia.

1. What is the current best practice related to PPP models including its governance, business, training models and type of collaboration?
2. How detailed the process of analysis to understand how PPP models in Indonesia currently conducts its business and training processes?
3. How PPP Models at current practice and system of resource allocations including physical, financial and human?
4. How are the limits of the current PPP models system including legal and resource limitations and make recommendations for regional PPP models improvements?
5. How PPP model at national level can be implemented to serve as the basis for the creation of a common regional PPP model with the following characteristics: responsiveness, relevance, cost-effectiveness, efficiency, accountability and sustainability?

#### **1.4. Scope of the study**

This project is a study on the theoretical approach on PPP model with specific characteristic on responsiveness, relevance, cost-effectiveness, efficiency, accountability and sustainability for skills development; and financial support from the private sector for skills development programs. There are three groups on PPP model: TVET Institutions, stakeholders/industries, and government.

## CHAPTER II RESEARCH METHODS

### 2.0. Methods

The tabulation of the research method is shown in Table 1.

Table 2.1. Research Method

| Research Question:<br>ppp                                                                                                                                                 | Variable                                                                                                                                                                                                   | Data Source                                                                                                                           | Data Collection                                                                                                                                                                          | Analysis                                                                                                                                   |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Research Question 1</b><br>What is the current best practice related to PPP models including its governance, business, training models and type of collaboration.      | <ul style="list-style-type: none"> <li>- PPP model</li> <li>- type of cooperation</li> <li>- parties involved</li> <li>- governance model</li> <li>- business model</li> <li>- type of training</li> </ul> | <ul style="list-style-type: none"> <li>- Government agencies</li> <li>- Chamber of commerce</li> <li>- minutes of meetings</li> </ul> | <ul style="list-style-type: none"> <li>- Observation , checklist</li> <li>- Document analysis</li> <li>- Interview guide</li> <li>- questionnaire/ structured interview guide</li> </ul> | <ul style="list-style-type: none"> <li>- Quantitative descriptive analysis</li> <li>- Qualitative</li> <li>- Empirical analysis</li> </ul> |
| <b>Research Question 2</b><br>How detailed the process of analysis to understand how PPP models in (your country) currently conducts its business and training processes. | <ul style="list-style-type: none"> <li>- Process analysis</li> </ul>                                                                                                                                       | <ul style="list-style-type: none"> <li>- Government agencies</li> <li>- Chamber of commerce</li> <li>- minutes of meetings</li> </ul> | questionnaire /structured interview guide (open ended)                                                                                                                                   | <ul style="list-style-type: none"> <li>- Inferences analysis</li> </ul>                                                                    |
| <b>Research Question 3</b><br>How PPP Models at current practice and system of resource allocations including                                                             | <ul style="list-style-type: none"> <li>- Current practices</li> <li>- System resources</li> <li>- Allocation</li> <li>- Professional competencies</li> </ul>                                               | <ul style="list-style-type: none"> <li>- Secondary source</li> <li>- documents, literature review,</li> </ul>                         | <ul style="list-style-type: none"> <li>- Focus group discussion with current practices PPP model</li> </ul>                                                                              | <ul style="list-style-type: none"> <li>- Inferences analysis</li> </ul>                                                                    |

|                                                                                                                                                                                               |                                                                                                                                                                                          |                                                                                                                                                                                                        |                                                                                                                               |                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| physical, financial and human.                                                                                                                                                                | <ul style="list-style-type: none"> <li>- Content and performance standards</li> <li>- Performance indicators, current practices, competency standards, professional standards</li> </ul> | country reports                                                                                                                                                                                        | <ul style="list-style-type: none"> <li>- Government agencies,</li> <li>- Existing documents (policies, exams, etc.</li> </ul> |                                                                               |
| <b>Research Question 4</b><br>Analyse the limits of the current PPP models system including legal and resource limitations and make recommendations for regional PPP models improvements.     | <ul style="list-style-type: none"> <li>- Strengths and weaknesses analysis</li> <li>- Best practices</li> <li>- Advantages and disadvantages of current PPPs</li> </ul>                  | <ul style="list-style-type: none"> <li>- existing documents like materials available, appointments , interview</li> </ul>                                                                              | <ul style="list-style-type: none"> <li>- Interview schedule</li> </ul>                                                        | <ul style="list-style-type: none"> <li>- Qualitative Data Analysis</li> </ul> |
| <b>Research Question 5</b><br>How PPP model at national level can be implemented to serve as the basis for the creation of a common regional PPP model with the following characteristics: 67 | <ul style="list-style-type: none"> <li>- Concerns and issues for improvement at regional level</li> </ul>                                                                                | <ul style="list-style-type: none"> <li>- Institutions</li> <li>- Industries</li> <li>- Expert</li> <li>- existing documents like materials available, reports, action researches, interview</li> </ul> | <ul style="list-style-type: none"> <li>- Interview guide</li> </ul>                                                           | <ul style="list-style-type: none"> <li>- Qualitative Data analysis</li> </ul> |

There are three approaches were being used in this study which are survey questionnaire, interviews and document analysis. Survey questionnaire and interviews were deployed to the TVET institutions, stakeholders/industries and geovernment organizations. While document analysis was implemented to TVET institutions operational document for additional data gathering. The tabulation of the sample is shown in Table 2.2.

Table 2.2. Sample distribution

| No | Data Source             | Area                       | Number of samples |
|----|-------------------------|----------------------------|-------------------|
| 1  | TVET Institutions       | University                 | 2                 |
| 2  | Stakeholders/Industries | Civil                      | 10                |
|    |                         | Electrical                 | 6                 |
|    |                         | IT                         | 7                 |
|    |                         | Mechanical                 | 7                 |
| 3  | Government Organization | Certification Organization | 4                 |

## CHAPTER III RESULTS AND DISCUSSIONS

### 3.0. Results

#### 3.1. Section A: Respondent Profiles

Table 3.1.1. Respondents by the gender

| Gender | M  | F |
|--------|----|---|
|        | 30 | 6 |

Table 3.1.2. Respondents by the education

| Education | High school | Diplome | S1 | S2 | S3 |
|-----------|-------------|---------|----|----|----|
|           | -           | 6       | 22 | 6  | 2  |

Table 3.1.3. Respondents by the occupation

| Occupation | Director | Manager | Executive | Technical | Others |
|------------|----------|---------|-----------|-----------|--------|
|            | 2        | 4       | 2         | 20        | 8      |

### 3.2. Section B: Awareness of Public Private Partnership (PPP)

Table 3.2.1. Awareness of Public Private Partnership (PPP) for TVET institutions

| No. | Instruments                                                                                                                                 | 5 Point Likert Scale in (%) |   |     |     |     |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|-----|-----|-----|
|     |                                                                                                                                             | 1                           | 2 | 3   | 4   | 5   |
| B7  | Are you aware of the existence of PPP for universities/ training institutes in TVET                                                         |                             |   |     | 50  | 50  |
| B8  | Is PPP for universities / training institute in TVET are important element for today                                                        |                             |   |     | 50  | 50  |
| B9  | Is PPP for universities/training institute in TVET to be a success in the long run?                                                         |                             |   |     | 100 |     |
| B10 | Are PPP for universities/training institutes in TVET will Improve service delivery by allowing institutes/industry to do what they do best? |                             |   |     |     | 100 |
| B11 | Are the success of student to get place in industry because of establishment of PPP for universities/training institutes in TVET            |                             |   | 100 |     |     |

Table 3.2.2. Awareness of Public Private Partnership (PPP) for stakeholders/industries

| No. | Instruments                                                                                                                                 | 5 Point Likert Scale in (%) |     |      |      |      |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-----|------|------|------|
|     |                                                                                                                                             | 1                           | 2   | 3    | 4    | 5    |
| B7  | Are you aware of the existence of PPP for universities/ training institutes in TVET                                                         |                             |     | 56,7 | 23,3 | 20,0 |
| B8  | Is PPP for universities / training institute in TVET are important element for today                                                        |                             |     | 36,7 | 40,0 | 23,3 |
| B9  | Is PPP for universities/training institute in TVET to be a success in the long run?                                                         |                             |     | 63,3 | 33,3 | 3,3  |
| B10 | Are PPP for universities/training institutes in TVET will Improve service delivery by allowing institutes/industry to do what they do best? |                             |     | 53,3 | 46,7 |      |
| B11 | Are the success of student to get place in industry because of establishment of PPP for universities/training institutes in TVET            |                             | 6,7 | 26,7 | 66,7 |      |

Table 3.2.3. Awareness of Public Private Partnership (PPP) for government organizations

| No. | Instruments                                                                                                                                 | 5 Point Likert Scale in (%) |   |    |    |    |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|----|----|----|
|     |                                                                                                                                             | 1                           | 2 | 3  | 4  | 5  |
| B7  | Are you aware of the existence of PPP for universities/ training institutes in TVET                                                         | 25                          |   |    | 50 | 25 |
| B8  | Is PPP for universities / training institute in TVET are important element for today                                                        |                             |   | 25 | 25 | 50 |
| B9  | Is PPP for universities/training institute in TVET to be a success in the long run?                                                         |                             |   | 50 | 25 | 25 |
| B10 | Are PPP for universities/training institutes in TVET will Improve service delivery by allowing institutes/industry to do what they do best? |                             |   | 25 | 50 | 25 |
| B11 | Are the success of student to get place in industry because of establishment of PPP for universities/training institutes in TVET            |                             |   | 50 | 50 |    |

### 3.3. Section C: Relevance of Public Private Partnership (PPP)

Table 3.3.1. Relevance of Public Private Partnership (PPP) for TVET institutions

| No. | Instruments                                                                                                                                                                 | 5 Point Likert Scale in (%) |   |   |     |    |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|---|-----|----|
|     |                                                                                                                                                                             | 1                           | 2 | 3 | 4   | 5  |
| C12 | Course that offer at universities/training institutes are relevance with industry                                                                                           |                             |   |   | 50  | 50 |
| C13 | Industries should be consulted periodically to provide specific advice on occupations and skills in demand, and to identify key skills, project priorities for their sector |                             |   |   | 100 |    |
| C14 | The company/industry welcome graduates because they know the graduates will pass a certain level of skills and technical capability.                                        |                             |   |   | 100 |    |

Table 3.3.2. Relevance of Public Private Partnership (PPP) for stakeholders/industries

| No. | Instruments | 5 Point Likert Scale in (%) |
|-----|-------------|-----------------------------|
|-----|-------------|-----------------------------|

|     |                                                                                                                                                                             | 1 | 2 | 3    | 4    | 5    |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|---|------|------|------|
| C12 | Course that offer at universities/training institutes are relevance with industry                                                                                           |   |   | 26,7 | 73,3 |      |
| C13 | Industries should be consulted periodically to provide specific advice on occupations and skills in demand, and to identify key skills, project priorities for their sector |   |   |      | 80,0 | 20,0 |
| C14 | The company/industry welcome graduates because they know the graduates will pass a certain level of skills and technical capability.                                        |   |   | 30,0 | 70,0 |      |

Table 3.3.3. Relevance of Public Private Partnership (PPP) for government organizations

| No. | Instruments                                                                                                                                                                 | 5 Point Likert Scale in (%) |   |    |    |    |
|-----|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|----|----|----|
|     |                                                                                                                                                                             | 1                           | 2 | 3  | 4  | 5  |
| C12 | Course that offer at universities/training institutes are relevance with industry                                                                                           |                             |   | 50 | 50 |    |
| C13 | Industries should be consulted periodically to provide specific advice on occupations and skills in demand, and to identify key skills, project priorities for their sector |                             |   | 25 | 50 | 25 |
| C14 | The company/industry welcome graduates because they know the graduates will pass a certain level of skills and technical capability.                                        |                             |   |    | 50 | 50 |

### 3.4. Section D: Responsiveness of Public Private Partnership (PPP)

Table 3.4.1. Responsiveness of Public Private Partnership (PPP) for TVET institutions

| No. | Instruments                                                                                         | 5 Point Likert Scale in (%) |   |    |     |    |
|-----|-----------------------------------------------------------------------------------------------------|-----------------------------|---|----|-----|----|
|     |                                                                                                     | 1                           | 2 | 3  | 4   | 5  |
| D15 | PPP for universities/training institutes in TVET can produce more skilled students                  |                             |   |    | 50  | 50 |
| D16 | PPP for universities/training institutes can produce graduates who meet the demands of the industry |                             |   |    | 100 |    |
| D17 | PPP remains a veritable tool for the achieving national                                             |                             |   | 50 | 50  |    |

|     |                                              |  |  |  |     |  |
|-----|----------------------------------------------|--|--|--|-----|--|
|     | development amongst nations                  |  |  |  |     |  |
| D18 | PPP program for skilled training enhancement |  |  |  | 100 |  |

Table 3.4.2. Responsiveness of Public Private Partnership (PPP) for stakeholders/industries

| No. | Instruments                                                                                         | 5 Point Likert Scale in (%) |     |      |      |      |
|-----|-----------------------------------------------------------------------------------------------------|-----------------------------|-----|------|------|------|
|     |                                                                                                     | 1                           | 2   | 3    | 4    | 5    |
| D15 | PPP for universities/training institutes in TVET can produce more skilled students                  |                             |     | 33,3 | 53,3 | 13,3 |
| D16 | PPP for universities/training institutes can produce graduates who meet the demands of the industry |                             |     | 33,3 | 66,7 |      |
| D17 | PPP remains a veritable tool for the achieving national development amongst nations                 |                             | 6,7 | 16,7 | 63,3 | 13,3 |
| D18 | PPP program for skilled training enhancement                                                        |                             |     | 10,0 | 70,0 | 20,0 |

Table 3.4.3. Responsiveness of Public Private Partnership (PPP) for government organizations

| No. | Instruments                                                                                         | 5 Point Likert Scale in (%) |   |    |     |   |
|-----|-----------------------------------------------------------------------------------------------------|-----------------------------|---|----|-----|---|
|     |                                                                                                     | 1                           | 2 | 3  | 4   | 5 |
| D15 | PPP for universities/training institutes in TVET can produce more skilled students                  |                             |   | 50 | 50  |   |
| D16 | PPP for universities/training institutes can produce graduates who meet the demands of the industry |                             |   |    | 100 |   |
| D17 | PPP remains a veritable tool for the achieving national development amongst nations                 |                             |   |    | 100 |   |
| D18 | PPP program for skilled training enhancement                                                        |                             |   | 50 | 50  |   |

|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|
|  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|

### 3.5. Section E: Cost-Effectiveness of Public Private Partnership (PPP)

Table 3.5.1. Cost-Effectiveness of Public Private Partnership (PPP) for TVET institutions

| No. | Instruments                                                                                                                                                                     | 5 Point Likert Scale in (%) |   |     |     |    |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|-----|-----|----|
|     |                                                                                                                                                                                 | 1                           | 2 | 3   | 4   | 5  |
| E22 | Does PPP can ensure proper financial flows?                                                                                                                                     |                             |   | 100 |     |    |
| E23 | Does PPP help industry overcome the financial constraints?                                                                                                                      |                             |   | 50  | 50  |    |
| E24 | Are PPP will reduce administration cost that bears by institutes/industry/government?                                                                                           |                             |   | 100 |     |    |
| E25 | A specific percentage of Income tax generated annually by Government should be utilized for the provision of work shop facilities to universities/training Institutions in TVET |                             |   |     | 50  | 50 |
| E26 | Cost of operation is expected to be much lower due to the greater managerial efficiency in PPP                                                                                  |                             |   | 50  | 50  |    |
| E27 | Without investing a very huge sum of money upfront, government would be able to cater to a much larger student population.                                                      |                             |   |     | 100 |    |
| E28 | Does PPP will reduce costs and increase revenues                                                                                                                                |                             |   | 50  | 50  |    |

Table 3.5.2. Cost-Effectiveness of Public Private Partnership (PPP) for stakeholders/industries

| No. | Instruments                                                                           | 5 Point Likert Scale in (%) |      |      |      |   |
|-----|---------------------------------------------------------------------------------------|-----------------------------|------|------|------|---|
|     |                                                                                       | 1                           | 2    | 3    | 4    | 5 |
| E22 | Does PPP can ensure proper financial flows?                                           |                             |      | 66,7 | 33,3 |   |
| E23 | Does PPP help industry overcome the financial constraints?                            |                             | 10,0 | 73,3 | 16,7 |   |
| E24 | Are PPP will reduce administration cost that bears by institutes/industry/government? |                             | 6,7  | 30,0 | 63,3 |   |

|     |                                                                                                                                                                                 |  |      |      |      |      |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------|------|------|------|
| E25 | A specific percentage of Income tax generated annually by Government should be utilized for the provision of work shop facilities to universities/training Institutions in TVET |  | 6,7  | 20,0 | 56,7 | 16,7 |
| E26 | Cost of operation is expected to be much lower due to the greater managerial efficiency in PPP                                                                                  |  |      | 36,7 | 63,3 |      |
| E27 | Without investing a very huge sum of money upfront, government would be able to cater to a much larger student population.                                                      |  | 13,3 | 46,7 | 40,0 |      |
| E28 | Does PPP will reduce costs and increase revenues                                                                                                                                |  | 7,4  | 70,4 | 18,5 | 3,7  |

Table 3.5.3. Cost-Effectiveness of Public Private Partnership (PPP) for government organizations

| No. | Instruments                                                                                                                                                                     | 5 Point Likert Scale in (%) |   |     |     |    |
|-----|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|-----|-----|----|
|     |                                                                                                                                                                                 | 1                           | 2 | 3   | 4   | 5  |
| E22 | Does PPP can ensure proper financial flows?                                                                                                                                     |                             |   | 75  | 25  |    |
| E23 | Does PPP help industry overcome the financial constraints?                                                                                                                      |                             |   | 50  | 25  | 25 |
| E24 | Are PPP will reduce administration cost that bears by institutes/industry/government?                                                                                           |                             |   | 100 |     |    |
| E25 | A specific percentage of Income tax generated annually by Government should be utilized for the provision of work shop facilities to universities/training Institutions in TVET |                             |   |     | 75  | 25 |
| E26 | Cost of operation is expected to be much lower due to the greater managerial efficiency in PPP                                                                                  |                             |   |     | 100 |    |
| E27 | Without investing a very huge sum of money upfront, government would be able to cater to a much larger student population.                                                      |                             |   | 50  | 50  |    |
| E28 | Does PPP will reduce costs and increase revenues                                                                                                                                |                             |   | 100 |     |    |

### 3.6. Section F: Efficiency of Public Private Partnership (PPP)

Table 3.6.1. Efficiency of Public Private Partnership (PPP) for TVET institutions

| No. | Instruments                                                                                                     | 5 Point Likert Scale in (%) |   |    |     |   |
|-----|-----------------------------------------------------------------------------------------------------------------|-----------------------------|---|----|-----|---|
|     |                                                                                                                 | 1                           | 2 | 3  | 4   | 5 |
| F29 | Shared cost savings                                                                                             |                             |   | 50 | 50  |   |
| F30 | lowering bureaucratic constraints                                                                               |                             |   | 50 | 50  |   |
| F31 | Decentralizing roles, power, and authority of PPP in TVET is important for effective delivery of skill training |                             |   |    | 100 |   |
| F32 | Faster, more efficient delivery of services / information                                                       |                             |   |    | 100 |   |

Table 3.6.2. Efficiency of Public Private Partnership (PPP) for stakeholders/industries

| No. | Instruments                                                                                                     | 5 Point Likert Scale in (%) |     |      |      |      |
|-----|-----------------------------------------------------------------------------------------------------------------|-----------------------------|-----|------|------|------|
|     |                                                                                                                 | 1                           | 2   | 3    | 4    | 5    |
| F29 | Shared cost savings                                                                                             |                             |     | 56,7 | 40,0 | 3,3  |
| F30 | lowering bureaucratic constraints                                                                               |                             | 6,7 | 40,0 | 50,0 | 3,3  |
| F31 | Decentralizing roles, power, and authority of PPP in TVET is important for effective delivery of skill training |                             |     | 13,3 | 80,0 | 6,7  |
| F32 | Faster, more efficient delivery of services / information                                                       |                             |     | 51,6 | 32,3 | 16,1 |

Table 3.6.3. Efficiency of Public Private Partnership (PPP) for government organizations

| No. | Instruments | 5 Point Likert Scale in (%) |
|-----|-------------|-----------------------------|
|-----|-------------|-----------------------------|

|     |                                                                                                                 | 1 | 2 | 3  | 4  | 5  |
|-----|-----------------------------------------------------------------------------------------------------------------|---|---|----|----|----|
| F29 | Shared cost savings                                                                                             |   |   | 50 | 50 |    |
| F30 | lowering bureaucratic constraints                                                                               |   |   | 25 | 75 |    |
| F31 | Decentralizing roles, power, and authority of PPP in TVET is important for effective delivery of skill training |   |   | 25 | 75 |    |
| F32 | Faster, more efficient delivery of services / information                                                       |   |   | 25 | 50 | 25 |

### 3.7. Section G: Accountability of Public Private Partnership (PPP)

Table 3.7.1. Accountability of Public Private Partnership (PPP) for TVET institutions

| No. | Instruments                                                                                   | 5 Point Likert Scale in (%) |   |    |     |   |
|-----|-----------------------------------------------------------------------------------------------|-----------------------------|---|----|-----|---|
|     |                                                                                               | 1                           | 2 | 3  | 4   | 5 |
| G33 | PPP contribute to highly achievement in TVET training?                                        |                             |   |    | 100 |   |
| G34 | Private sector should be the key player on PPP activities/program.                            |                             |   | 50 | 50  |   |
| G35 | Government highly responsible on supporting PPP in term of financial and training facilities. |                             |   |    | 100 |   |
| G35 | Universities/training institutions should be the leader in future planning on PPP.            |                             |   |    | 100 |   |

Table 3.7.2. Accountability of Public Private Partnership (PPP) for stakeholders/industries

| No. | Instruments                                            | 5 Point Likert Scale in (%) |   |      |      |     |
|-----|--------------------------------------------------------|-----------------------------|---|------|------|-----|
|     |                                                        | 1                           | 2 | 3    | 4    | 5   |
| G33 | PPP contribute to highly achievement in TVET training? |                             |   | 20,0 | 76,7 | 3,3 |

|     |                                                                                               |  |      |      |      |  |
|-----|-----------------------------------------------------------------------------------------------|--|------|------|------|--|
| G34 | Private sector should be the key player on PPP activities/program.                            |  | 13,3 | 26,7 | 60,0 |  |
| G35 | Government highly responsible on supporting PPP in term of financial and training facilities. |  | 3,3  | 46,7 | 50,0 |  |
| G35 | Universities/training institutions should be the leader in future planning on PPP.            |  | 13,3 | 16,7 | 70,0 |  |

Table 3.7.3. Accountability of Public Private Partnership (PPP) for government organizations

| No. | Instruments                                                                                   | 5 Point Likert Scale in (%) |   |    |    |    |
|-----|-----------------------------------------------------------------------------------------------|-----------------------------|---|----|----|----|
|     |                                                                                               | 1                           | 2 | 3  | 4  | 5  |
| G33 | PPP contribute to highly achievement in TVET training?                                        |                             |   |    | 75 | 25 |
| G34 | Private sector should be the key player on PPP activities/program.                            |                             |   | 50 | 50 |    |
| G35 | Government highly responsible on supporting PPP in term of financial and training facilities. |                             |   | 50 | 50 |    |
| G35 | Universities/training institutions should be the leader in future planning on PPP.            |                             |   |    | 75 | 25 |

### 3.8. Section H: Sustainability of Public Private Partnership (PPP)

Table 3.8.1. Sustainability of Public Private Partnership (PPP) for TVET institutions

| No. | Instruments                                                                                                                                                             | 5 Point Likert Scale in (%) |   |    |     |    |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|----|-----|----|
|     |                                                                                                                                                                         | 1                           | 2 | 3  | 4   | 5  |
| H36 | Does PPP for universities/training institutions are produce graduates who are competitive?                                                                              |                             |   | 50 | 50  |    |
| H37 | PPP in TVET is designed to train skilled and entrepreneu-rial workforce that are needed to create wealth that would help reduce the menace of poverty and unemployment. |                             |   |    | 50  | 50 |
| H38 | PPP in TVET whose primary purpose is to prepare persons for employment in a recognize occupation present and future workforce.                                          |                             |   |    | 100 |    |

Table 3.8.2. Sustainability of Public Private Partnership (PPP) for stakeholders/industries

| No. | Instruments                                                                                                                                                             | 5 Point Likert Scale in (%) |   |      |      |      |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|------|------|------|
|     |                                                                                                                                                                         | 1                           | 2 | 3    | 4    | 5    |
| H36 | Does PPP for universities/training institutions are produce graduates who are competitive?                                                                              |                             |   | 23,3 | 66,7 | 10,0 |
| H37 | PPP in TVET is designed to train skilled and entrepreneu-rial workforce that are needed to create wealth that would help reduce the menace of poverty and unemployment. |                             |   | 16,7 | 76,7 | 6,7  |
| H38 | PPP in TVET whose primary purpose is to prepare persons for employment in a recognize occupation present and future workforce.                                          |                             |   | 6,7  | 83,3 | 10,0 |

Table 3.8.3. Sustainability of Public Private Partnership (PPP) for government organizations

| No. | Instruments                                                                                                                                                             | 5 Point Likert Scale in (%) |   |    |    |    |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|---|----|----|----|
|     |                                                                                                                                                                         | 1                           | 2 | 3  | 4  | 5  |
| H36 | Does PPP for universities/training institutions are produce graduates who are competitive?                                                                              |                             |   | 25 | 75 |    |
| H37 | PPP in TVET is designed to train skilled and entrepreneu-rial workforce that are needed to create wealth that would help reduce the menace of poverty and unemployment. |                             |   | 25 | 75 |    |
| H38 | PPP in TVET whose primary purpose is to prepare persons for employment in a recognize occupation present and future workforce.                                          |                             |   |    | 75 | 25 |

### 3.9. Section I: Perspective of Public Private Partnership (PPP)

I39. What kind of background factors influenced the decision for implementing PPP for universities/training institutes in TVET?

| Factor in (%)                               | Institutions | Stakeholders | Governments |
|---------------------------------------------|--------------|--------------|-------------|
| Support by government initiative            | 40           | 13           | 23          |
| Closer cooperation with institutes/industry | 40           | 32           | 31          |
| To produce highly skills workers            | 20           | 27           | 23          |
| More interaction                            | 0            | 14           | 15          |

|                                     |   |    |   |
|-------------------------------------|---|----|---|
| Sharing knowledge on new technology | 0 | 14 | 8 |
|-------------------------------------|---|----|---|

I40. What kind of advantages do you expect from PPP?

| Factor in (%)                                                      | Institutions | Stakeholders | Governments |
|--------------------------------------------------------------------|--------------|--------------|-------------|
| Skills training are more business driven                           | 25           | 23           | 29          |
| Employee aware of what is happening in industry                    | 25           | 16           | 14          |
| Employee learn to operate latest stage of equipment and technology | 0            | 23           | 0           |
| Student learn by job-related work processes                        | 50           | 39           | 57          |

I41. What benefits of PPP for universities/training institutes in TVET?

| Factor in (%)                                             | Institutions | Stakeholders | Governments |
|-----------------------------------------------------------|--------------|--------------|-------------|
| Produce more skilled students                             | 40           | 37           | 27          |
| Prepare persons for employment in a recognize occupation. | 40           | 27           | 36          |
| Reduce costs and increase revenues                        | 0            | 10           | 18          |
| To produce highly skills workers                          | 20           | 27           | 18          |

I42. What are the challenges of PPP for universities/training institute in TVET? (%)

| Factor in (%)                                                                                                    | Institutions | Stakeholders | Governments |
|------------------------------------------------------------------------------------------------------------------|--------------|--------------|-------------|
| Mismatch between the labour market and TVET program                                                              | 50           | 19           | 44          |
| Training needs are not always identified and prioritized according to industry skills and workforce development. | 0            | 38           | 22          |
| Inadequate investment in training infrastructure, facilities and staff development.                              | 50           | 43           | 33          |

#### 4.0. Discussions

##### 4.1. Awareness of Public Private Partnership (PPP) for TVET institutions

The awareness of PPP for TVET institutions are comprised of 5 factors as follows:

- The existence of PPP for universities/ training institutes in TVET
- The importance of PPP for universities/ training institutes
- The succesfull of PPP in the long term period
- The service delivery of universities/ training institutes to industries
- The student opportunity to get place in industry due to the establishment of PPP

Tabel 4.1 and Figure 4.1 shows a comparison between institutions, government organizations and stakeholders/industries toward the awareness of PPP for TVET institution.

Tabel 4.1 Awareness of PPP for TVET institution

| Instruments              | Institutions | 5 Point Likert Scale (%) |     |      |      |      |
|--------------------------|--------------|--------------------------|-----|------|------|------|
|                          |              | 1                        | 2   | 3    | 4    | 5    |
| The existence            | Institutions |                          |     |      | 50   | 50   |
|                          | Government   | 25                       |     |      | 50   | 25   |
|                          | Stakeholders |                          |     | 56,7 | 23,3 | 20,0 |
| The importance           | Institutions |                          |     |      | 50   | 50   |
|                          | Government   |                          |     | 25   | 25   | 50   |
|                          | Stakeholders |                          |     | 36,7 | 40,0 | 23,3 |
| The long term succesfull | Institutions |                          |     |      | 100  |      |
|                          | Government   |                          |     | 50   | 25   | 25   |
|                          | Stakeholders |                          |     | 63,3 | 33,3 | 3,3  |
| Improve delivery service | Institutions |                          |     |      |      | 100  |
|                          | Government   |                          |     | 25   | 50   | 25   |
|                          | Stakeholders |                          |     | 53,3 | 46,7 |      |
| Student opportunity      | Institutions |                          |     | 100  |      |      |
|                          | Government   |                          |     | 50   | 50   |      |
|                          | Stakeholders |                          | 6,7 | 26,7 | 66,7 |      |

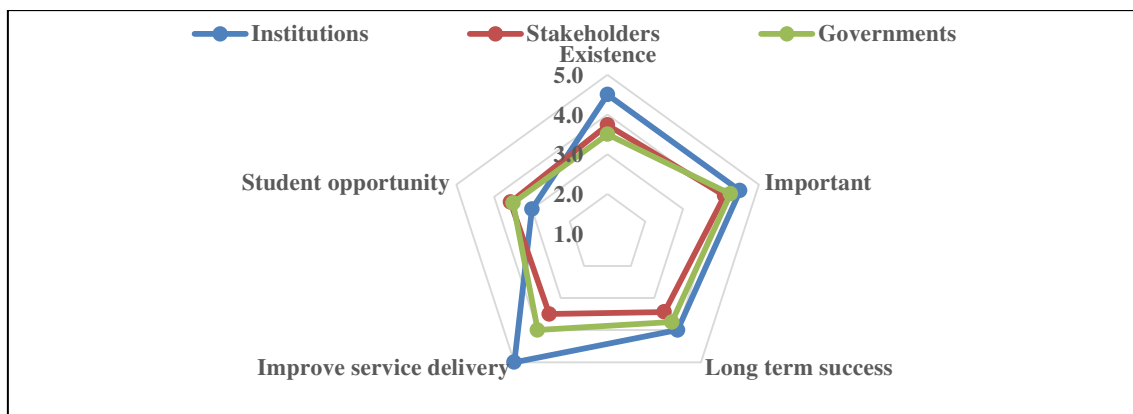


Figure 4.1 Awareness of PPP for TVET institutions

Based on the results in Table 4.1.1 and Figure 4.1.1, TVET institutions are strongly aware about the existence of PPP, the important element of PPP for universities / training institute in TVET, as well as the role of PPP to improve service delivery by the universities/training institutes in TVET and the long run succesfull of PPP program. However, TVET institutions are not sure and aware that this PPP program can provide an opportunity to students to work after they graduate. It is due to the role of government policy towards the industries.

On the other hand, government organizations are aware enough on all factors of PPP of TVET institutions. This might attributed to the lack of consistency of TVET institutions in carrying out their education program. Similar to the government organizations, stakeholder are sufficiently aware on the existence of PPP and the important element of PPP for universities/ training institute in TVET. However, it should be noted that stakeholders and industries, as the users of TVET institutions graduates, are not sure about the long run succesfull of PPP of universities/training institute activities in TVET, as well as the role of PPP to improve service delivery and the ability of PPP program in providing opportunity to students to work after they graduate.

It can be concluded that due to the lack awareness of government organizations and industries towards PPP program and the high expectations by the industries towards the skill of graduates, TVET institutions have to address these situations by providing a good education program.

#### 4.2. Relevance of Public Private Partnership (PPP)

The relevance of PPP for TVET institutions are comprised of 3 factors as follows:

- The course relevancy with industry

- The industrial involvement on occupations, skills in demand, key skills identification, and project priorities for their sector
- The industrial confidence in graduates skill

Tabel 4.2 and Figure 4.2 shows a comparison between institutions, government organizations and stakeholders/industries toward the relevance of PPP.

Tabel 4.2 Relevance of PPP

| Instruments                | Institutions | 5 Point Likert Scale (%) |   |      |      |    |
|----------------------------|--------------|--------------------------|---|------|------|----|
|                            |              | 1                        | 2 | 3    | 4    | 5  |
| The course relevancy       | Institutions |                          |   |      | 50   | 50 |
|                            | Government   |                          |   | 50   | 50   |    |
|                            | Stakeholders |                          |   | 26,7 | 73,3 |    |
| The industrial involvement | Institutions |                          |   |      | 100  |    |
|                            | Government   |                          |   | 25   | 50   | 25 |
|                            | Stakeholders |                          |   |      | 80   | 20 |
| The industrial confidency  | Institutions |                          |   |      | 100  |    |
|                            | Government   |                          |   |      | 50   | 50 |
|                            | Stakeholders |                          |   | 30   | 70   |    |

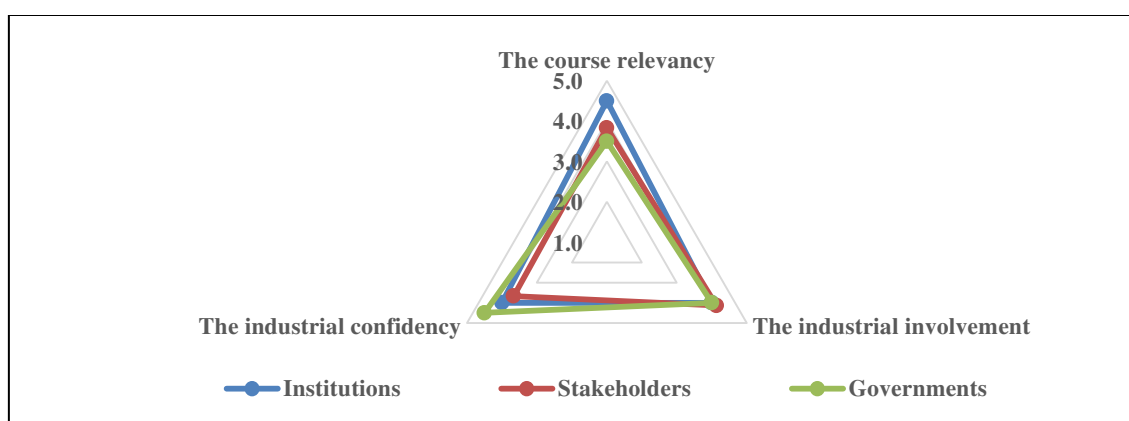


Figure 4.2 Relevance of PPP

Based on the results in Table 4.2 and Figure 4.2, in terms of course relevancy, TVET institutions, government organizations and stakeholders are significantly agree that there should be a relevancy for the course that offered at universities/training institutes with

industry. This relevancy is supported by the by involvement of industries. According to the results, all are agree that industries should consulted periodically to provide specific advice on occupations and skills in demand, and to identify key skills, project priorities for their sector. This will bring a situation that the company/industry welcomes graduates because they know that the graduates have passed a certain level of skills and technical capability. It can be concluded that the relevancy between TVET institutions, government organizations and stakeholders/industries need to be developed to overcome the skill gap between TVET institutions graduates and industries requirement.

#### 4.3. Responsiveness of Public Private Partnership (PPP)

The responsiveness of PPP are comprised of 4 factors as follows:

- Produce skill students
- Able to meet industrial demands
- Remain as a veritable tools
- Enhance skill training

Tabel 4.3 and Figure 4.3 shows a comparison between institutions, government organizations and stakeholders/industries toward the responsiveness of PPP.

Tabel 4.3 Responsiveness of PPP

| Instruments                     | Institutions | 5 Point Likert Scale (%) |     |      |      |      |
|---------------------------------|--------------|--------------------------|-----|------|------|------|
|                                 |              | 1                        | 2   | 3    | 4    | 5    |
| Produce skill students          | Institutions |                          |     |      | 50   | 50   |
|                                 | Government   |                          |     | 50   | 50   |      |
|                                 | Stakeholders |                          |     | 33,3 | 53,3 | 13,3 |
| Able to meet industrial demands | Institutions |                          |     |      | 100  |      |
|                                 | Government   |                          |     |      | 100  |      |
|                                 | Stakeholders |                          |     | 33,3 | 66,7 |      |
| Remain as a veritable tools     | Institutions |                          |     | 50   | 50   |      |
|                                 | Government   |                          |     |      | 100  |      |
|                                 | Stakeholders |                          | 6,7 | 16,7 | 63,3 | 13,3 |
| Enhance skill training          | Institutions |                          |     |      | 100  |      |
|                                 | Government   |                          |     | 50   | 50   |      |

|  |              |  |  |    |    |    |
|--|--------------|--|--|----|----|----|
|  | Stakeholders |  |  | 10 | 70 | 20 |
|--|--------------|--|--|----|----|----|

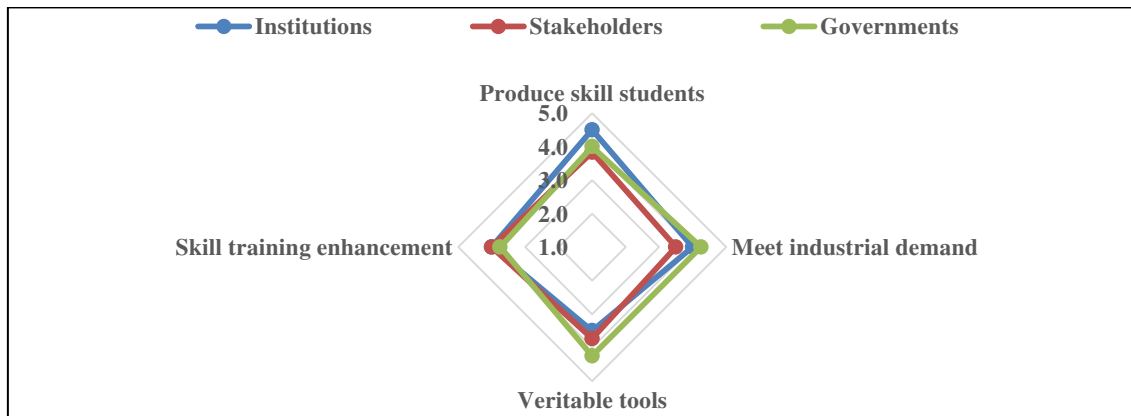


Figure 4.3 Responsiveness of PPP

Based on the results in Table 4.3 and Figure 4.3, the responsiveness to produce more skilled students in PPP programs are TVET institutions. However, the role of government organizations are crucial to overcome the skill gaps between the TVET institutions graduates and the demands of the industry. It is shown on Figure 4.3 that the industrials confidence are very low towards the skill of TVET student skill to meet their demands. Therefor, in PPP program, the role of government organizations are very important in providing a veritable tool to achieve national development. Furthermore, TVET institutions, government and industries believe that PPP program are very beneficial for skilled training enhancement.

#### 4.4. Cost-Effectiveness of Public Private Partnership (PPP)

The cost-effectiveness of PPP are comprised of 7 factors as follows:

- Ensure financial flows
- Overcome the industrial financial constraints
- Reduce administration coat that bears by institutes/industry/government
- Government policy in annually income tax
- Lower cost of operation due to managerial efficiency
- Able to cater to a much larger student population
- Reduce cost and increase revenue

Tabel 4.4 and Figure 4.4 shows a comparison between institutions, government organizations and stakeholders/industries toward the cost-effectiveness of PPP.

Tabel 4.4 The cost-effectiveness of PPP

| Instruments            | Institutions | 5 Point Likert Scale (%) |      |      |      |      |
|------------------------|--------------|--------------------------|------|------|------|------|
|                        |              | 1                        | 2    | 3    | 4    | 5    |
| Ensure financial flows | Institutions |                          |      | 100  |      |      |
|                        | Government   |                          |      | 75   | 25   |      |
|                        | Stakeholders |                          |      | 66,7 | 33,3 |      |
| Financial constraints  | Institutions |                          |      |      | 50   | 50   |
|                        | Government   |                          |      | 50   | 25   | 25   |
|                        | Stakeholders |                          | 10   | 73,3 | 16,7 |      |
| Reduce administration  | Institutions |                          |      | 100  |      |      |
|                        | Government   |                          |      | 100  |      |      |
|                        | Stakeholders |                          | 6,7  | 30   | 63,3 |      |
| Government policy      | Institutions |                          |      |      | 50   | 50   |
|                        | Government   |                          |      |      | 75   | 25   |
|                        | Stakeholders |                          | 6,7  | 20   | 56,7 | 16,7 |
| Cost of operation      | Institutions |                          |      | 50   | 50   |      |
|                        | Government   |                          |      |      | 100  |      |
|                        | Stakeholders |                          |      | 36,7 | 63,3 |      |
| Student population     | Institutions |                          |      |      | 100  |      |
|                        | Government   |                          |      | 50   | 50   |      |
|                        | Stakeholders |                          | 13,3 | 46,7 | 40   |      |
| Reduce cost            | Institutions |                          |      | 50   | 50   |      |
|                        | Government   |                          |      | 100  |      |      |
|                        | Stakeholders |                          | 7,4  | 70,4 | 18,5 | 3,7  |

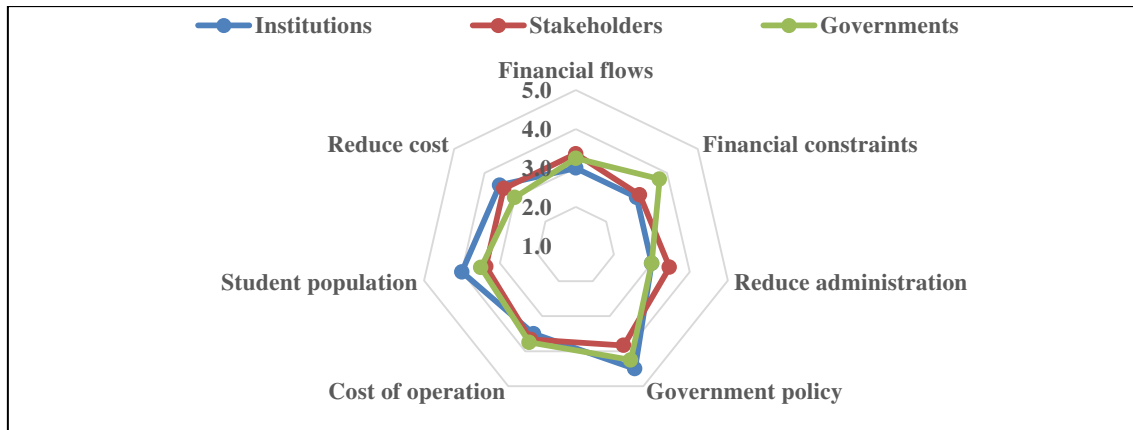


Figure 4.4 The cost-effectiveness of PPP

Based on the results in Table 4.4 and Figure 4.4, TVET institutions, government organizations and stakeholders/industries are slightly believe that PPP programs will ensure proper financial flows and lower the cost of operations due to the greater managerial efficiency in PPP. This is attributed to the lack of government involvement and there is no established system to support the PPP program. Moreover, TVET institutions and government organizations are not sure that this PPP program will be able to reduce administration cost that bears by institute and government. However, according to TVET institutions, this might be overcome by a specific percentage of income tax generated annually by government should be utilized for the provision of work shop facilities to universities/training Institutions in TVET. Thus, this policy will be able to cater to a much larger student population.

On the other hand, most of stakeholders/industries are agree that this PPP program is able to overcome the administration cost and cost operation problem which lead to the revenue increase. While, the government organizations are merely agree that the PPP program will help the industries to overcome their financial constraints. Thus, it can be concluded that the cost-effectiveness of PPP is not yet fully formed due to the gap of the government organizations policy towards industries.

#### 4.5. Efficiency of Public Private Partnership (PPP)

The efficiency of PPP are comprised of 4 factors as follows:

- Shared cost savings
- Lowering bureaucratic constraints
- Decentralizing roles, power, and authority
- More efficient delivery of services

Tabel 4.5 and Figure 4.5 shows a comparison between institutions, government organizations and stakeholders/industries toward the efficiency of PPP.

Tabel 4.5 Efficiency of PPP

| Instruments                            | Institutions | 5 Point Likert Scale (%) |     |      |      |      |
|----------------------------------------|--------------|--------------------------|-----|------|------|------|
|                                        |              | 1                        | 2   | 3    | 4    | 5    |
| Shared cost savings                    | Institutions |                          |     | 50   | 50   |      |
|                                        | Government   |                          |     | 50   | 50   |      |
|                                        | Stakeholders |                          |     | 56,7 | 40   | 3,3  |
| Lowering bureaucratic constraints      | Institutions |                          |     | 50   | 50   |      |
|                                        | Government   |                          |     | 25   | 75   |      |
|                                        | Stakeholders |                          | 6,7 | 40   | 50   | 3,3  |
| Decentralizing roles, power, authority | Institutions |                          |     |      | 100  |      |
|                                        | Government   |                          |     | 25   | 75   |      |
|                                        | Stakeholders |                          |     | 13,3 | 80   | 6,7  |
| More efficient delivery of services    | Institutions |                          |     |      | 100  |      |
|                                        | Government   |                          |     | 25   | 50   | 25   |
|                                        | Stakeholders |                          |     | 51,6 | 32,3 | 16,1 |

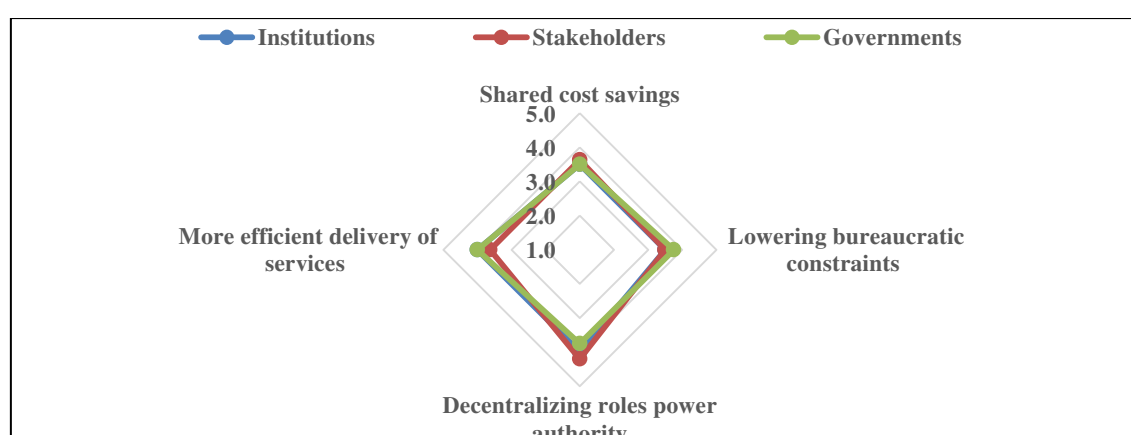


Figure 4.5 Efficiency of PPP

Based on the results in Table 4.5 and Figure 4.5, the implementation of PPP program will significantly improve the efficiency of TVET institutions, government organizations and

stakeholder/industries. It will provide shared cost savings, a faster and more efficient in delivery services and information, and also lowering bureaucratic constrains. Moreover, decentralizing roles, power, and authority of PPP in TVET is important for effective delivery of skill training particularly for TVET institutions, government organizations.

#### 4.6. Accountability of Public Private Partnership (PPP)

Accountability of PPP are comprised of 4 factors as follows:

- Contribution to TVET training
- Key player
- Government responsibility
- Leader in future planning

Tabel 4.6 and Figure 4.6 shows a comparison between institutions, government organizations and stakeholders/industries toward the accountability of PPP.

Tabel 4.6 Accountability of PPP

| Instruments                   | Institutions | 5 Point Likert Scale (%) |      |      |      |     |
|-------------------------------|--------------|--------------------------|------|------|------|-----|
|                               |              | 1                        | 2    | 3    | 4    | 5   |
| Contribution to TVET training | Institutions |                          |      |      | 100  |     |
|                               | Government   |                          |      |      | 75   | 25  |
|                               | Stakeholders |                          |      | 20   | 76,7 | 3,3 |
| Key player                    | Institutions |                          |      | 50   | 50   |     |
|                               | Government   |                          |      | 50   | 50   |     |
|                               | Stakeholders |                          | 13,3 | 26,7 | 60   |     |
| Government responsibility     | Institutions |                          |      |      | 100  |     |
|                               | Government   |                          |      | 50   | 50   |     |
|                               | Stakeholders |                          | 3,3  | 46,7 | 50   |     |
| Leader in future planning     | Institutions |                          |      |      | 100  |     |
|                               | Government   |                          |      |      | 75   | 25  |
|                               | Stakeholders |                          | 13,3 | 16,7 | 70   |     |

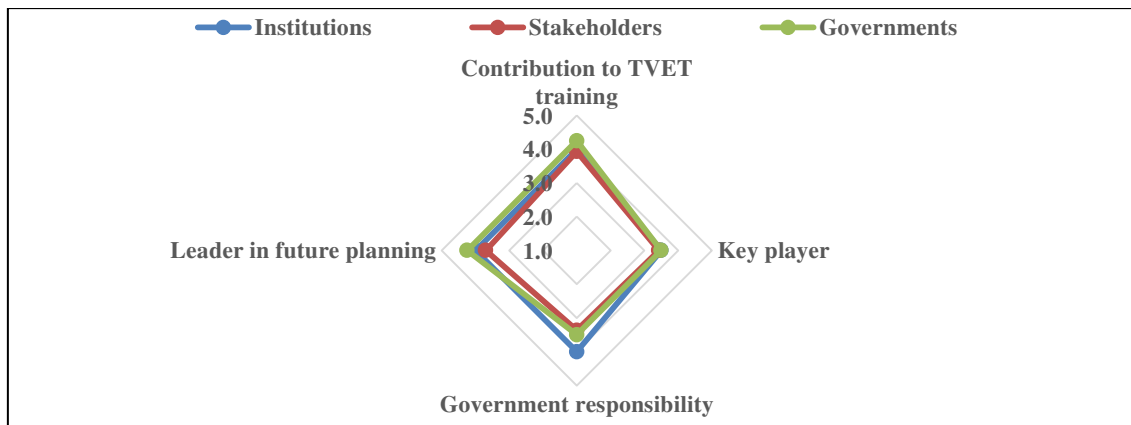


Figure 4.6 Accountability of PPP

Based on the results in Table 4.6 and Figure 4.6, the implementation of PPP program will contribute to highly achievement training and should become the key player on PPP activities/program for TVET institutions, government organizations and stakeholders/industries. Moreover, the accountability of PPP program should have a support from government. Government highly responsible on supporting PPP in term of financial and training facilities. However, the stakeholders/industries are agree that role of government involvement in supporting PPP in term of financial and training facilities are still very low. Furthermore, TVET institutions and government organizations believe that universities/training institutions should be the leader in future planning on PPP program. However, this concept is not fully agreed by stakeholders/industries. This program should be a collaboration program between TVET institutions and industries under government supervision and support.

#### 4.7. Sustainability of Public Private Partnership (PPP)

Sustainability of PPP are comprised of 3 factors as follows:

- Produce competitive graduates
- Train skilled and entrepreneurial workforce to reduce poverty and unemployment
- Recognize occupation present and future workforce

Tabel 4.7 and Figure 4.7 shows a comparison between institutions, government organizations and stakeholders/industries toward the sustainability of PPP.

Tabel 4.7 Sustainability of PPP

| Instruments                              | Institutions | 5 Point Likert Scale (%) |   |      |      |     |
|------------------------------------------|--------------|--------------------------|---|------|------|-----|
|                                          |              | 1                        | 2 | 3    | 4    | 5   |
| Produce competitive graduates            | Institutions |                          |   | 50   | 50   |     |
|                                          | Government   |                          |   | 25   | 75   |     |
|                                          | Stakeholders |                          |   | 23,3 | 66,7 | 6,7 |
| Train skilled, entrepreneurial workforce | Institutions |                          |   |      | 50   | 50  |
|                                          | Government   |                          |   | 25   | 75   |     |
|                                          | Stakeholders |                          |   | 16,7 | 76,7 | 6,7 |
| Recognize occupation                     | Institutions |                          |   |      | 100  |     |
|                                          | Government   |                          |   |      | 75   | 25  |
|                                          | Stakeholders |                          |   | 6,7  | 83,3 | 10  |

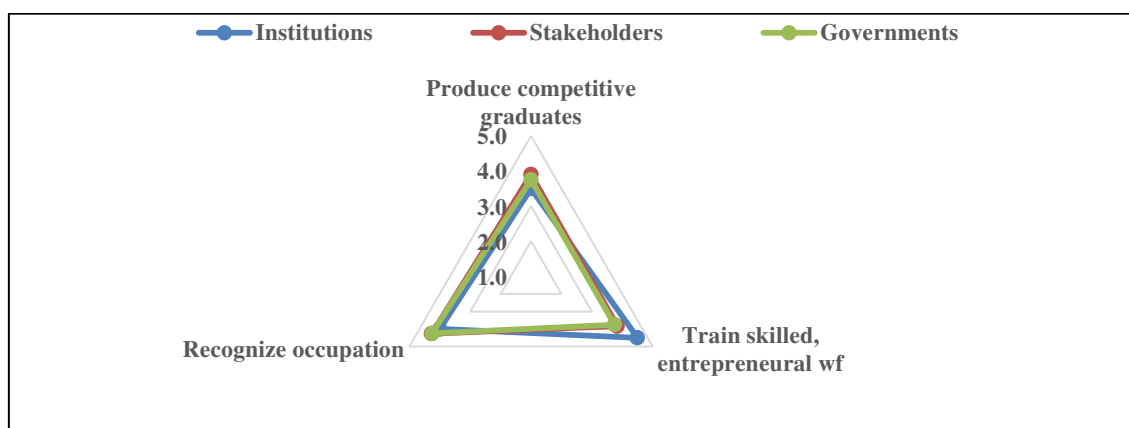


Figure 4.7 Sustainability of PPP

Based on the results in Table 4.7 and Figure 4.7, in terms of sustainability of PPP program in long run, PPP program for universities/training institutions will produce a competitive graduate and able to prepare students for employment in a recognize occupation present and future workforce. TVET institutions also strongly agree that PPP program in TVET is designed to train skilled and entrepreneurial workforce that are needed to create wealth that would help reduce the menace of poverty and unemployment. This is also supported by government organizations and industries that this program can overcome the gap between TVET institutions and industries in reducing unemployment. Thus, it can be concluded that PPP program will provide a good sustainability to national welfare.

#### 4.8. Perspective of Public Private Partnership (PPP)

The perspective of PPP was determined by 3 factors as follows: (1) background factors that influenced the decision for implementing PPP for universities/training institutes in TVET, (2) advantages from PPP, and (3) benefits of PPP for universities/training institutes in TVET

##### Background factors that influenced the decision for implementing PPP for universities/training institutes in TVET

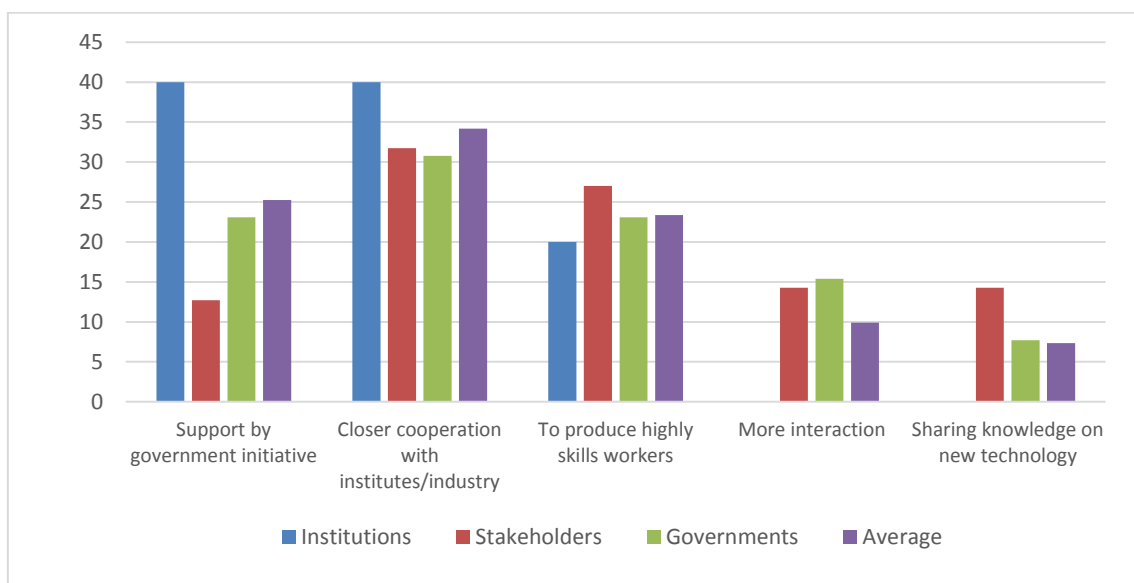


Figure 4.8.1 Background factors that influenced the decision for implementing PPP for universities/training institutes in TVET

##### Advantages from PPP

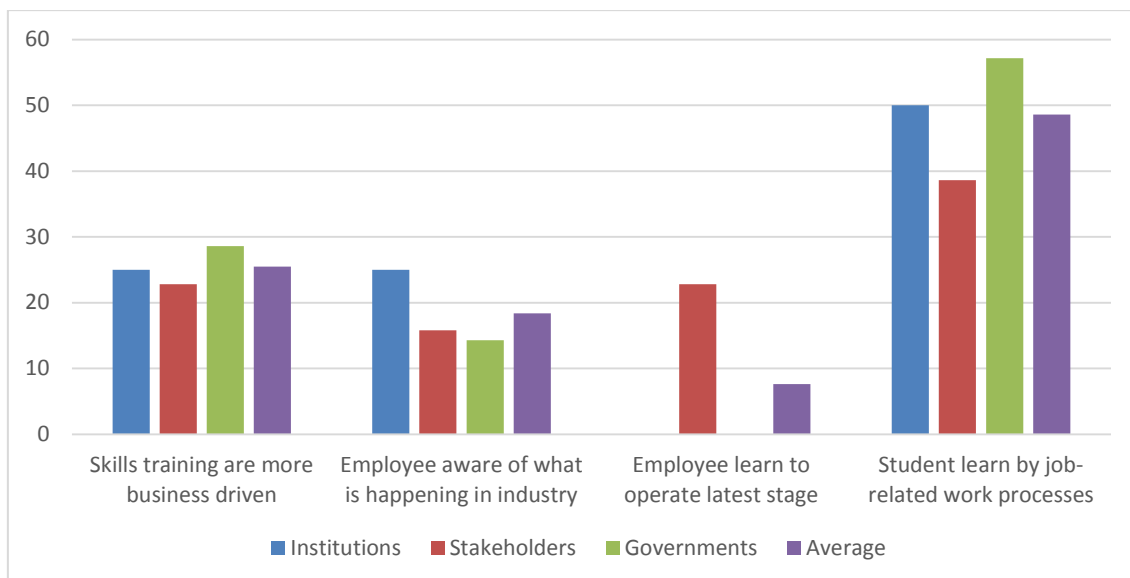


Figure 4.8.2 Advantages from PPP

#### Benefits of PPP for universities/training institutes in TVET

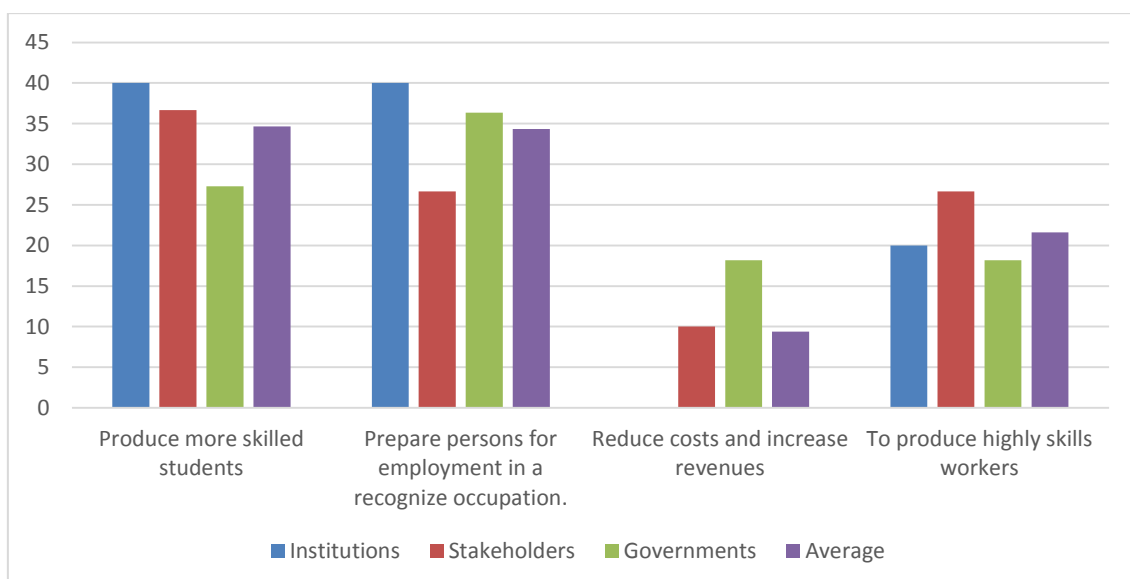


Figure 4.8.3 Benefits of PPP for universities/training institutes in TVET

#### The challenges of PPP for universities/training institute in TVET

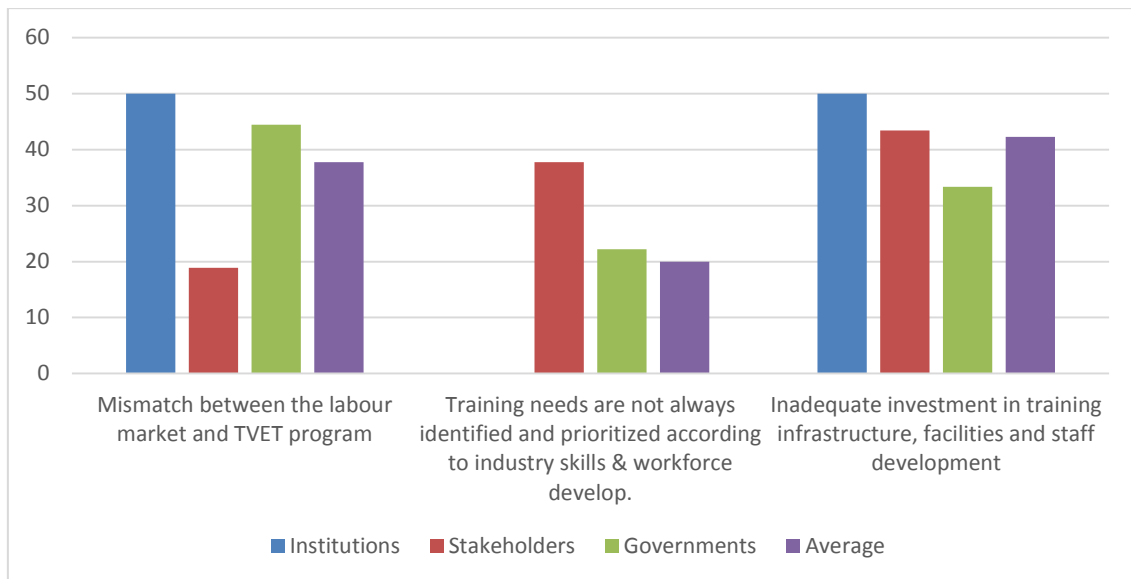


Figure 4.8.4 The challenges of PPP for universities/training institute in TVET

In general, the background factors that influenced the decision for implementing PPP on universities/training institutes in TVET are: support by government initiative, closer cooperation with institutes and industries, and to produce highly skilled workers. These backgrounds are expected by the TVET institutions and stakeholders/industries to form a collaboration under government supervision which will be able to overcome the skill gap issues. Furthermore, stakeholders and government organizations also hope that there will be more interaction and sharing knowledge on new technology by the implementation of PPP program.

Furthermore, TVET institutions, government organizations and stakeholders/industries agree that the advantages of implementing PPP program is that student learn by job-related processes during the PPP program. This process will bring benefits for universities/training institutes as well as to industries. The benefits of colaboration between universities/training institutes in TVET with stakeholders/industries in PPP program will produce more skilled students, prepare persons for employment in a recognize occupation, and to produce highly skills workers.

However, the main challenges of PPP program for universities/training institute in TVET now are the mismatch between the labour market and TVET program and inadequate investment in training infrastructure, facilities and staff development. The implementation of PPP programs hopefully will overcome the skill gap between the demands of industries and TVET

student graduates. The support of government is also play the important role in terms of training infrastructure, facilities and staff development.

#### 4.9. Public Private Partnership (PPP): The Existing Model in Indonesia

Based on the analysis on **Section 4.8**, the relationship between the universities/training institutes in TVET, government organizations, and stakeholders/industries in Indonesia can be drawn as follows:



Figure 4.9.1 Public Private Partnership (PPP): The Existing Model in Indonesia

Based on the final analysis in Figure 4.9.1, it shows that there is big mismatch between universities/training institutes in TVET with stakeholders/industries. Universities/training institutes in TVET are aware about the importance, relevancy, responsiveness and accountability of PPP program to overcome the skill gap between the TVET graduates and industrial demands. However, this situation is not supported by industries. The industries perspective and awareness towards PPP programs are low. They are not sure about the benefits that can be received by implementing this program, as well as the responsiveness and the accountability. This is due the role of government organizations which has not performed optimally as a supervisor and regulatory.

Based on this analysis, it can be concluded that the best model of PPP program in Indonesia is apprenticeship, as shown in Figure 4.9.2 and Figure 4.9.3, respectively.

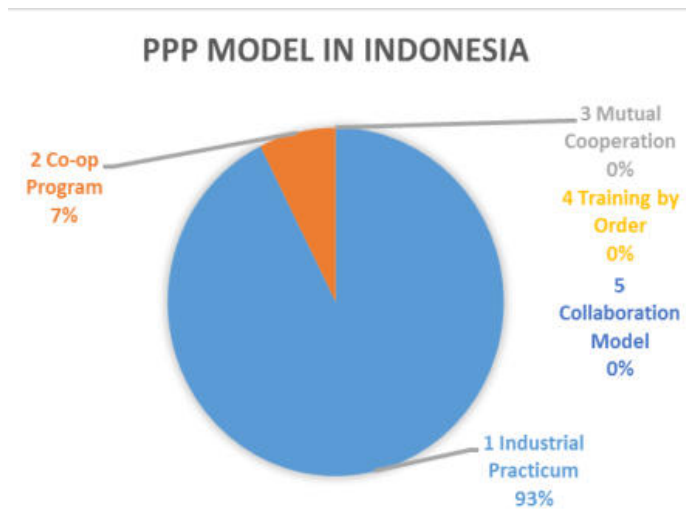


Figure 4.9.2 Public Private Partnership (PPP): The Existing Model in Indonesia

Type of PPP model in Indonesia is apprenticeship

Types of cooperation:

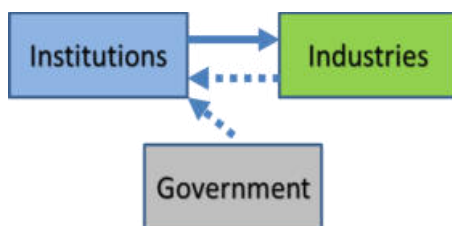


Figure 4.9.3 Relationship between universities/institutions, industries and government organizations.

## 5.0. Conclusions

Based on the analysis, it can be concluded as follows:

1. The type of PPP model in Indonesia is apprenticeship.
2. There is a big mismatch between universities/training institutes and stakeholders/industries.
3. The role of government organizations in supporting the PPP program is low. The role of government is still not quite clear as a bridge between universities/training institutes in TVET and industries. In addition, the government function as a regulatory has not performed optimally.

4. The bureaucracy system in Indonesia is not supported the implementation of PPP program.

----- **END of REPORTS** -----

## **National Report Cambodia**

### **“Public Private Partnership Between Government, University and Industry in TVET”**

#### **Abstract**

The report acknowledges the difficulties of moving from a traditional supply driven TVET system to a demand drive system. To ensure the relevance of TVET systems, involvement of industry and other stakeholders, necessitates facilitation throughout the development of all key features of that system. Within a developing country context, the introduction of technical vocational education and training (TVET) faces a wealth of challenges, encompassing infrastructure deficiencies, industry relevance, professional development needs, quality assurance, low status and governance. Phase one of TVET reform, in a developing country, usually focuses on increasing access, while the second phase usually functions to improve quality. A major keystone in the improvement of TVET quality is industry relevance. Industry relevance can be used as an input measure (industry developed competency standards and curriculum) and as an output measure (graduate destination) of a TVET quality system.

Implementing a consistent and comprehensive TVET quality system is important to ensure consistency of outputs and help raise the overall professionalism of a national TVET system. Moreover, involving industry is vital to maintaining the relevance of TVET to industry and ensuring the efficiency of provision. The following recommendations intend to address the question; how can industry have a positive impact on these areas of the National TVET Quality Framework for the Kingdom of Cambodia?

The research is done by NTTI staffs to survey on the PPP practice in Cambodia including 5 departments of Ministry of Labor and Vocational Training, and other TVET institutes in Phnom Penh and provincial total 20 institutes and 3 companies on total 139 respondents.

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- X. Conclusion

## ACRONYMS AND ABBREVIATIONS

ASEAN - Asia southeast Association Nation

CIB - Cambodia investment board

DGTVET - Directorate General of Technical and Vocational Education and Training

ICT - Information Communication Technology

IAG - Industry Advisory Groups

LMI - Labor Market Information

MoLVT - Ministry of Labor and Vocational Training

NTB - National Training Board

PPP - Public Private Partnership

PTC - Provincial Training Center

QIP - qualified investment projects

RECOTEVT - Regional Cooperation Platform for TVET Teacher Education and Training

RGC - Royal Government of Cambodia

SME - Small and Medium Enterprise

TVET - Technical Vocational Education Training

VET - Vocational Education Training

## I. Introduction

The difficulties of moving from a tradition supply driven TVET system to a demand driven which will meet with the market labor, it is limited process involving many different stakeholders and have to control and practice in steps. These involve some parameters from the supply side of what the institute/ teachers can deliver and how to attract students to,

and what does industry need and how can this be best achieved? PPP are understood to range from industry involvement in competency standards and curriculum development through to infrastructure funding for TVET provision. The industry participates, contribution and responsive to vocational training system has been a major goal of contemporary TVET system for decade, and it might be an area of ongoing process for well-established TVET system which lead to public private partnership between government, university and industry. The Royal Government of Cambodia has made significant moves through the Directorate General of Technical and Vocational Education and Training (DGTNET) towards making the Cambodian TVET system more responsive to industry needs. With the establishment of the National Training Board (NTB) and wide Board representation, the Cambodian TVET system has a strategic mechanism for industry partnership at the highest level.

## **II. Research Background**

The 2015 ASEAN integration and the move in 2015 to an ASEAN borderless state are placing urgent demands on the Kingdom of Cambodia, to ensure that skill development and TVET strategies are industry relevant and demand driven. If TVET demand driven strategies are not implemented before 2015, low skilled Cambodians could be locked out of the labor market as skilled workers from the region fill demand for skilled job vacancies. This situation would exacerbate poverty associated problems and social exclusion that the Government is already working hard to overcome. Like many governments, the Royal Government of Cambodia recognizes the importance of having a skilled workforce as the foundation for a strong and competitive economy.

The RECOTEVT and GIZ funded the research and support of this report to push the National Technical Training Institute in their efforts to extent the Cambodia TVET system in order to build partnership between government and industry. The research aim to identify when forming partnerships it is important to be realistic. Some big issues may need attention, but starting with smaller, more manageable tasks lets the partnership achieve early successes. Being realistic helps to build trust and stops disappointment. This report attempts to provide some pragmatic first steps to move forward. It also willing to access the Directorate General of TVET within the Ministry of Labor and Vocational Training (MoLVT), which has five operating departments (Department of Standard and Training Program, Department of Quality Assurance, Department of Policy and Strategies, Department of Labor Market Information and Department of Training) responsible for developing national competency standards, development and maintenance of a labor market information system and assuring quality of public and private TVET provision. Some of the main fields relevant for a survey are: How is PPP organized in partner countries, what kind of programs exist and are implemented? Which economic and institutional elements are crucial to the successful implementation of PPP in VET in reality? What are the relationship and interactions among them? How do firms get

involved in PPP? What benefits and costs do they expect to have and actually have? How are power distributed among the participating stakeholders in VET PPP? How are they defined and regulated in the process of program design? What are the government's expectations and worries in VET PPP? Which function does and shall government take during the development and implementation stage? What are the most important policy implications? The more detailed research questions focus on:

- a. Study of the current practice related to PPP models including its governance, business, training models and type of collaboration.
- b. Detailed process analysis to understand how PPP models currently conducts its business and training processes.
- c. Understand PPP Models current practice and system of resource allocations including physical, financial and human.
- d. Analyze the limits of the current PPP models system including legal and resource limitations and make recommendations for regional PPP models improvements.

### **III. Research Objectives**

The purpose of this study is to determine a relevant type of Public Private Partnership (PPP) model suitable to be incorporated in determining long-term contractual arrangements in terms of socio-economic impacts, investments and prospects, task efficiency and service enrichment to develop a feasible TVET hub in ASEAN (+3) countries that involved TVET actors as well as promoting "maintenance culture" among government private and academic sectors in the respective region.

- i. To explore numbers of existing programs/projects of TVET PPP among government, university and industry within TVET of your country based on relevant PPP model.
- ii. To determine the extent of private participation in different types of PPP arrangements/agreements within of your country based on relevant PPP model.
- iii. To compare between numbers of PPP programs with types of PPP arrangements/agreements within TVET of your country.
- iv. To explore the influences of socio-economic impacts, investments and prospects, task efficiency and service enrichment in determining the prospects and pitfalls of TVET PPP programs/projects of developing TVET hub in your country.
- v. To formulate and propose a cohesive new PPP model involving government, university and industry in accordance TVET hub development in of your country.
- vi. To recognize the major policy context regarding public-private partnership in TVET sector in your country.
- vii. To examine the current situation of public-private partnership that exists in the TVET system in your country.
- viii. To identify strategies to strengthen PPP.

### **IV. Research Question**

How is PPP organized in your country, what kind of programs exist and are implemented?

In Cambodia by MOLVT focused different PPP models for exchange and join with private sector to develop and capacity building for labor market to respond the need of industry of technical, business/ICT and mechanical worker for nation-wide labor demand. The first step we introduce the different training providers are introduced different PPP model. Try to improve efficiency and effectiveness of TVET workforce to push our TVET personal equip new technique upgrade on their existing skill.

Which economic and institutional elements are crucial to the successful implementation of PPP in VET in reality?

Mostly TVET institute success implement on technical, business/ICT and mechanical.

**What are the relationship and interactions among them? How do firms get involved in PPP?**

MoLVT and others universities and institutes try to expand and establish an industry exchange/sabbatical model to allow teachers to work in industry for 6 months to maintain industry currency. Government try to focus and adapt the new policy and regulations to enforce industry to participate with public sector in develop curriculum and new technology training arrangement. Created the exchange model between public and private to allow the teacher/ student and industry workers gain practical knowledge and know how. Identify industry sector in which to pilot programs to develop sustainability (ex: Land use, mineral, energy, tourism). Pilot sustainability to support environmental sustainability. Prioritize industrial sectors are defined for piloting sustainability program and prioritize industrial sector are sustainable developed.

**What benefits and costs do they expect to have and actually have?**

PPP are new mechanism to mobilize resource to support TVET. It also introduces Levy system for larger employers to support TVET training and skill development, and include TVET in investment promotion list for qualified investment projects (QIPs) under investment law. enforcing local skilled labor recruitment requirements and compulsory training obligation under investment law (Build Operate Transfer or other transfer systems under concession schemes). Regulations to enforce levy system are existing to get large employers to support TVET, and Cambodia investment board (CIB) play active role in sharing information on industrial demands (Skill need and manpower) and CIB makes an effort to attract investors to support TVET.

**How are power distributed among the participating stakeholders in VET PPP?**

Develop a system for the implementation and management of PPP (Include TVET in Quality Investment Projects so that TVET properties and services can be part of government concession scheme. Create network with stakeholders' particularly industrial sector is developed and Industry Advisory Groups (IAGs) for more sectors is also developed. The system for the implementation and management of PPPs is available. Establish coaching and mentoring circle for DGTNET and Public Training institutions directors with senior national or international mentor. Coaching and mentoring programs are implemented and improve the management capacity

### **How are they defined and regulated in the process of program design?**

Establish an annual innovating teachers award for innovative training models with an overseas study tour as a prize. Teachers award is established and participation is high. Deconcentration/granting administrative and/or financial autonomy to public training institutions and empower public Training institutions directions over management and organizational development and organizational development of the institutions. Institutions might move towards achieving autonomy.

### **What are the government's expectations and worries in VET PPP?**

Private household contribution to TVET through tuition fees are developing into an important source of income for TVET institutions in MoLVT. In the absence of a centrally developed policy on student fees, exemptions for students from marginalized and poor households are not available, institutional income from fees is not effectively monitored and equity and access for poor students and unemployed workers is undermined. Because the practice is developing in an unregulated fashion, the level of finance received by DGTNET institutions is not transparent which has implications for financial management, efficiency and unit cost.

### **Which functions does and shall government take during the development and implementation stage?**

There are considerable variations across DGTNET institutions. Larger institutes in Phnom Penh are able to charge fees, engage in fee-for-service course and develop programs without the benefit of government subsidies. The Engineering program at NTTI is an example. Most PTCs are unable to generate additional revenue from fees or other sources. Except in rare circumstances, DGTNET institutions have not received funding from international donor programmes, NGOs or industry because of poor perceptions of the quality of TVET that they offer. In the current economic situation, private providers are reporting significant cuts, up to 50 percent, in their fee schedules to attract students. It is assumed that cuts have also been made by public institutes. In the current climate it seems reasonable to assume there is little room to increase the percentage of private fee contributions in DGTNET institutions. The

more important issues are lack of data on tuition fees and the impact they have on access and equity.

#### **- What are the most important policy implications?**

A first step in the further analysis could be to priorities industry sectors within a number of categories such as export earning, wealth generating, employment generating, significance to regional economies, economic priority for the RGC, and social priority for the RCG and then cross reference this to LMI data on skill shortages by industry sector, by skill type and by skill level.

An industry sector such as garment manufacturing, would rate highly in both export earnings and employment generation and would there force be a priority industry sector for TVET depending on which parts of the sector are affected by skill shortages-entry level basic skill work, middle-level skills, front line management skills, administration and business skills and so on. the full range of industry sectors (Including sectors like education and health which have significant government expenditure) Should be assessed in this way.

Please identify your research with this 6 characteristics responsiveness, relevance, cost-effectiveness, efficiency, accountability and sustainability.

Demand for skill comes overwhelmingly from enterprises which need them for their production processes and individuals who need them to access work-both in occupations and self-employment. The nature of the demand varies substantially on the basis of the source of demand. A large enterprise may well be looking for fully qualifies workers with formal qualifications. An SME or micro-business is more likely to be looking for a customized skill package that might be part of a formal qualification or could be a mix of skill from a number of qualifications. Individuals exercise choice and may be looking for TVET that is not highlighted as a priority by LMI.

DGTVEET institutions with strong relationships with local enterprises and with their communities are much better placed to accurately read the nature of demand. This factor is one of the strengths of the VSTP. The VSTP built in the necessity for DGTVEET institutions to determine locally what skills were offered under the program. It is suggested later that DGTVEET central office and institutions negotiate the annual allocation of resources to programs so that the market intelligence from Labor Market Information (LMI) on one hand and the local market intelligence gathered by DGTVEET on the other, jointly influence the programs that are funded and offered.

#### **V. Socio-economic framework in the country**

Private household contribution to TVET through tuition fees are developing into an important source of income for TVET institutions in MLVT. In the absence of a centrally developed policy on student fees, exemptions for students from marginalized and poor households are not available, institutional income from fees is not effectively monitored and equity and access for poor students and unemployed workers is undermined. Because the practice is developing in an unregulated fashion, the level of finance received by DGTVE institutions is not transparent which has implications for financial management, efficiency and unit cost.

Industry associations and enterprise claim to expend very significant amounts on in-company delivered technical and vocational training. there is no definitive evidence for this, but anecdotal evidence strongly suggests there is some truth to the assertion. However, the quality of training is not monitored and may not be high. For example, the Tourism sector asserts that enterprises within it do most of their own training. However, a study on the financing of vocational training in Tourism and Hospitality in Cambodia highlighted a large skills gap in the workforce, low market shares for tourism in Cambodia within ASEAN and low labour productivity in absolute and relative terms compared to other ASEAN countries.

The size of the private TVET provider sector is substantial and the level of activity and outputs as measured by graduates in most industry sectors exceeds that of the DGTVE institutions in MoLVT. The following figures are from the Baseline Survey prepared by STVET. It represents as snap shot of 2012 rather than a definitive account of the number of course and graduates.

## **VI. Policy Framework for PPP**

The modern Cambodia, in pursuit of socio-economic development is following a free market economy, decentralization. As in other developing and developed nations worldwide, the Royal Government of Cambodia (RGC) recognizes that decentralization at the grass root level is not only important for strengthening democracy but also instrumental to foster participatory development and improve quality of public services. The government, with commitment in the National Poverty Reduction Strategy and the 'Rectangular Strategy' has shifted or is in the process of shifting responsibilities, power and resources from line ministries at the central level to local levels. In the process, the government has also given high priority to capacity building of the local authorities to ensure they are able to adequately manage the newly added responsibility of managing their own development needs. With the commitment of the government, the private sector has already started working in infrastructure development and providing public services in energy, infrastructure and waste sectors, formally and informally on different scales. While the large-scale projects have been given legal recognition, a lot of local level private sector initiatives have yet to be recognized and brought into the formal channel and provided with a more focused direction. Recognizing the private sector as the 'engine for growth' in both the public service and the Rectangular Strategy, the government has explicitly stated that NGOs, private sector and civil society will be encouraged to be involved by mobilizing local resources for infrastructure development and service delivery through partnerships and participation. To develop a conducive climate for involvement of the private sector in infrastructure development and

public services, the government has expressed its commitment to continue to support private investments in development of transport and telecommunications infrastructure systems and development in energy and electricity sectors (Rectangular Strategy) in its third mandate.

In the unorganized sector, small and micro enterprises have been involved in production and/or distribution of energy in small pocket settlements, supply of drinking water to households using their own distribution network or simply transporting it through water tankers. These are some examples of PPP that are already taking place. The active participation and interest of the private sector in infrastructure development and public service delivery, both large and small, is an indication that PPP has great potential in Cambodia.

While the private contractors have been able to fill in the supply demand gap that has not been met by government owned public utility authorities, the poor people are having to pay unreasonably high tariffs in exchange for available services. The present situation has also largely occurred due to lack of appropriate government legislation with respect to PPP. The government as of yet has not formulated a policy on PPPs and amended other supporting policies though it has already recognized partnerships with private sector, NGOs and the civil society. While PPP is already underway in Cambodia, there is a need to systematize the process with participation, transparency and accountability and to ensure that it is pro-poor focused. The Governing Principles of PPP like Transparency, Accountability, Participation, Equity and Empowerment, Competition and Contestability and others should be followed in the process of implementing the PPP projects.

## **VII. Selected PPP-Models (PPP models of Cambodia)**

PPP models as good practice in NTTI, Cambodia can be classified into three categories:

- School – School model
- School – Companies model
- School – Development partners/ NGOs

School – School model made in MOU between NTTI and other institute and universities both domestic, regional and international in purpose of teacher's exchange experiences and learning exchange for student. We have teacher's exchange with HCMUTE experts who came to NTTI to train our teacher on Robotic development. We also send our instructor to get trained in RMUTL on survey skill development. Moreover, we have sent student for student's exchange program to universities in Thailand and Vietnam for training and other skill competitions such as robot, electronic, and electricity. And we also host in NTTI to receive visits student from other domestic institute and university and other foreign country.

School – Company model is made by find the opportunities to create relation with private sector then we send our instructors to the private companies to upgrade their skill and capacity on new technologies which use in the companies. And we send our students to

companies for study tour and internship to give them more practice in real situation of working environment.

The PPP model regard as good practice between Battambang Institute of Technology, represented by Mr. Ouk Davandy, The authorized director, having its principal office at National Road no.5.nearby battambang Airport, Cambodia, and KUBOTA (CAMBODIA)Co.,Ltd., represented by Mr. Weerapong Wirabutra, the authorized director, having its principal office at #42, street No.306, Sangkat Boeungkengkong 1, Khan Chamkarmom, Phnom Penh City, Cambodia.

Whereas, KUBOTA CAMBODIA wishes to support and develop the Agricultural Machinery curriculum to Technical and Vocational Education Field of Cambodia Under the program called the KUBOTA Technical Education Center (hereinafter referred to as the" KTEC") as a part of KUBOTA CAMBODIA's policy on social contribution NOW, THEREFORE, KUBOTA CAMBODIA cooperates with BIT on KTEC for developing Technical and Vocational Education and Training in Cambodia, especially the Agricultural Machinery Training in Battambang Institute of Technology.

School – Development partners/ NGO, NTTI has join training program with UNIDO and Ministry of Environment in particular skills training to the youths in electronic industry and

business opportunities on e-waste industries for small business creation and startup. Teacher's upgradation by send our instructors to Thailand, Korea, German, China, Vietnam, for field training and field visit in Companies like Samsung Electronics Inc.

VIII. Impact of the PPP models which has been implemented to Cambodia towards economic impacts

- Prepare the physical infrastructure i.e. classroom, space of workshop
- Organize the instructors and/or trainers for this long term training program
- Support the operational materials including, but not limited to, fuel, oil, electricity and water supply
- Arrange the necessary documents for import duties and taxes exemption to import the training materials and necessary equipment for the KTEC program
- Implement the training program through the training curriculum agreed by both parties.
- Responsible for organizing the student selection for the Agricultural Machinery Section.
- Recommend graduate students to work with KUBOTA CAMBODIA by providing KUBOTA CAMBODIA of the undergraduate and/or graduate students with their profiles, before their final graduation.
- Utilize the KTEC with high responsibility and quality.
- Report the performance progress to KUBOTA CAMBODIA every semester.
- Provide general support for the long term agricultural machineries and equipment education, as well as the training, as it deems appropriate.
- Provide, as it deems appropriate, the necessary agricultural machineries and equipment as the training materials to BIT under KTEC program as below:

- Phase I: Diesel Engines, Split Diesel Engine, Power Tiller and Tools.
- Phase II: Other agricultural machineries depending on and appropriate curriculum.
- Collaborate with BIT for developing the training curriculum to meet the needs of labor market on the base of BIT Training curriculum and the changes of equipment technology in order to level up the technical and Vocational Education and Training.
- Provide for the internships during and the employments after graduation to students whose performance matches the KUBOTA CAMBODIA's standard.

#### **IX. Factor of Success**

- Design tailor mad course matching the needs of the targets group and companies
- Develop and integrate Training Program in both theoretical and practical method
- Renovate Training Area
- Provide training materials & equipment
- Conduct training for Cambodia instructors and/or trainer in Cambodia and KUBOTA CAMBODIA's Training Centre
- Organize internships leading to possible permanent employment
- Monitor and Evaluate the program

#### **X. Suggestions**

Public-Private Partnership is one of the most promising forms of such collaboration. It is based on the recognition that both public and private sector can benefit from pooling their financial resources, know-how and expertise to improve the delivery of basic service to all citizen.

Funds are very limited for new equipment and new facilities. Any growth in high technology or manufacturing industry sectors will be based on public private partnerships that involve the direct beneficiaries if training in financing that training. As such, in-industry and on the job training may reduce the requirement for facilities and new equipment.

Private sector trainers can also respond to new training demands with government playing the role of ensuring standards and ensuring access to training for the poor and disadvantaged groups by purchasing training places in private training institutions. PTCs and other TVET providers will be trained to generate revenue which can be used to self-finance construction and equipment.

#### **XI. Conclusion**

As TVET continues to grow and mature, new strategies are required to meet the NTB's policy directions. Cambodia TVET calls for increased emphasis on recruiting more secondary school graduates and out-of-school youth to Diploma and 28-degree level TVET. The development a plan to re-organize and expand the existing institutional TVET system to increase its efficiency and effectiveness, especially in meeting the growing needs of Enterprise. The PPP in TVET calls for a review of the role Enterprise plays in the financing of TVET as a beneficiary

and the place of public private partnerships in the provision of skills development. With strength now imbedded in the system in the field of rural poverty reduction, NTB will seek ways to expand and sustain the Voucher Skills Training Program introduced in the Asian Development Bank supported TVET and to more closely link the training provided for new TVET staff to ensure that they meet the evolving needs of TVET institutions. Finally, it is clear that without a National mechanism to match TVET graduates and other job seekers with employment, the overall efficiency of the labor market is limited and the effectiveness of TVET in training for employment is not realized. Thus over the year ahead, the NTB will support the development of a national employment system to link job seekers with Enterprise seeking new employees and with training if the skills do not match the requirements.

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## National Report: Thailand

Models of and Approaches to Public Private Partnerships in

TVET Education in Thailand:

Work-integrated Learning - School in Factory (SiF)

## RMUTL research Team

Led by

### Rajamangala University of Technology Lanna (RMUTL)

Assoc. Prof. Dr. Numyoot Songthanapitak

Assist. Prof. Dr. Niwat Moonpa

Dr. Tarapong karnjanaparichat

### National Science Technology and Innovation Policy Office (STI)

Dr. Banpot Horbunluekit

### Michelin Siam Co.Ltd.

Mr. Suchin Ingkapradit

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## Abstract

Public, Private, and Partnerships (PPP) play a key role in the development of the Asia Pacific region in the efforts of increasing the quality of graduates to meet the industry's needs. The application of science, technology, engineering and mathematics in contexts as well as work-integrated learning (WiL) approaches to PPP between government, university and industry is very important in the new educational management model for Thai industry. The new innovation pilot project - School in Factory (SiF) developed together by RMUTL, STI and Siam Michelin Co, Ltd, aimed to solve the problem of shortage of qualified technicians and research engineers in the country, reduce the turnover of employees and increase the country's productivity. These were the main concern of this study. The university taught the theory and academic units and industry trained students in their professional field as well as developing their job competencies. The results show that students had outstanding learning outcomes and gained work readiness skills or necessary employability skills. The results suggest that this project is a practical and successful educational management model that meet the needs of government, university and industry and should be expanded to other companies and institutions in Thailand.

## **1. Introduction**

A professionally qualified technician is considered a key factor for the development of industry in Thailand as it will increase productivity and enhance the country's competitiveness. However, evidence from previous studies and news from the public and private sectors have highlighted that educational institutions in Thailand have not been able to produce a workforce who qualify or meet the needs of industry (Jitsuchon, 2012).

According to the Vocational Education Act of 2008, one of the main goals of the National Economic and Social Development Plan and National Education Plan is to produce and develop vocational manpower at levels of skilled, technical, and technological, to serve the demands of labour markets, by integrating international theoretical knowledge with Thai wisdom to equip students with practical capacity and competencies for their occupations (UNESCO, 2011). The lack of skilled workforce in Thailand is hampering the advancement of research and development in industry, and, in turn the government should pay more attention to education and human resource development to increase the country's competitiveness.

In alignment with the demands for skilled workers in the growing Thai manufacturing industry, producing professionals in the vocational education sector falls on the shoulders of vocational training institutions, colleges and universities. In the past, Rajamangala University of Technology Lanna (RMUTL) has adopted internships known as the dual system or cooperative education. The weakness of this method was that the students carry out the internship for a short period of time only which is not sufficient for them to gain enough experience necessary for the workforce. Also the instructors, instruction methods and the tools and machinery used by the university was not as updated as found in the industries. As a result, the students fell short in skills when they joined the workforce.

At the present, RMUTL is striving to become a recognized higher education institution – a technological university - which offers students the opportunity to study vocational education from certificate to postgraduate level. In order to produce professionally qualified graduates, RMUTL regards workplaces as essential to train the students for practical work

while the universities provide students with knowledge and allow them to practice basic skills needed until they are competent enough to join the workforce and gain experience and expertise in their professions. Figure 1 presents types of workforce needed in Thailand.

| Federation of Thai Industries Cluster |                                                   |                                                                                                                                                                                            |                                             |
|---------------------------------------|---------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| No.                                   | Cluster                                           | GROUP                                                                                                                                                                                      | Supporting Cluster                          |
| 1                                     | Food Processing Cluster                           | Food, Sugar, Palm oil, Printing and paper packaging, Agricultural Machinery, Chemical, Pulp and paper, Plastics, Steel, Herbal, Environmental management, Bio-technology, Renewable energy | Gas, Bio-technology, Information technology |
| 2                                     | Natural Rubber and Rubberwood Cluster             | Rubber product, Furniture, Panel product, Wood Processing, Gift and decorative                                                                                                             |                                             |
| 3                                     | Fashion & Lifestyle Cluster                       | Textile, Garments, Cosmetics, Footwear, Gift and decorative, Leather product, Furniture, Gem and Jewelry                                                                                   |                                             |
| 4                                     | Printing and Packaging Cluster                    | Printing and paper packaging, Pulp and paper, Plastics, Glass, Food, Cosmetics                                                                                                             |                                             |
| 5                                     | Environment Friendly Energy Cluster               | Renewable energy, Power producer, Environmental management, Sugar, Agricultural Machinery, Palm oil, Rubber product, Furniture, Panel product, Pulp and paper                              |                                             |
| 6                                     | Health & Beauty Products Cluster                  | Medicine, Herbal, Cosmetics, Bio-technology                                                                                                                                                |                                             |
| 7                                     | Engineering Machinery and Metal Work Cluster      | Machinery and Metal Work, Agricultural Machinery, Shipbuilding, Repairing and Steel Construction                                                                                           |                                             |
| 8                                     | Automotive Cluster                                | Automotive, Auto parts                                                                                                                                                                     |                                             |
| 9                                     | Electrical Electronics & Air-Conditioning Cluster | Electrical, Electronics, telecommunications, Air-Conditioning and Refrigeration                                                                                                            |                                             |
| 10                                    | Petrochemical Cluster                             | Petrochemical, Chemicals, Plastics, Petroleum refining                                                                                                                                     |                                             |
| 11                                    | Construction Materials Cluster                    | Cement, Steel, Roofing and Accessories, Granite and Marble, Glass, Ceramic, Wood Processing, Panel product, Electrical, Electronics, telecommunications, Aluminium                         |                                             |
| 12                                    | Agriculture Industry Cluster                      | Agricultural Machinery, Machinery and Metal Work, Sugar, Palm oil, Rubber product, Renewable energy, Food                                                                                  |                                             |

**Figure 1:** Cluster of Thai Industries

Source: The Federal of Thai Industries, Retrieved April 4, 2016, from WWW: <http://www.fti.or.th>

## 2. Research background

From the view of the education sector, there are two factors affecting the quality of the workforce in Thailand. Firstly, Thailand is facing a lack of quality manpower in the industrial sector in the fields of technology, research engineers and technical staff (Parpart, 2015). The main reason being a shortfall in the curriculum design adopted in vocational colleges and institutes as they were found to be outdated and lacking in practical approaches. The second factor is the lack of interest in vocational education among young Thai people with high

academic potential, largely due to the fact that technician positions pay low salary in comparison to other professions, despite long hours and heavy workload.

In relation to the socio-economic landscape, Thailand, similar to most ASEAN countries, is stuck at what is referred to as the middle-income trap (MIT) (Jitsuchon, 2012). This trap occurs when a country is stuck at the income dictated by given resources and initial advantages, and cannot rise beyond that threshold (Maddison, 2003). One of the methods, in order to get out of this trap is to create an effective integration of public private partnership in collecting, and sharing industrial information between government, businesses and education institutions to improve the knowledge, skills and technology of the workforce thereby allowing the country to increase the income per capita.

Rajamangala University of Technology Lanna take these challenges as an opportunity to become a leader in providing hands-on graduates who are well-trained in updated technology while focusing on developing an innovative learning curriculum. It also allows the university to build a Public-Private Partnership (PPP) which supports the industries to recruit higher quality staff while allowing the students to be trained as professionals while completing their studies.

At RMUTL, the objective is to produce graduates who have good foundation in science and technology and provide opportunities for providing further studies. Redesigning the work-integrated learning (WiL) curriculum with hands-on approach requires working together with the stakeholders: the industry, the instructors and the students. In answer to the issues at hand, RMUTL adopted the School in Factory (SIF) program where the students from the Faculty of Engineering, RMUTL Chiangmai Campus are assigned to work and study at Siam Michelin Co, Ltd Thailand for two years as part of the course work. Together with the support from Siam Michelin Co, Ltd Thailand and instructors from RMUTL, the students are trained theory and practical knowledge while the instructors redesign their curriculum to fit the immediate and relevant needs of the industry.

TVET is often seen as "last choice education" because of a lack of quality. High-quality TVET, on the other hand, leads to a higher status and improved attractiveness of TVET. To promote Public Private Partnership or enhance private sector enhancement in education is the key

issue of this project with assumption that this PPP in TVET education will improve the image and quality of TVET as well as strengthen the capacity and capability.

National Science Technology and Innovation Policy Office (STI), RMUTL and Michelin Siam Company Limited recently began a pilot project to find a better way to manage the education model for industry under the principle that students must meet the needs of the industrial sectors (demand driven).

### **3. PPP Model in Education and Work-integrated Learning (WiL) Approaches**

Public-Private Partnership (PPP) in the Technical Vocational Education and Training (TVET) is an increasingly popular curriculum innovation. PPP is based on the idea that students will be better prepared for work or professional practice if they have opportunities to integrate theoretical knowledge with practice. The aim of the project is to provide an evidence base for assessing the impact of how PPP can be meaningful to TVET Institutions, Work-integrated Learning programs and Private Enterprises.

In April 2012, the Thailand cabinet approved a ten year National STI Master Plan (2012-2021) which provides mechanisms to enrich Thailand's innovation system at all levels – from national to regional and local. At the foundation, the STI Master plan states that knowledgeable and skilled human capital along with sufficient scientific and technological infrastructure and enabling factors are vital to the creation of a thriving innovation system. Therefore, strategies and measures are mapped out to develop these vital factors, resulting in human capital development programs –such as science education improvement through enquiry-based learning, vocational skill improvement **through work-integrated learning, and enhanced university-industry-research institute collaboration via cooperative education,** and improved academic/research personnel mobility, and infrastructure/enabling factor development programs such as regional science parks, industrial technology assistance, tax incentives, and innovation financing.

STI is the agency responsible for overseeing the implementation of the National STI Master Plan. Collaborative networking is an essential part of the Office and is emphasized by the creation and promotion of active collaboration through strong linkages with local and international partners.

STI Thailand is trying to promote the implementation of WiL practice by organizing WiL conferences, conducting pilot industry-based research, and encouraging educational institutions to pay close attention to the learning outcomes of their graduates. Additionally, WiL policy is included in the Education Reform of Thailand which is a significant move that shows the importance given to WiL. The Thai Ministry of Education is also trying to promote WiL practice in Thai institutions of Vocational and Higher Education. New graduates in Thailand should prove to be qualified and competent workers, hence, WiL and the PPP concept must be practical and applicable to real-world situations.

Work-integrated Learning or WiL refers to the learning strategy designed to produce hands-on graduates to meet the demands of the industrial sector. WiL requires a three-way partnership of student, workplace, and education institutions. WiL aims to bridge the gap between academic knowledge and professional skills of graduates/human resource in real-life situations. There is a lack of manpower with practical skills that are necessary to perform satisfactorily in workplace situations. WiL was initiated in view of this issue. WiL helps workplace organizations and educational institutions enhance students' development of their personal and professional competencies. In addition, in the 21<sup>st</sup> Century, it is important for those who work in industry to be not only competent in their fields, but also be well equipped with skills such as communication skills, problem solving abilities and teamwork. On the regional level, WiL is being designed to be applied in classroom teaching in order to produce hands-on graduates who can meet the demands of the industrial sector. As for ASEAN, there is a promotion of workforce mobility among the ASEAN countries. Students are expected to take internships in different countries to gain more work experience and other important skills.

Rajamangala University of Technology Lanna (RMUTL) is recognized as “the University of Innovation for Community” with an aim to produce hands-on graduates who can contribute

to society. It is not possible to compare RMUTL with other universities whose policies mainly serve academic and research purposes. So RMUTL aims to produce graduates who have acquired an integration of work and study. For the aim to be accomplished, RMUTL deems it important to establish cooperation between workplace and the university in order to ready the students for the competitive world of work. This cooperation does not benefit only the University but also the workplace and the government sectors.

WiL can be broadly defined as educational activities that integrate theoretical learning with its application in the workplace. This learner-centric process should provide a meaningful experience of workplace application, resulting in successful learning outcomes such as problem-solving skills, creative thinking, and other soft skills for the student. WIL models include, but are not limited to practical training via practice schools, internships, work placements, cooperative education, industry-based learning or School in Factory (SIF), and community-based learning.

It is obvious that in addition to knowledge, a well-rounded professional engineer should possess a number of additional attributes that society and employers need. RMUTL has long recognized the importance of such skills development, which include areas such as problem-solving, self-learning, creativity, making decisions, judgment, communication, English proficiency, teamwork, leadership, and social responsibilities. RMUTL decided that its new professional program or WiL program must meet the following criteria: be practice-based, and have strong linkages to the private sector or industries, which offer workplace sites needed for practical training. Given the necessity for a new relationships between universities, the world of work and the community as a whole, technical and vocational education and training (TVET) should exist as part of a system of lifelong learning adapted to the needs of each particular country and to worldwide technological development. This system should be directed to:

- (a) Abolishing barriers between levels and areas of education, between education and  
the world of work, and between school and society through:
  - The appropriate integration of technical/vocational and general education at all levels;

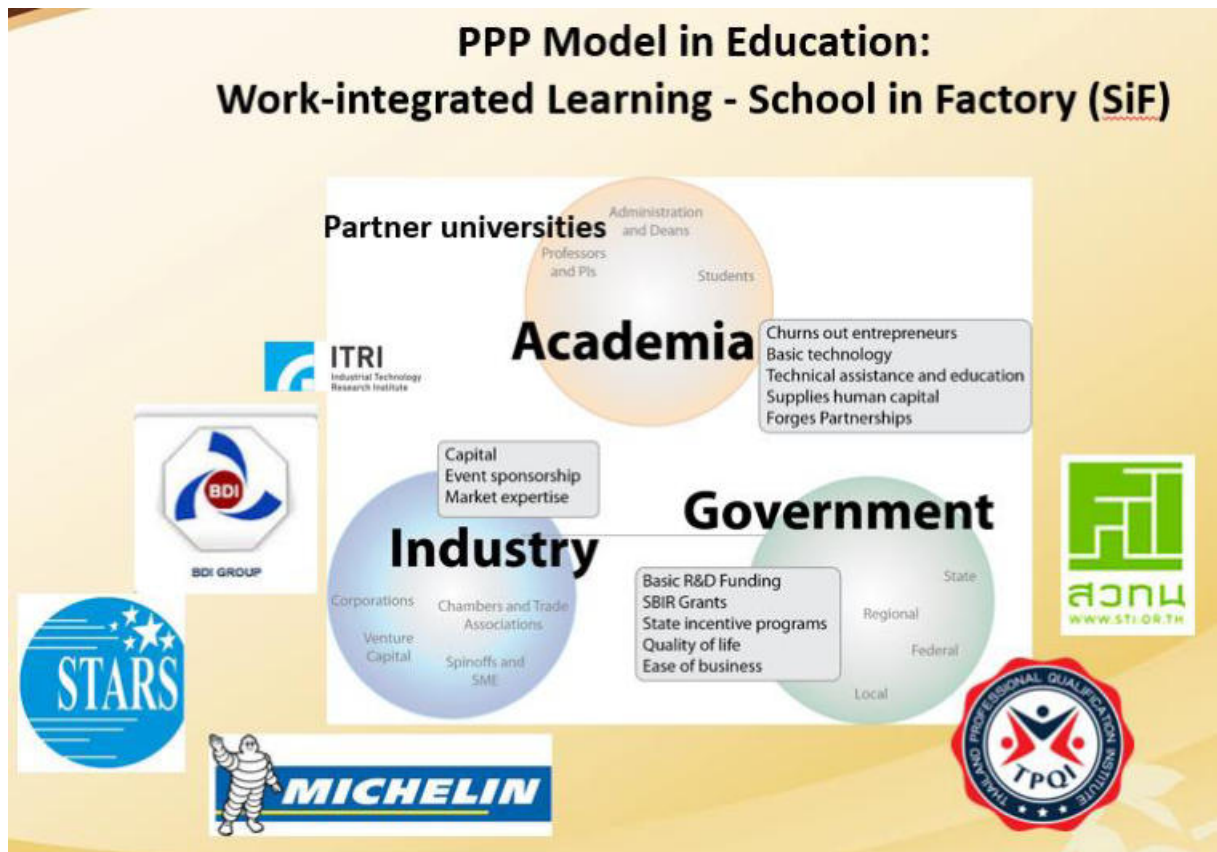
- The creation of open and flexible educational structure;
- Taking into account individuals' educational needs, the evolution of occupations and jobs recognizing work experience as a part of learning.

(b) Improving quality of life by creating a learning culture that permits individuals

To expand their intellectual horizons, to acquire and to constantly improve professional skills and knowledge, and to engage positively in society to utilize the fruits of economic and technological change for the general welfare.

As the labour market becomes more specialized and economies demand higher levels of skill, government and businesses are increasingly investing in the future of technical and vocational education. Due to the demands for skilled workers, the Thai government tries to formulate and implement policies for TVET. A growing interest in TVET has been found in all types of businesses and has begun to struggle to create the indispensable bridges between vocational education and the world of work. Although government has the primary responsibility for TVET, in the modern market economy its policy design and delivery has been achieved through the new partnership between public and private organizations (PPP) including employers, employees, industries, professionals and also educational institutions. To tackle the problem of skilled labour shortages, the government has to change its mind-set for grading students, and businesses have to change their mind-set for investing in human resources.

Figure 2 reveals the PPP model in Education focusing on how academia, industry and government can work together to improve the skilled workforce in Thailand.



**Figure 2:** PPP Model in Education: Work-integrated Learning - School in Factory (SiF)

These are reasons why RMUTL and all vocational colleges and technological universities in Thailand are highly interested in this area of specific PPP collaboration. PPP deserves increasing collaborative effort in providing high quality educational experiences in work-based or oriented environments to enhance our graduates' work-ready skills, in a structured way.

#### 4. Research Objectives

As a result of the Symposium on *"Trends and Challenges of Work-integrated Learning: Enhancing the Work Readiness and Employability"* at RMUTL, Chiangmai on 19 January 2015, National Science Technology and Innovation Policy Office (STI) planned to encourage the practice of WiL by introducing the concept into the educational curriculum. This is deemed to be a long-term education plan. As the saying goes, "a constant trickle of water will one day

destroy the rock,” time is needed for the implementation of WiL to be successful. The STI is planning to encourage Vocational Colleges and Universities to include WiL as part of their curricula. In addition to that, there will be cooperation of three sectors to enhance the WiL program: Government, Industry and University.

At the above symposium, key speakers gave their thoughts and support for WiL. These ideas provided impetus to the current research project: Prof. Rolf Genrich, Lecturer and Consultant in Policy and Strategy Development, Technical Vocational Education and Training (TVET), talked about vocational education in Europe. There is a high rate of youth unemployment in Europe which eventually led to the interest in the cooperation of vocational education and workplace. It is of paramount importance to develop the environment to implement work-integrated learning.

Dr. Nils Geissler, Programme Director, Regional Cooperation in TVET, RECOTVET has given his opinion on WiL when talking about policy concerning vocational teacher development. The development program requires cooperation from the private sector to train the teachers. Only with qualified vocational teacher training staff will we get qualified teachers who will in turn teach university students in a more work-oriented technique. Dr. Geissler further advised that education should try to encourage the conducting of research about innovation. Clearly the idea is that students must be familiar with how to think and research innovatively in order to be proficient in their work endeavours.

Dr. Veerachai Srikachorn, Director of Thailand Professional Qualification Institute (TPQI), has talked about Thailand’s qualification framework. He proposed that there should be a standard of competency that the country as a whole could follow. In order to adhere to a standard competency framework, we need to be successful in the development of the workforce competency. Only then can a national qualification framework be accomplished. Dr. Veerachai also shared his ideas on the cooperation of universities and industries. The university that is located in the area of a particular industry should try to establish possible

cooperation. Finally, it is hoped that the college/university will produce competent workforce who can manifest their potential to meet the demands of the labour market.

Dr. Nu Nu Yin, from Yangon University has also given her opinion on WiL as practiced in Myanmar. Each Ministry in Myanmar has its own universities and colleges. Basic and higher education from Ministry of Education along with other Ministries, focus on producing and training vocational students. There is a 're-train' program for graduates, simply put this is the re-education of the workforce to make them more proficient in their areas of work.

Dr. Puttachard Suphalucksana, Director of Center for International Vocational Education Cooperation, Vocational Education Commission, shared with the panel that they are promoting the implementation of vocational systems for colleges in Thailand. She suggests that the German vocational systems can be analyzed and then applied to Thai vocational education. It is imperative to know what the industrial sector really needs, so students are sent to train in the factories for four months. When the period of four months is over, the students are expected to have a clear picture of what the industrial sectors need. Additionally, the educational institution could invite representatives from the industrial sector to help in the development of curriculum, so that the needs of the private sector can be met. It is also recommended that multi-cooperation should be promoted with other ASEAN countries to motivate the implementation of vocational education.

Assoc. Prof. Dr. Bounseng Khammounty, Head of Faculty of Vocational Teacher Education, National University of Laos, shared his experience of vocational education in Laos. Graduates in Laos require two aspects of education, one is technical, and the other is theoretical. Students gain theoretical knowledge in the educational institutions. After that the students go to train in the workplace to gain their technical skills. They will also have to finish a final project in order to improve their theoretical knowledge.

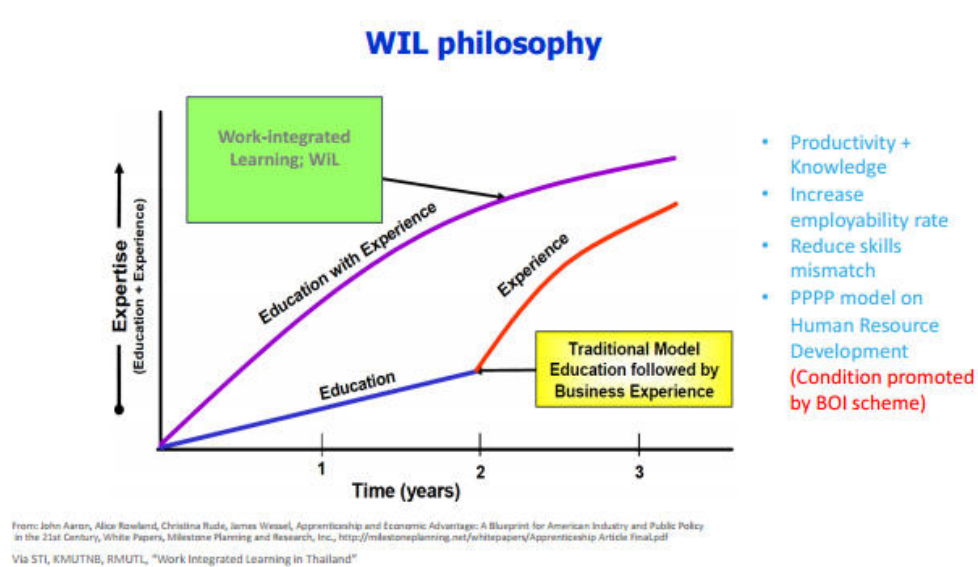
Dr. Yok Sothy, President from National Technical Training Institute, Cambodia mentioned students are encouraged to think critically and effectively. They are trained with an aim to develop their local community. The student needs to go back to his/her village of birth to contribute their knowledge for the well-being of the community, so that what they have learned both from universities and workplace can be beneficial not only to them but to society as a whole. The students in Cambodia are now facing the rapid change in technology. So they must be aware of what goes on around them.

RMUTL has established cooperation with many industrial organizations namely, Siam Michelin Co. Ltd, Dutch Milk, Central Retail Group, VPF Group, CM Fresh Milk, etc. A “School in Factory” (SiF) project has been carried out with Siam Michelin Co. Ltd. As a vocational education institution, RMUTL is attempting to accomplish the practice of WiL and to be the example of WiL concept that makes it become a successful way of learning and teaching.

As previously stated, a professionally competent technician is considered an important factor for the development of industry in Thailand. At the present, the industrial sector demands more professional workers who are proficiently equipped with skills in TVET. The following is a list of the objectives of the study.

- To promote the Thai TVET policy through teaching and learning in the innovative SiF program and to help the stakeholders understand and recognize the philosophy of SiF and understand new ways of curriculum design and pedagogy. Teachers who want to join the program must understand the SiF before they join.
- Teachers who are part of SiF need to understand the immediate needs of the industry and how to check if the learning outcomes are being achieved by the students. The assessment process of SiF should be a collaboration between the professionals from the industry and the instructors from the university who teach the course.
- A redesign of the up-to-date work-integrated learning curriculum and lesson materials
- Expose students to the real world contexts to make more responsible and mature students

Figure 3 describes the WIL philosophy believing that human resources can develop their employability skills and expertise through work-integrated learning context.

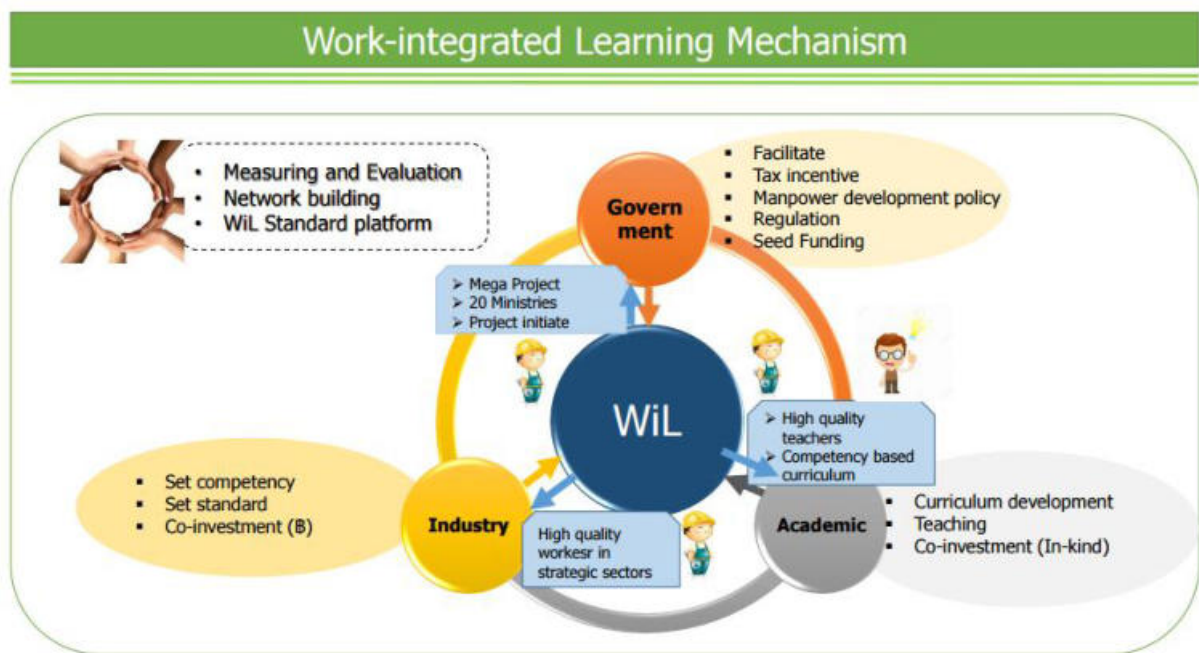


**Figure 3:** Work-integrated Learning Philosophy, Dr. Kittipong Kitipong Promwong, Deputy Secretary General, National Science Technology and Innovation Policy Office, Retrived 10 December 2015  
[http://www.boi.go.th/upload/content/Cluster%20Development%20Incentive%20Package%20%20STI\\_20211.pdf](http://www.boi.go.th/upload/content/Cluster%20Development%20Incentive%20Package%20%20STI_20211.pdf)

## 5. Research Questions

Work-integrated Learning in Public Private Partnership (PPP) educational model is a learning and teaching strategy that enables the learners to become efficient in practical skills. PPP practice has become the major concern for many educational bodies focused on producing qualified and high skilled human resources to meet the needs of the work-force market.

The National Science Technology and Innovation Policy Office (STI) and RMUTL have prepared **action research** focusing on work-integrated learning (WiL) in the form of “**School in Industry**” (SiF) to create a **PPP educational model**, by working closely with the industry. **Figure 3** describes work-integrated mechanism. The pilot project has studied and reviewed various factors concerning how to make the most work integrated learning.



**Figure 3:** Work-integrated Learning mechanism Dr. Kittipong Kitipong Promwong, Deputy Secretary General, National Science Technology and Innovation Policy Office, Retrieved 10 December 2015 (<http://www.boei.go.th/upload/content/Cluster%20Development%20Incentive%20Package%20%20STI%202011.pdf>)

The question is how to provide an efficient and effective workforce to the labour market. The following are some questions we need to take into consideration through this study:

1. Can Work-integrated Learning with PPP educational model bridge the gap between academic present and professional future and apply knowledge gained on campus to real life experiences?
2. How can WiL curriculum be designed to meet the needs of industries?

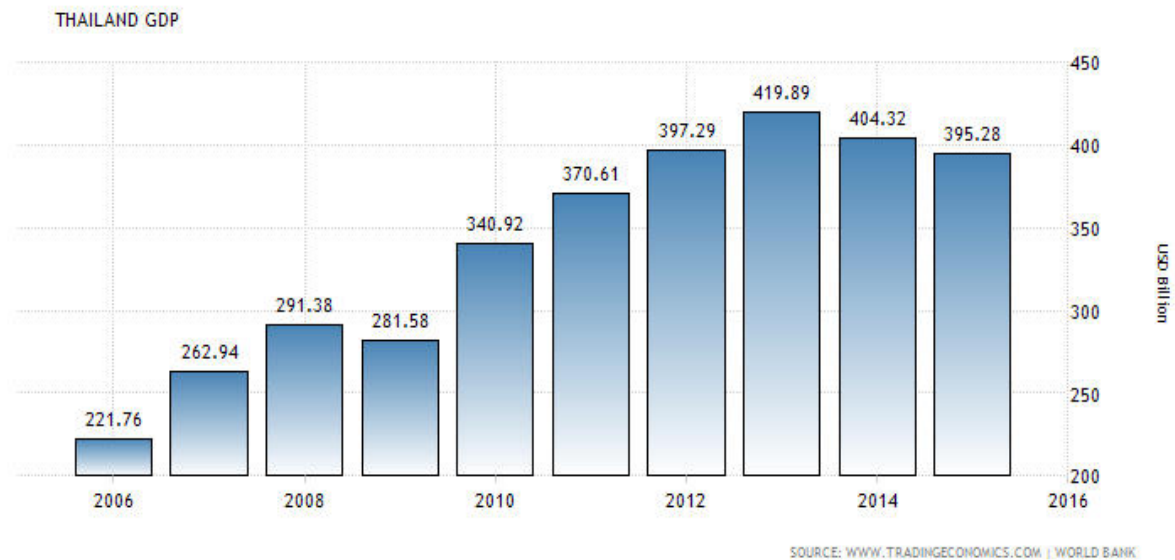
3. How can technological universities in Thailand increase embedding workplaces and apply learning opportunities within the curriculum?
4. How can “School in Factory” (SiF) enhance employability of graduates? What are key success factors of SiF good practice?
5. How can RMUTL examine the current situation of public-private and/or any other partnership (PPP) that exist in the current WiL- SiF education programs?

## 6. Research Methodology

This study is based on the assumption that positive changes can occur when the practitioners examine their practice (Freeman, 2002). The research undertaken in this project was **action research** – a category of qualitative research in which all activities developmental cycles involved planning, acting, data gathering and reflecting on outcomes (McNiff & Whitehead, 2000). In this case not only the research team as teachers became researchers and learners, but also the learners were encouraged to be co researchers of their own learning, practice and outcomes. The model of action research involves participants in theorizing and reflecting on their own practices. In short, action research can be seen as a form of an enquiry conducted by the self into the self (McNiff & Whitehead 2000).

## 7. Research Findings and Discussion

In answer to search for ways to solve the problem of shortage of qualified technicians and research engineers of the country, reduce the turnover of employees and increase the country productivity or GDP as shown in Figure 4, the National Science Technology and Innovation Policy Office (STI), RMUTL and Siam Michelin Company Limited initiated a pilot project termed as “School in Factory” (SiF), to find a better way to manage the TVET education pattern for industry. This section reveals the action research findings as well as the details of SiF, its impact, weaknesses and strengths and its transferability to other institutions both in Thailand and South East Asian Nations (ASEAN) contexts.

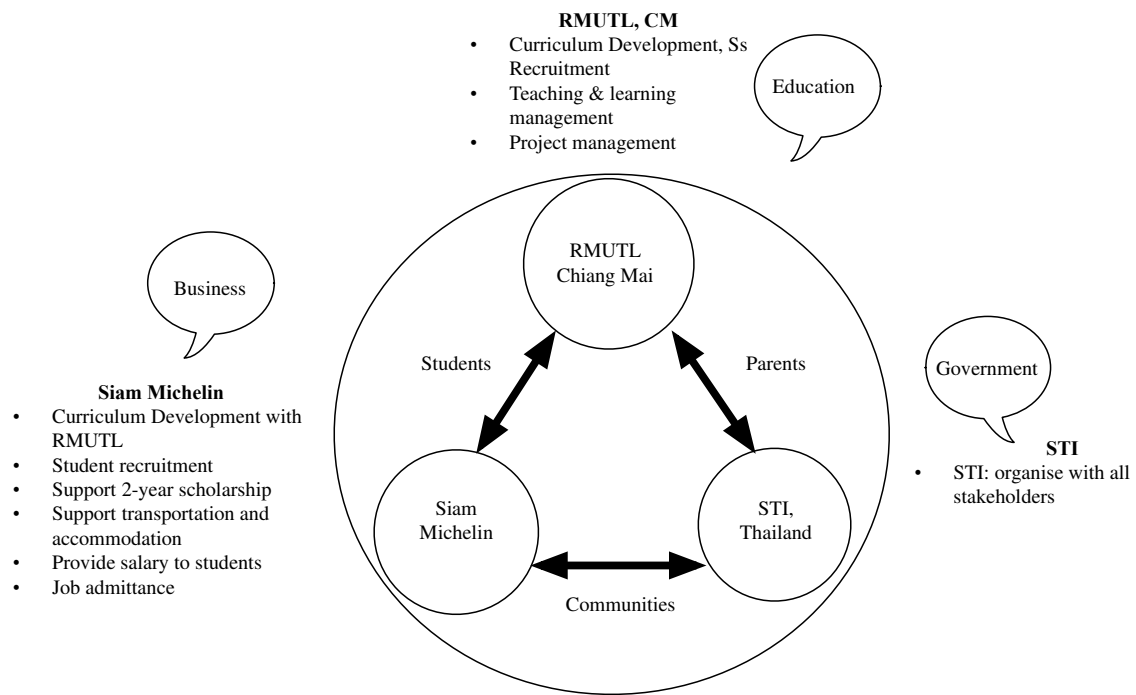


**Figure 4:** Thailand GDP (Source: World Bank, Sept.2016)

### 7.1 SiF Model

Siam Michelin recognizes that good productivity comes from a quality workforce which is the reason why they would like to work together with an institution to train students who will be employed as workers and at the same time completing their studies. They started by offering scholarships to the diploma students from RMUTL with combined support from STI and RMUTL. SiF is the first pilot project between RMUTL, Michelin and STI.

**Figure 5** presents the SiF education management model used in the study. RMUTL, STI and Siam Michelin Co. Ltd. play equally crucial roles in order to make the SiF program workable, meaningful and manageable.



**Figure 5: SiF Education Management Model**

In order to understand the role and contribution of each of the key units in the process, some extra information is provided.

## 7.2 Background information on STI

As mentioned earlier, the National Science, Technology and Innovation Policy Office (STI) is one of the key stakeholders and funding parties to help the SiF program become established. STI was realised in 2008 as part of the National Science, Technology and Innovation Act 2008. Its goal is to unify STI commitments among public agencies and to strengthen the collaboration with and among the private sector, academics, and research institutes. The STI focuses development in three strategic areas – (1) society and local communities, (2) economy, and (3) energy and environment- with the ultimate goal of having a quality society driven by sustainable and green innovation (National Science Technology and Innovation Policy Office, 2016).

## 7.3 Background information of Siam Michelin

Michelin Siam Group was established in 1987, the company operates 3 tire-manufacturing plants, 1 mold manufacturing plant and 1 steel cord manufacturing plant. It employs more than 6,700 people in total (Michelin Thailand, 2012). Michelin has a firm belief in contributing to the local economy in a sustainable way which is one of its mission. In addition to this, they have a firm belief in developing their employees, communities and societies in which they are involved.

#### **7.4 Project Framework**

Thailand became a leader in many production industries such as automotive and parts, electrical appliances, electronics and telecommunication, etc. Thailand is also a production base of companies from US, Europe and Japan, for example. There is a shortage of qualified and work-ready graduates possess the skills to work in multinational industries. To raise the standard of living of the workforce is one of the main goals of Thailand and one of the key areas to develop is the training of quality graduates who can work in industry with the necessary skills, competence and expertise.

Prior to SIF, there was co-operative education and apprenticeship, also known as, internship. However, the SIF program requires the students to work continuously for 2 years. This means there is no turnover for the businesses, which in itself is an enticing prospect for factories. After the completion of the program, the students may go for further studies if they wish, or they can choose to continue working for the company.

The management of SIF at Siam Michelin Co. Ltd. aims to produce advanced vocational certificate technicians. The intake of students from high schools and vocational colleges will work and study at the tyre mould industry in Lam Cha Bang Industrial Estate, Chonburi or in the tyre's wire factory in Hemaraja Industrial Estate in Rayong.

The students will have to study basic technician skills and higher professional skills based on real jobs they may encounter in the factory for two months at RMUTL. They have to integrate science, technology, engineering and mathematics in the jobs they are facing at work which is called STEM for TVET. The teachers at the factory will act as facilitators to support the students' theory learning. The students have to report their work-integrated learning to the

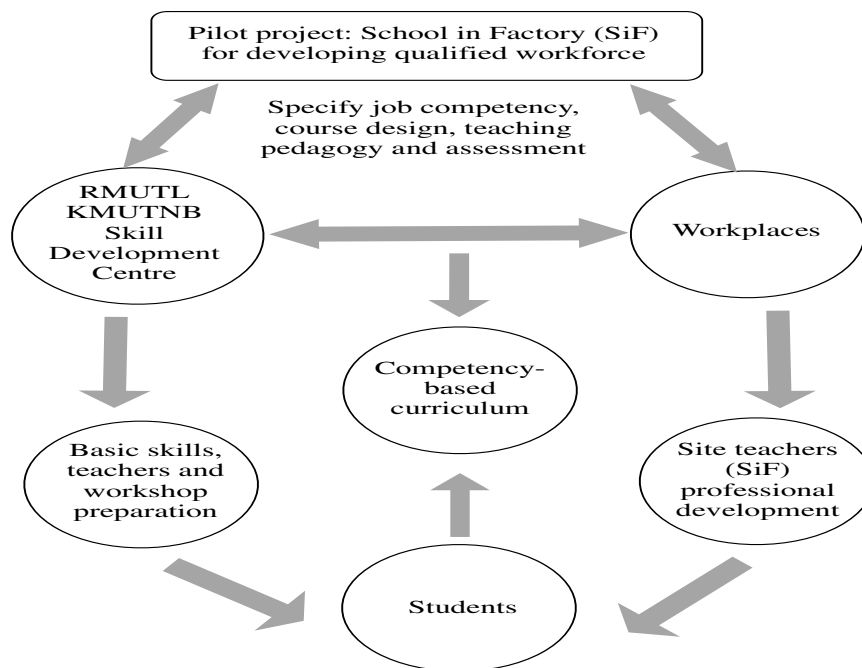
professional teachers once a month. The program of SiF study will include 3-4 hours of studying in classes in the factory and 8 hours of working every day in the factory for 6 days a week through the entire curriculum

Teachers from the university side need to understand the business systems in industry, know modern industrial technology and have necessary knowledge in the factory. Therefore, the SiF Project has opened another new SiF Master Program in Mechanical Engineering in which candidates, while doing this program, must be teacher's assistant in the SiF system in the form of work-integrated learning. Such teachers following this SiF method need to work and integrate their knowledge, do their research and gain experience working in industry with engineers and factory managers. In addition, they have to learn how to take care of the SiF students and learn the working environment from professional teachers in industry.

The success of SiF is based on five factors:

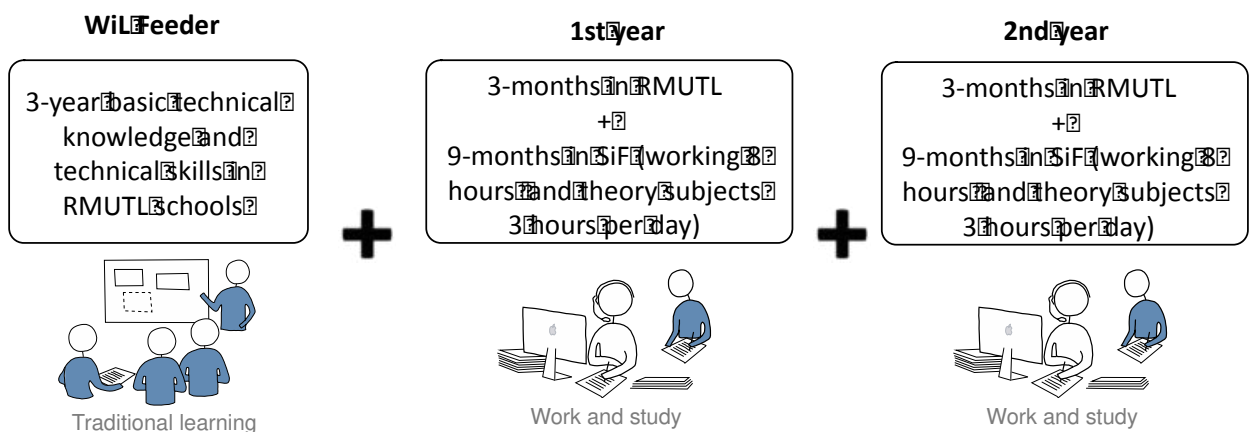
1. teachers who have good attitude in the SiF context,
2. work-integrated learning curriculum and teaching pedagogy,
3. manufacturing equipment and machinery as teaching aids for individual students,
4. understanding how SiF program has been conducted with all stakeholders
5. budget supported from public-private partnership stakeholders

Work-integrated learning model assures that the students develop the skills necessary for work when they finish their 2-year term. Figure 6 describes how SiF educational management project was designed, planned and implemented.



**Figure 6:** SiF Project framework

## 7.5 Program structure

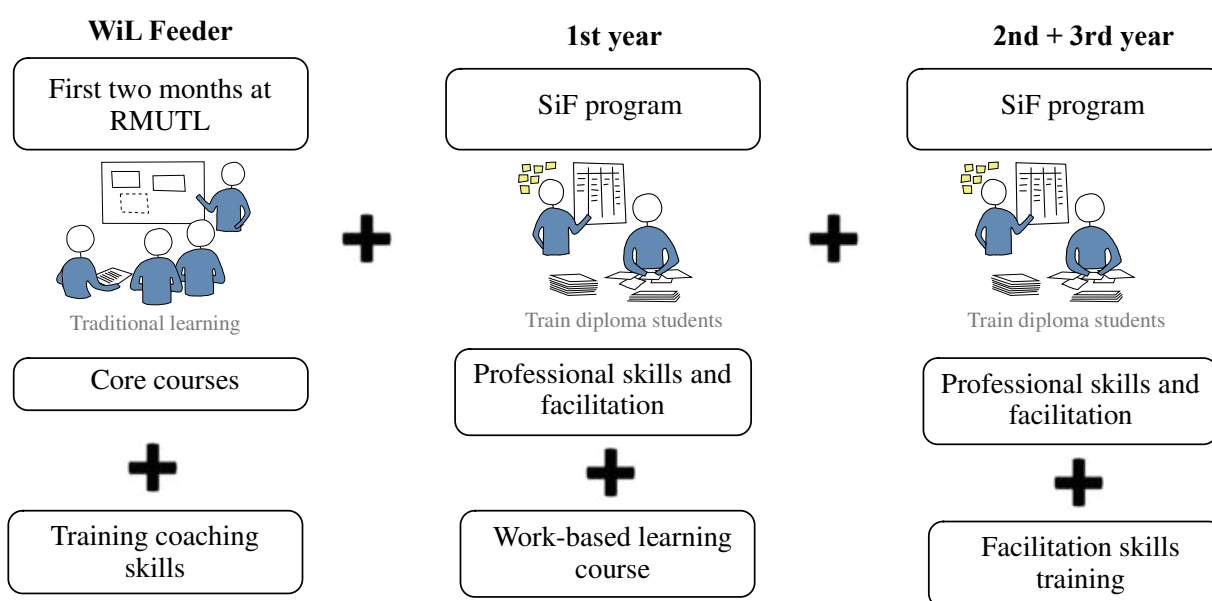


**Figure 7:** SiF education management program structure for diploma program

Figure 7 illustrates the program structure used by the SiF pilot study. As the figure shows, the first three months of the semester, the students are trained at the university to acquire the knowledge for a foundation needed to work in the factory. Next the students work at the factory for 9 months, 8 hours a day and study 3 hours per day. During the summer, for 2

months, the students come back to the university to study general education subjects and experience university college life with other RMUTL students.

Figure 8 shows the 3-year work-integrated master program in mechanical engineering which came about as an unexpected outcome from the success of the diploma program. Students attending the master program are expected to conduct research on a given topic by the company while mentoring the undergraduate students taking part in the SiF program. It is an unexpected but invaluable outcome, borne from the necessity of teachers who understand the business systems in industries, and have the knowledge, skills and experiences of working in a factory. Due to this demand, the SiF project started the SiF Master program in Mechanical Engineering field. The students of the Master program learn to take care of the advanced vocational certificate SiF students and learn about the working environment from professional teachers from the factory.



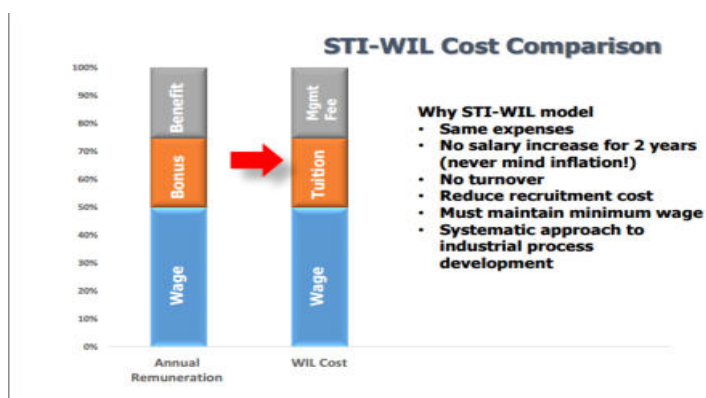
**Figure 8:** SiF education management program structure for the Master program

## 7.6 Budget and Financing

The funding of the SiF came from three sources namely, the government STI, Michelin and RMUTL. The company budget, from Siam Michelin Co., Ltd. is paid to employees but converted into educational expenses. Those are teachers' salary, travel expenses of senior lecturer, school fees of SiF students, monthly allowances, accommodation cost, books, health

insurance and transportation. After completion of the program of study, SiF students will not be required to pay the mentioned costs back to the company.

The expense concerning the project advisor, project head, committee, site director and coordinators, are offered by STI. RMUTL contributes the salary of the professors and the incurring costs of using the machinery and workshops on campus for the students.



**Figure 9: Cost comparison of company participating in WIL program**

## 7.7 Strengths of SiF

This section lists the strengths of the program and highlights the key factors which served as a basis for the success of the program. Below lists the key strengths and success factors of the SiF pilot study and **Table 1 below** summarises the strengths of the program in terms of the stakeholders involved.

- Through SiF program, the students have the opportunity to foster their practical training at three levels: knowledge, practical experience, and professional recognition. The students receive full academic support from the university to assist them in integrating their theoretical knowledge with the practical knowledge at the beginning of the program. During the three-year period in which the students are situated in the workplace, as full-time workers, they gain the practical knowledge as per the instructions from the instructors and work supervisors. After the program finishes, the students gain the Diploma in Industrial Technology while also gaining the professional recognition of working for a multinational organization, Siam Michelin. As stated previously, the SiF program is the first long-term collaboration project between industry, government and academic institution.

- The uniqueness of the SiF program as a long-term initiative serves all the involved parties in a win-win situation. The students gain a solid work experience while Siam Michelin has little to no turnover at the industrial engineering level for two or three years depending on the study program. This is one of the key factors underlying the success of the SiF program as there is much to be gained for all parties involved and all involved parties must have the same goal. As Figure 5 illustrates, the partner university, RMUTL in this case, the industry partner, Michelin, and the government sector, the STI contribute different capital either in terms of knowledge, finance or business incentive. This model demonstrates that in order for all parties to achieve their goals, all the tri-lateral network stakeholders need to work together for the success of such programs as SiF.
- Another key success factor is the networking and communication of the head of departments from the university, Michelin and instructors. All three groups must share the common goal and all three institutions must share the same ethos in order for the SiF program to thrive and success long-term.
- From interviewing the instructors, it was found that the program gives equal opportunity to students from all backgrounds. The instructors feel that it is a merit-based system where the students are graded from various aspects, not limited to textbook knowledge but practical knowledge as well.
- Finally, the company needs to see a clear result that they are benefitting from this partnership. In this case study, the students prove time and again that they are responsible people in the various departments they have been assigned to. As the company has a first-hand opportunity to select and train potential higher level personnel for the future, it provides them with a rare opportunity of honing the skills of individual worker.

SiF students have the opportunity to foster their practical training-knowledge, manual-labour-skills and professional roles. This in progress project shows that their work performance is better than regular employees of the company because the students are motivated to study and they are in a good learning environment. They can develop due to their engagement in higher levels of training through real working and sharing knowledge

with professionals in the industry. The students of this SiF group received full academic support from the university to assist them in integrating their theory knowledge with their practical work. Thus, this SiF educational model operates according to an interactive rather than a linear model of innovation. In addition, learning in this SiF program, students get to work, earn money and gain a qualification. At the factory, the theory they learn from their teachers can be immediately applied in a practical sense.

| Students                                                                                                                                                                                                                                                                                                                                                                              | Siam Michelin                                                                                                                                                                                                                                                                                                                                                                                                                    | RMUTL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Government                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>- Gain Diploma in Industrial Technology from RMUTL</li> <li>- Gain a solid industry experience from working in an organization</li> <li>- Earn income while studying</li> <li>- Become more confident and responsible as the students have to be responsible adults</li> <li>- Education and other expenses paid for by the company</li> </ul> | <ul style="list-style-type: none"> <li>- No turnover for 3 years</li> <li>- Opportunity to recruit quality workers who can be trained and later on become high-level professionals</li> <li>- Productivity in the operation line</li> <li>- Opportunity to mold the right kind of employee which the company requires→ tailored for the specific industry and role</li> <li>- Tax reduction from the government 200%.</li> </ul> | <ul style="list-style-type: none"> <li>- Recruit and produce quality graduates ready for working in the industry</li> <li>- Bridge the gap between private and public partnerships necessary to strengthen practical approaches necessary in the vocational education sector</li> <li>- Develop curriculum appropriate and relevant to the current industry landscape.</li> <li>- Teacher professional development</li> <li>- Students have the rare and invaluable opportunity to work in an industry and learn to</li> </ul> | <ul style="list-style-type: none"> <li>- Higher knowledge means higher contribution to the national GDP, lifting the overall quality of living for the general public</li> <li>- Attract quality business/ industries from around the world to Thailand</li> <li>- Become a knowledge pioneer in effective vocational education training which can be distributed among the ASEAN.</li> </ul> |

|  |  |                                                                                                            |  |
|--|--|------------------------------------------------------------------------------------------------------------|--|
|  |  | communicate with<br>workers from various<br>levels from the<br>managing director to the<br>cleaning staff. |  |
|--|--|------------------------------------------------------------------------------------------------------------|--|

**Table 1:** The strengths of the PPP – SiF program in terms of the stakeholders involved.

### 7.7 Weaknesses of SiF

As this is the pilot study, several weaknesses were observed which could serve as the basis for improvement of the future and ongoing SiF program. One of the weaknesses observed was that there tends to be a major gap between workplace and academia. As a result of many discussions among the head of projects from the university and teachers, it appears there is a lack of teachers who are ready to work in the (SiF program) system. This is because the teachers are expected to move from the university to the factory and they are required to rewrite the lesson plans, change the curriculum to fit the factory work experience.

One of the weaknesses of the SiF from the students' perspective is that they lack university life and have a heavy workload while learning and working. Also there is a perceived lack of intellectual and articulate teachers who are well-versed in academic knowledge while there are plenty of practical, and somewhat practical-oriented mentors. From the view of the weaknesses of the SiF from the business perspective, the business have to cater the educational needs of the students and as a result, sometimes, they have to digress from their main business goals, or it produces more workload for the factory workers.

From the teachers' perspective, teachers have to be liaisons between the business and the students. In addition to this pressure, the teachers have more workload, as they are asked to redesign the curriculum as part of the requirement from the university while the industry

side also expect the teachers to solve some of the problems in the factory as they expect professional knowledge from the teachers.

### **7.8 Outcomes of the SiF program**

The pilot SiF program began in 2014 with 6 students from a 2-year Farm Machines Engineering Program and 11 students from Industrial Technology while studying at RMUTL and working at Siam Michelin Co., Ltd. At the present, in 2016, there are in total 120 students at the Diploma level and 5 students of Master in Mechanical Engineering. In order to sustain this successful long-term partnership, it required a lot of reworking and redesigning of the program and countless meetings to get to the present stage. Only through clear analysis and reflection of the past mistakes and understanding of the challenges while trying to solve the issues as they come along, the program has withstood time thereby resulting in increase in the number of quality students and teachers.

The outcomes at the present stage of the study show that students from the SiF program have opportunities to foster their knowledge, practical and professional skills. Feedback from the supervisors showed that the students' work performance is better than regular employees as the students are driven by goals to finish their studies coupled with the fact that they are in an authentic learning environment motivates the students to achieve more than their peers. In the vocational education field where practical knowledge is the key in being professionally successful, leaning away from the traditional style of learning and teaching and using an innovative approach by creating the opportunity for students to apply theoretical knowledge to not only in the practical but also in the professional context is the way forward. In addition to getting positive feedback from the company, the students were found to excel academically.

The latest update of program shows that, in 2015, 30 students who graduated in Diploma of Industrial Technology were offered jobs at the rubber molding factory of Siam Michelin Co., Ltd in Computer Numeric Control (CNC) and CAD sections.

The in progress study shows SiF program could solve the problem of lacking qualified workforce in terms of quality and productivity. A student of SiF said “We are able to come close contact with machinery, employees and the working of a factory. It might be a bit tiring, but it is worth it. We have an advantage over others in that we work and study at the same time. We have knowledge of what’s surrounding us”.

### **7.9 Potential knowledge transferability**

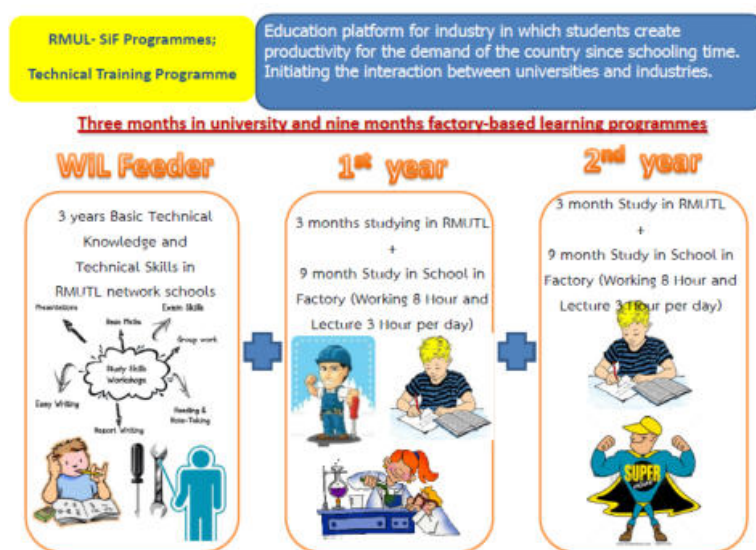
The success of the SiF pilot program means that we can think of transferability in two ways. The first is replication of the model to adapt to other ASEAN countries. As countries such as Lao PDR, Myanmar and Cambodia become more competent industrialised countries (The Government Public Relations Department, 2016), the SiF model used by RMUTL can be applicable to each country’s situation. The model stipulates that the ethos shared by the government, participating universities and the industry needs to be on a common ground in order for it to work. Thus, it would require a careful search in terms of the university focusing on vocational education, and an industry looking for a long-term sustainable development in conjunction to its expansion, and the government policies which are enticing enough industries to partake.

In terms of the subject transferability, the pilot study has been found to expand to other fields such as the service and agro industries. Ongoing and future studies will dictate whether this model is applicable to other industries which requires less practical knowledge. However, the direction in which the education is moving in the industry-based countries and other technologically advanced technologies highlights that extending the classroom to the outside world will become the future in most areas of studies.

## **8. Impact of the PPP models: WiL – SiF in Thailand**

This model is believed to be able to develop human resources who are work ready for workplaces by working with all three sectors in the form of the Tri-lateral network interaction model between university, business and government. Thus, the sustainability of PPP educational model will depend on the business involved in the project because the industry

will pay the budget for students and faculty staff's expenses who work in the workplaces. The government has to foster and support a form of participatory education. University has a mission to produce manpower by offering an "in kind" investment, such as the instructors, senior lecturers and school management. Figure 10 illustrates SiF education management for teaching. Students studied 3-4 hours and worked for 8 hours everyday in the factory for 6 days a week through the entire curriculum.

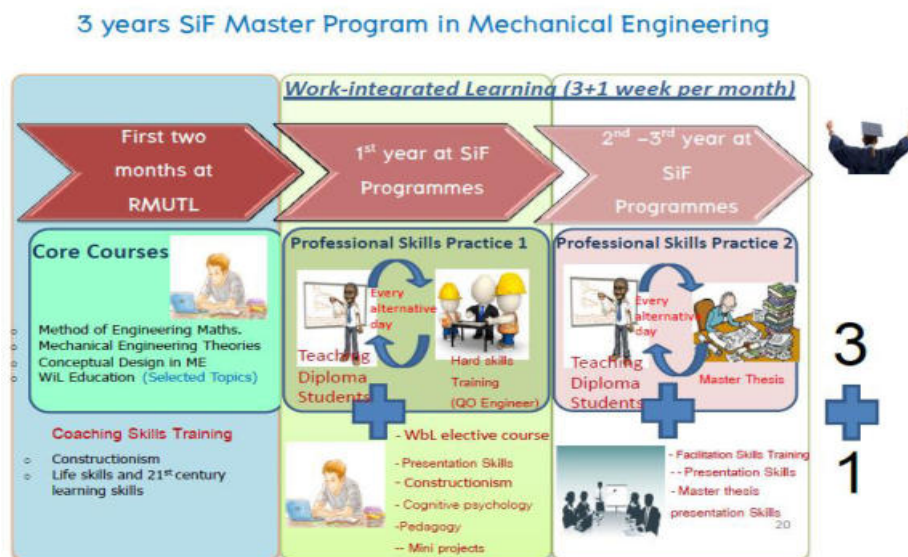


**Figure 10:** SiF education management for teaching in order to produce industrial technicians

The form of the educational management system in factories is similar to a boarding school. Students will not just learn academic subjects at school, they will also learn through performing real work in the factory. Learning through this authentic tasks leads to the problem of lacking teachers from the university, who have sufficient knowledge and experience in industry context.

Teachers from the university side need to understand the business systems in industry, know modern industrial technology and have necessary knowledge and basic skills and experiences in working in the factory. Therefore, the SiF Project has opened another new SiF Master Program in Mechanical Engineering which the candidates while doing this program must be teacher's assistant in the SiF system in the form of work-integrated learning.

The Master students must be trained to know how to manage the SiF program by applying the knowledge gained from the industry. The SiF Master students have to do research from the real problem of the industry as well as do educational research focusing on how to enhance the SiF educational model to be more productive. This model of 3-year SiF Master Program to produce teachers for SiF schools is shown in Figure 11.



**Figure 11:** The model of education to produce TVET teachers (Master program) for SiF schools.

The SiF model mentioned has been expanded to other industries and educational institutions at this moment such as automotive and parts, electronics and food industries as well as tourism industry. The educational model of work-integrated learning approach is also expanded to high schools and vocational schools to produce the high potential students who plan to further their study in this SiF education system under the support from many public and private sectors organizations. Figure 12 illustrates in 2016 another PPP program between an auto part company; Bangkok Alloy Enterprise Co. Ltd., a subsidizing of BDI, RMUTL and STI.

## Work-Integrated Learning (WiL) in BAE (Bangkok Alloy Enterprise Co.,Ltd): auto part company



**Figure 12:** Expansion of WiL – SiF to BAE (Bangkok Alloy Enterprise Co.,Ltd.)

**SiF students** will work from 8.00-4.00 and study from 6.00-9.00 plus Sat and Sun.

**Learning outcomes (K S A)** will be assessed by students, teachers from university, professionals from company. Competency-based learning is employed.

Source from: BDI



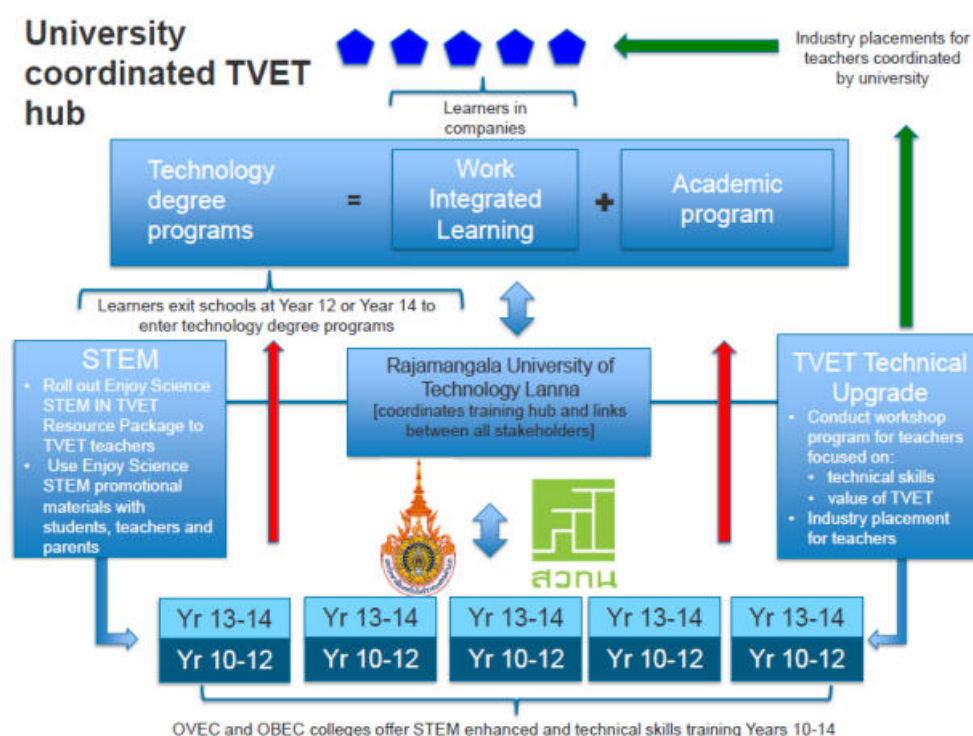
**Figure 13:** WiL – SiF industrial engineering students are put in 5 stations in BAE and studying with teachers from the university and professionals from the company.

## 9. Conclusions

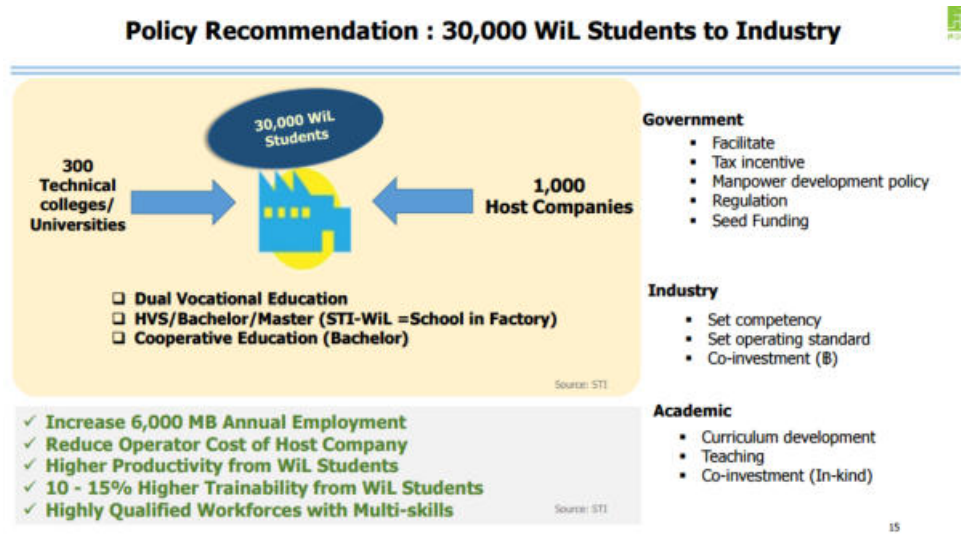
What Michelin benefits from SIF project are: first, quality labour, second, they acquire workers who have worked full time efficiently. The government also gains by not having to seek expensive tools and equipment for universities. It is a win-win situation.

This study reveals factories should provide the main expenditure, but universities might provide support in terms of teachers. Government might adjust some policy including lowering taxes, providing welfare and incentives to attract factories to the scheme. In the past, education and the demands of industry might not have been the same because the education system provided knowledge to students in one way, but the private sector needed human resources for a different type of work. But nowadays, work-integrated learning or learners learning in the companies (See Figure 14, 15, 16) will help foster cooperation between the education and private sectors in order to produce higher quality human resource for companies and industries

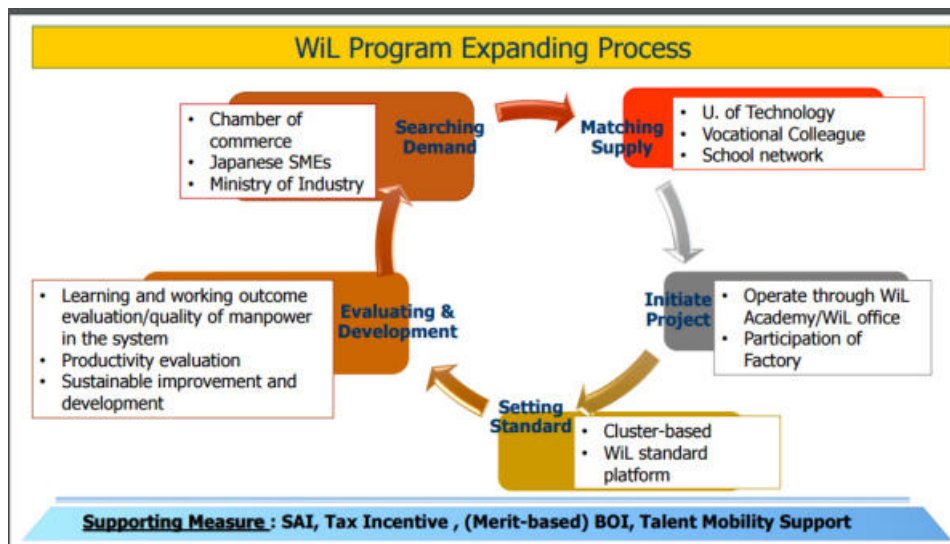
The PPP pilot project has produced positive results. With the modifications outlined in this report and the satisfactory outcomes/benefits of the project, we are encouraged to advance WiL/SiF as a means of enhancing students as a qualified and competent workforce.



**Figure 14:** Work-integrated Learning



**Figure 15:** STI WiL Policy to support PPP Model in Thailand



**Figure 16:** WiL Program expansion supported by STI in Thailand



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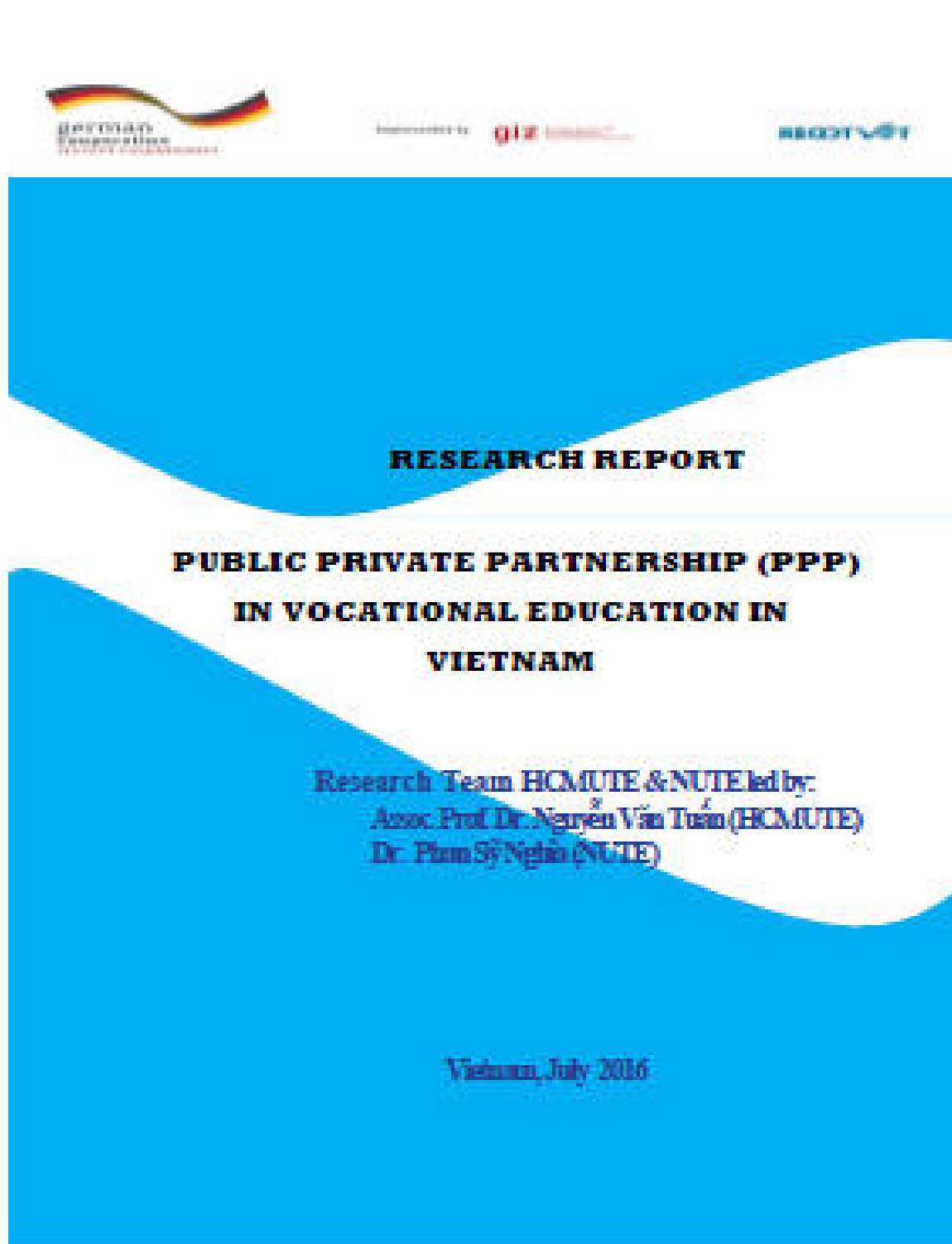
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## 1. About Vietnam

Vietnam is a country in Southeast Asia, with the history of over 4000 years’development. China borders it to the north, Laos and Cambodia to the west, the South China Sea to the east and the south. Vietnam's population is approximately 91.7 million people (of which 63 million people of working age) of 54 different ethnic groups, living on the land shaped like the letter "S" with an area nearly 331.000km<sup>2</sup> . Vietnam has more than 3000 kilometers of coastline. Three quarters of Vietnam's land is mountainous; farmland accounts for only about 28% of total land area.

As a member of ASEAN, Vietnam has integrated deeply into the international relations of labor and employment; continues to promote the implementation of sustainable

employment programs; develops and forecasts the labor market; promotes labor restructuring and labor movement in the country and internationally, especially supports highly qualified workers to work abroad; completes employment policies; develops and implements public employment program on the basis of international and regional criteria.

## **2. Background of the research**

Since the implementation of the "Renewal" policy, Vietnam has gained remarkable achievements in economic development; the growth rate of total gross domestic product (GDP) is high and stable compared with countries in the region and the world. Although the role of the state sector remains the key position, with the policy of expanding economic sectors, the formation and growth of the private sector in recent years has contributed to the promotion of the growth rate of the economy and social development.

In the context of market economy and international integration, the trend for "Public Private Partnership" in education is growing stronger and is implemented in various forms.

The formation of PPP in education is a new trend to create mechanisms and combining models to promote the strengths of the state and private elements in the market mechanism to improve the quality and efficiency of education.

To implement the policy of "Basic and comprehensive renewal of education and training to meet the requirements of industrialization and modernization in the conditions socialism-oriented market economy and international integration," it is essential to study and apply PPP forms to motivate the development of education, including vocational education.

## **3. Research objective and research tasks**

### **3.1. Research objective**

The research aims at evaluating and analyzing models of public-private partnerships between universities, colleges and businesses (PPP) in Vietnam, thus proposing the most effective form within the framework of ASEAN.

### **3.2. Research tasks**

With these goals upon, the thesis studies the following tasks:

- 1) Discover the programs, the current TVET PPP models/ projects between the government, universities and enterprises in vocational and technical training
- 2) Determine the level of involvement of the private (business) in the different types of PPP cooperation.
- 3) Compare the forms, models of cooperation between schools and businesses.
- 4) The impact and results of this cooperation;
- 5) The motivating factors and barriers of the development of this collaborative relationship.

- 6) Construct and propose a new PPP model between the government, schools and businesses in accordance with the development of the country.
- 7) Propose public-private partnership policies in the field of vocational education.

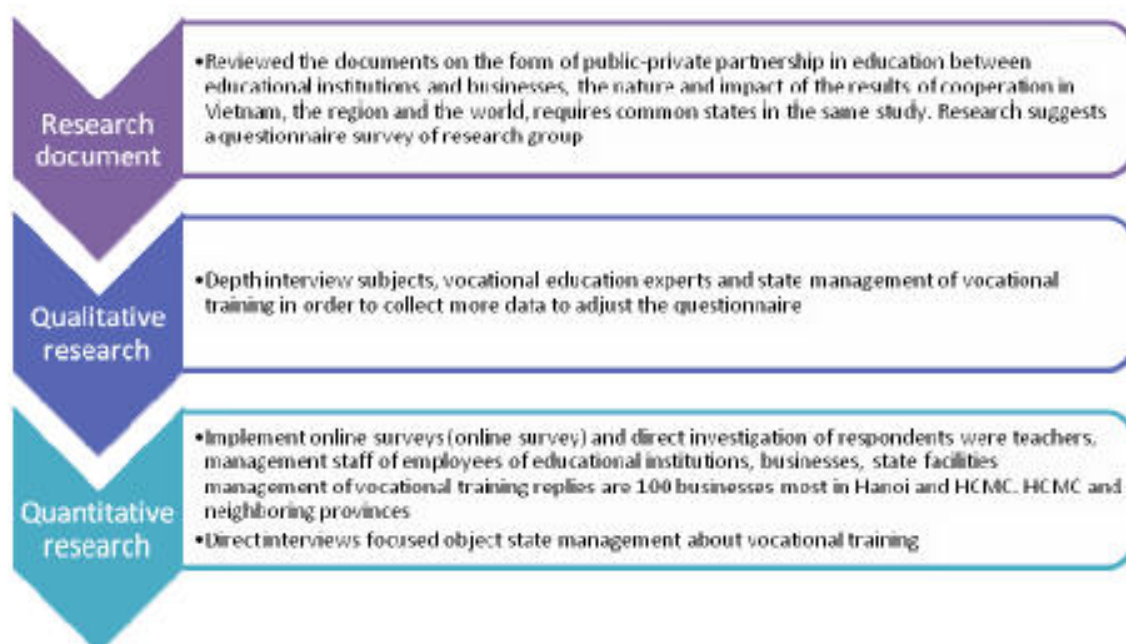
#### **4. Research questions**

##### **4.1. Contents of research questions**

- 1) How is PPP between schools and businesses organized? Which programs of PPP are being implemented?
- 2) What are the economic factors and institutions to successfully implement the PPP in vocational education (TVET)
- 3) What is the relationship and interactions between them? How to make enterprises engaged in PPP?
- 4) What are the benefits and costs they are expecting? What do they really have?
- 5) How to distribute the resources between stakeholders (partners) to participate in TVET PPP?
- 6) How are the stakeholders ruled in the program design process?
- 7) Do policy makers have expectations and worries about PPP in vocational education?
- 8) What are the role and functions of policy makers (government) in the development and implementation of PPP ?
- 9) What is most important policy for the PPP between training institute and enterprise?

##### **4.2. Research Methods**

In order to answer the above research questions, the researchers apply the following research methods:



*Figure 1. Process of research*

Samples of the study sample are participants who are working in training institutions, businesses and management position of vocational training institutions in Ho Chi Minh City, Hanoi and surrounding areas:

Regarding education institutions: colleges and vocational colleges and universities. Regarding enterprises: The enterprises receive internship students. State management unit of vocational training: General Department of Vocational Training and vocational training department in the provinces.

*Table 1. Number of survey questionnaires*

|                                           | Frequen<br>cy | Per<br>cent | Valid<br>Percent | Cumulative<br>Percent |
|-------------------------------------------|---------------|-------------|------------------|-----------------------|
| Nha truong (TVET Institution)             | 136           | 74,7        | 74,7             | 74,7                  |
| Doanh nghiep (Industry)                   | 39            | 21,4        | 21,4             | 96,2                  |
| Quan ly nha nuoc ve day nghe (Government) | 7             | 3,8         | 3,8              | 100                   |
| Total                                     | 182           | 100         | 100              |                       |

The results of the survey were analyzed using SPSS software.

## 5. Socio-economic framework in the country

In 1986, after decades of war and national construction, Vietnam has carried out an economic reform in the direction of innovation, transforming the economy from a centrally planned one to a "socialism-oriented market economy".

After nearly three decades of rapid economic growth, Vietnam is now seen as a success story of development. The renewal of politics and economy (Doi Moi) initiated in 1986 has led Vietnam from one of the poorest countries in the world to becoming a country with the average income in just a quarter of a century. The per capita income rising from under \$ 100 to about \$ 2.109 in 2015 took place simultaneously with the poverty rate dropping from 58% to 14,2 % in 2010 and 4,5 % in 2015<sup>1</sup>. Vietnam has completed a number of Millennium development Goals ahead of schedule in 2015 and improved most development indicators<sup>2</sup>, as well as enhanced the access to educational services, health care and social safety network for more classes in the society.

In recent years, especially over the past 15 years, vocational education has been paid much attention to and gradually meet the demand of the economic sector.

Because of the improvement of the conditions to ensure the quality of education, the quality of vocational education has a positive move; vocational training is initially tied to employers; occupational skills of graduate students have been raised. However, vocational education quality improvement is slow; there is a <sup>1</sup> Report on the status of implementing the tasks in 2015 and the period 2011-2015 in the field labours and social affairs – Labour and Social Affair Publisher shortage of high-quality labor; and the training is not closely tied to the needs of society.

So far the financial resources of the professional education institutions in Vietnam are mainly due to government budget or students' contributions. To mobilize social resources for the development of vocational education, including the private sector, the Government has promoted socialization this field, encouraged collaboration between businesses and schools. However, in the reality in Vietnam, cooperation between schools, government and businesses is limited. Information on the status of models and forms of cooperation, the level of involvement of the businesses, as well as the impact of the cooperation on the society and related objects are issues that have not been adequately studied.

Therefore, this research has important implications in order to collect the actual data as the basis for the formulation of policies to further encourage the participation of businesses in vocational education.

In order to achieve the goal "to become a modern and industrialized country", during the past few years, Vietnam has focused on the development of vocational education and training aimed at developing human resources to meet the needs of the labor market in terms of quantity, quality and career structure. It is considered one of three strategic breakthroughs (two other pillars are: perfecting the socialism-oriented market economy and building synchronized infrastructure systems)<sup>3</sup>

- On 04/11/2013, at the 8th Plenum, the Communist Party's Executive Board XI issued Resolution No. 29-TW/NQ on basic and comprehensive renovation of education and training to meet the requirements of industrialization and modernization in conditions of market economy and international integration. One of the objectives of the Resolution is "Renewing basically and comprehensively education in the direction of standardization and modernization, socialization, democratization and international integration" and "rapid development of human resources, especially high-quality human resources, focusing on fundamental and comprehensive innovation of the national education".

Committee on basic and comprehensive innovation education and training to meet the requirements of industrialization and modernization in conditions of market economy and international integration.

- To implement Resolution 29-NQ/TW dated on 09/6/2014, the Government issued Resolution No. 44/NQ-CP of the action plan of the Government. The Action Plan identified 9 major missions and 18 schemes, including the scheme of international integration in education and training until 2020. Regarding vocational training, the general objective is that: By 2020, a number of vocational training institutions are developed to reach the advanced level in the region and the world with the innovation in content, curricula.<sup>5</sup>

- Until 31/12/2015, there were 1,467 vocational training institutes, including 190 vocational training colleges (including 48 non-public schools), 280 vocational schools (with 102 non-public schools), 997 vocational training centers (344 nonpublic centers)<sup>6</sup>.

- Until 31/12/2015, there were 535,920 active enterprises among 941,051 registered businesses, in which about 95% are medium-sized, small and micro-sized enterprises.<sup>7</sup>

## **6. Policy framework for PPP**

- Article 59 of the Laws of Labor in 2012 says that: The State encourages employers who are qualified enough to establish vocational training courses to train skills for employees.

- Article 20 of the Laws of Labor 2012 defines the responsibilities of the employer: The employer plan the annual budget for training and fostering skills for workers.

- Chapter V (articles 55 and 56) of the Laws on Vocational Training 2006, Chapter IV (articles 51 and 52) of the Laws on Vocational Education and Training and Chapter IV (Articles 30 and 31) of the Decree 48/2015/NĐ-CP of the Government stipulate "the rights and responsibilities of businesses in vocational education". Accordingly, businesses have the following rights and responsibilities:

+ Enterprises have the right to establish vocational education institutions;

+ Collaborate with vocational education institutions to organize vocational training courses;

+ Participate in developing curricula, organizing courses and assessing the learning outcomes of students in vocational education institutions;

- + Receiving learners and teachers to observe, practice and practice occupational skills;
- + Pay salaries for students, teachers or laborers directly engaged in making products during training and practice in enterprises.
- + Expenses for professional training activities of the business are deductible when determining taxable income.
- Charter of Vocational Colleges and Vocational Schools has identified the collaboration with the businesses in production, vocational training plan, developing curriculum and textbooks, organizing internship; the joint programs with national and international economic, educational and scientific organization to improve vocational training and associate vocational training with employment and labor market..

Vocational training development strategy period 2011 - 2020 has identified the linkage between vocational training to the labor market and the participation of the businesses. The enterprises have the primary responsibility for ensuring vocational skills of workers in their businesses (self-organization of training and retraining for the workers of the enterprises; collaboration with vocational training institutions for the training and place the training); for contributing to the vocational training fund; for directly participating in vocational training activities (developing standards of vocational skills, identifying job categories, developing curricula, assessment of learning outcomes of vocational students...). Vocational training institutions are responsible for receiving information from enterprises and changing to adapt to the needs of the businesses.

## **7. Research's results**

### **7.1. Current TVET PPP models/ projects between the government, universities and enterprises in vocational education.**

#### **- At the policy level**

Exist the following forms of cooperation<sup>8</sup>:

- ☐ Enterprises engage in making lists vocational training;
  - ☐ Enterprises participate to build of national vocational skills standards
  - ☐ Enterprises participate in building the framework program.
  - ☐ State orders the TVET institutions manpower training. - At the level of training activity
- Currently, there are many forms of cooperation between enterprises and vocational training institutions such as:
- ☐ Exchange, provide human resources between training institutions and enterprises;
  - ☐ Enterprises receive and organize vocational training for students of vocational training institutions;
  - ☐ The assistance program, which provides scholarships for students;

☐ Business training school order;

☐ Enterprises participate in building training programs;

☐ Enterprises establish the professional educational institutions .. In the form above, cooperation organize vocational training for students is the most common form. The assessment of State management agencies, teachers, principals and businesses about the program/ model.

When asked the question, "At present, which forms of PPP are there in your school/ business?", most of the survey participants choose the "Practice in enterprise skills" among 6 models of PPP.

## **7.2. Determine the extent of involvement of the private (business) in the different types of PPP.**

### **7.2.1. The level of participation of businesses**

Currently there are several forms of cooperation between businesses and training institute, including: exchanging and providing resources between training institutes and businesses; exchanging information between training institutes and businesses; Enterprises' support for students' internship.

Through the survey process in the training institute, it can be realized that "students practicing in enterprises " is the most regular and popular form at vocational schools. This partnership is the most highly appreciated compared to other forms of PPP. Some forms are averagely rated , such as providing information on the needs for students to practice and information on recruitment of graduates, in collaboration with business to arrange jobs for graduates. Such activities as inviting alumni to speak to students; inviting experts to teaching at businesses; providing scholarships for students, funding for equipment at vocational schools; cooperating in developing training plans are the most depreciated. Through the survey and further research, it can be seen that the potential for cooperation with enterprises that has not yet been fully exploited.

(See table of forms of cooperation between schools and businesses.

### **7.2.2. Survey results**

In the survey of Ha Xuan Quang et al.<sup>10</sup>, 85.7% of enterprises are willing to cooperate with schools, especially receive students to practice in enterprises. All 233 enterprises surveyed are willing to cooperate with the training institutes. The cooperation activities include: receiving students and vocational teachers to visit and practice in businesses, providing recruitment information and giving feedback on the quality of graduates. 35.1% of the businesses are willing to support vocational training equipment, the activity of the lowest rate. However, because of some hindering factors, a number of cooperation programs have not been implemented in practice.

### 7.3. Compare forms and models of cooperation between schools and businesses

#### 7.3.1. Benefits and feasibility of the models of cooperation

- By Place from the public
- By Place from Businesses
- Practice in enterprise skills
- Dual Training System
- School in Factory
- Industrial Training / on job training

Among the above models, practice in enterprise skills is the most feasible model in vocational education in Vietnam. Students are able to learn through the process of working. They are aware of what is happening in the industry and more confident in their professional activities, which helps reduce waste in the training process.

#### 7.3.2. Survey results

Among all the surveyed models, practice in enterprise skills is considered the most realistic and popular in Vietnam (see the below figure).

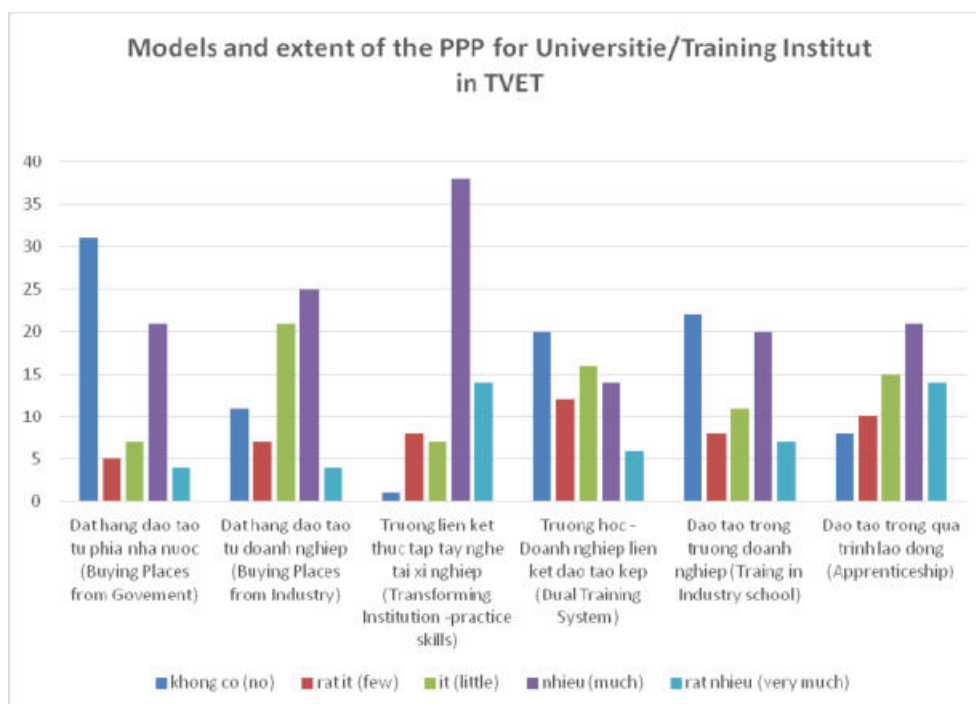


Figure 2. The PPP models and its application level

It can be realized that 52% of respondents rate the model practice in enterprise skills to be feasible (38% chooses “much” and 14% chooses “very much”).

## **7.4. The impact and results of this cooperation**

### **7.4.1. Impacts**

- The cooperation between schools and businesses is necessary and suitable to the trend of social development and bring about practical benefits.
- The cooperation benefits both businesses and training institutes.

*Benefits to training institutes:* The cooperation with businesses creates opportunities for resource mobilization from business to increase the scale and quality of training. Besides, it helps enhance the connection between training and the using of labor and avoid waste. In the condition that the state budget is limited and does not meet the requirements of vocational training development, this form of cooperation is increasingly focused.

*Benefits to enterprises:* Cooperation with training institutes will help capture capabilities and characteristics of the training institutes to coordinate and train students to meet their requirements. Products of "the cooperation between enterprises and schools" would suit the market's need (both in quantity and quality) to avoid the waste due to excess or deficiency. Simultaneously, as the role of user of the product of that process, enterprises will save additional training costs when recruiting graduate student from the training institute. To properly deal the interests of the parties is the basis for the development of cooperation programs.

*Table 2. Benefits of public-private partnerships between schools and businesses*

| Object     | Benefits                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Students   | <ul style="list-style-type: none"> <li>- Improving the knowledge of learners by experience</li> <li>- Creating more skilled learners with more expertise</li> <li>- Preparing the people who work for a recognized profession</li> <li>- Improving soft skills for learners</li> <li>- Easily integrating into the work environment after graduation</li> <li>- Increasing income for learners</li> <li>- Having a better orientation</li> <li>- Developing relationships; increasing your chances of finding work later</li> </ul> |
| Businesses | <ul style="list-style-type: none"> <li>- Improving the efficiency of business operations</li> <li>- Enhancing business image and prestige in society</li> <li>- Helping businesses develop/ prepare long-term human resources</li> <li>- Reducing costs and increasing revenue</li> <li>- Having a potential staff to create competitive advantage in the market</li> <li>- Cost savings for recruitment, training and development</li> <li>- Expanding relations, business promotion and access to potential customers</li> </ul>  |
| Society    | <ul style="list-style-type: none"> <li>- Improving the quality of the labor force in society</li> <li>- Meeting the demand for qualified human resource</li> <li>- Avoiding waste in training</li> </ul>                                                                                                                                                                                                                                                                                                                            |

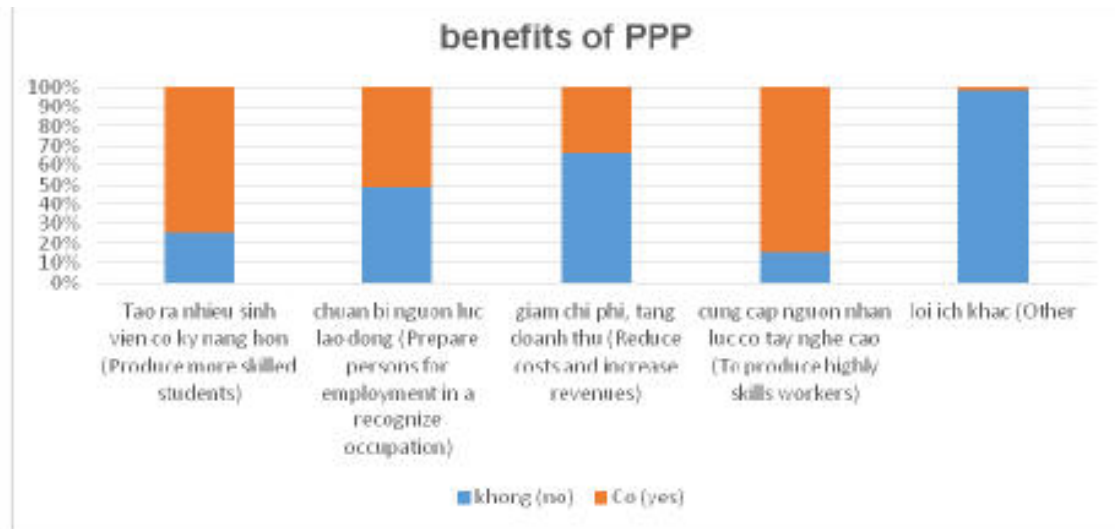
|                    |                                                                                                                                                                                                                                                                   |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                    | <ul style="list-style-type: none"> <li>- Creating specific benefits to businesses through research and innovation</li> </ul>                                                                                                                                      |
| Training Institute | <ul style="list-style-type: none"> <li>- Increasing the competitiveness and reputation of schools</li> <li>- Improving the quality of the output of training institutions and quality of graduating students</li> <li>- Increasing revenue for schools</li> </ul> |

Currently, training cooperation is loose and has not become a common operation of schools and businesses.

The most popular and regular cooperation program between Training institutes and business is practice in enterprise skills and it has most effects on the knowledge and skills of vocational students. Other cooperation programs are also carried out, but their influence on students' knowledge and skills is not much. The cause of this problem is some elements hindering the cooperation.

### 7.4.2. Survey results

- Benefits of the cooperation between schools and businesses:



*Figure 3. Benefits of the cooperation between schools and businesses*

Among the benefits of public-private partnership, over 70% vote for “Produce more skilled students” and more than 80% for “Produce highly skilled workers”.

## 7.5. The motivating factors in and barriers to the development of this collaborative relationship.

### 7.5.1. The motivating factors and barriers

#### - Motivating factors

- + The views and guidance of the Communist Party and State about the cooperative relations between businesses and training institutes
- + The benefits of businesses and training institutes

Table 3. Motivating factors to the development of this collaborative relationship

| Group of factors                         | Motivating factors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Relations between schools and businesses | <ul style="list-style-type: none"> <li>- The belief in the close cooperation between schools and businesses</li> <li>- The fair cooperation for the sake of both businesses and schools</li> <li>- The objective of the parties is shared</li> <li>- Understanding the common interests of the parties (schools, businesses, learners)</li> <li>- Flexibility in the way of cooperation</li> <li>- Supporting the government's initiative</li> <li>- More interaction</li> <li>- Sharing knowledge regarding new technologies</li> </ul> |
| Motivating factors from businesses       | <ul style="list-style-type: none"> <li>- The interest/ support of business leaders for the cooperation with universities</li> <li>- Employees of the business is former employees and/ or former students of the university</li> <li>- The ability to funding/ financial resources of enterprises</li> <li>- Schools and businesses have close geographical location</li> </ul>                                                                                                                                                          |
| Motivating factors from institutions     | <ul style="list-style-type: none"> <li>- The school is a special enterprise with autonomous and self-responsible management mechanism</li> <li>- Trade orientation of training institutes</li> <li>- Training institutions have developing strategies associated with social needs</li> <li>- Increasing competition and training to meet the needs of the society</li> <li>- The quality of education and training</li> </ul>                                                                                                           |
|                                          | <ul style="list-style-type: none"> <li>- Enhancing skills for students after graduation</li> <li>- Providing highly skilled human resources</li> <li>- Application and practice oriented training</li> <li>- The initiative of the training institutions in accessing and giving ways of cooperation with businesses</li> <li>- The need to enhance market competitiveness</li> </ul>                                                                                                                                                    |

#### - Barriers

- + The legal framework on liability and rights of businesses has not been applied in practice.
- + Enterprises and vocational training institutions are not really actively involved to work together. The reason is that the policy is not strong enough to make it attractive to businesses and vocational training institutions<sup>11</sup>.

+ In fact, some cooperation programs between businesses and training institutions also have certain limitations. As assessed by the training institutions, the biggest factor that hinders the development of cooperation programs is that the state regulations lack incentives and obligations for training institutes and businesses to work together. Other hindering factors are: training institutions'

lack of information on the enterprise; officials and teachers' lack the skills to develop partnerships with businesses; training institutes' lack of regulation to encourage departments to actively implement the cooperation programs with enterprises. According to some businesses: "The State lack regulations to encourage training institutes and businesses to work together". Besides, enterprises lack information on training institutes; enterprises suppose that training institutes do not meet the requirements.

### 7.5.2. Survey results

According to some teachers, managers and businesses, the biggest barrier is that the training need do not follow the professional skills and human resource development - accounting for over 60% of respondents.

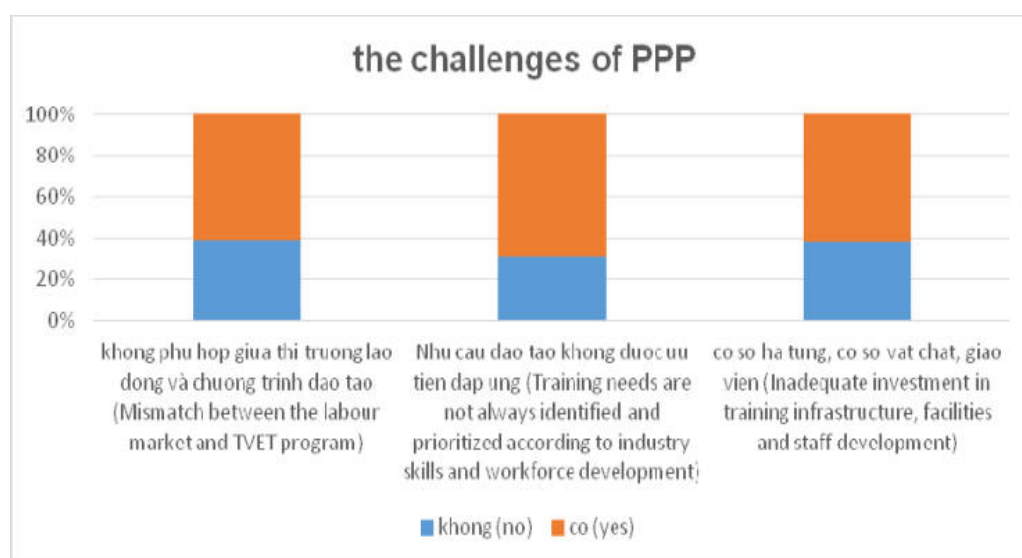


Figure 4. Barriers to the partnership between businesses and training institutes

## 7.6. Develop and propose a new PPP model to connect the government, schools and businesses in line with the development of the country

### 7.6.1. The new PPP model

In Vietnam today remains models of cooperation as follows:

- 1) By Place from the public
- 2) By Place from Businesses
- 3) Practice in enterprise skills
- 4) Dual Training System
- 5) School in Factory
- 6) Industrial Training

### 7.6.2. Practice in enterprise skills

Currently, in Vietnam 95% of the enterprises are small and medium enterprises, so this model is the most popular. Schools and businesses proactively cooperate with each other. In this model, students are sent to practice in enterprises and guided by skilled technicians to involve in certain stages of production.

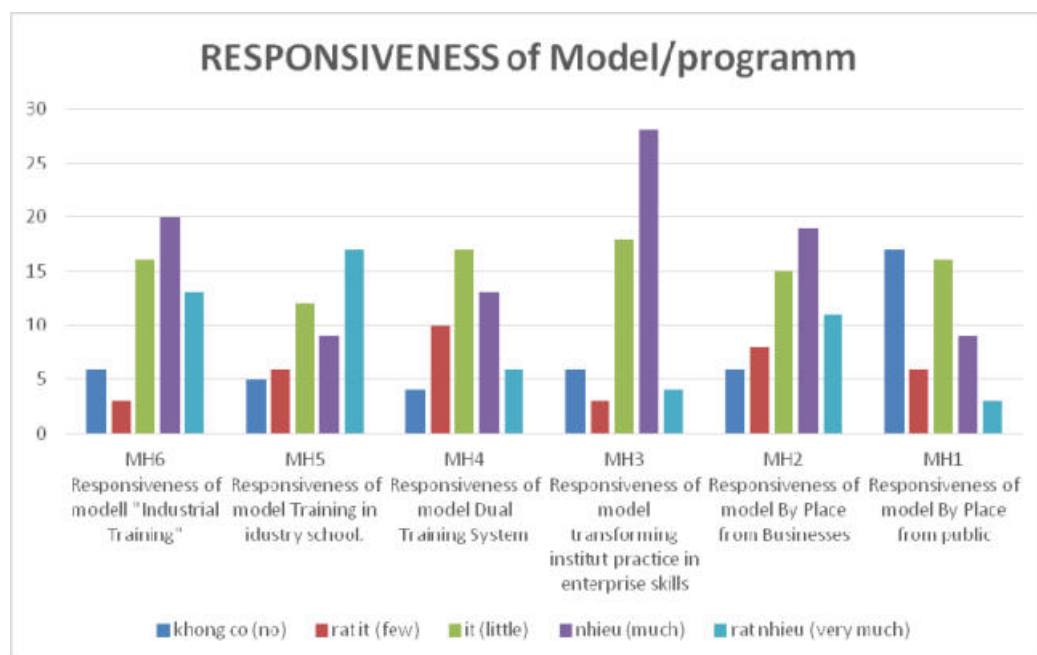


Figure 5. Characteristics and responsiveness of the public private partnership model in vocational education

### 7.6.3. Opinions on selected models

In the survey, we find that many participants rate “practice in enterprise skills” as “much” and “very much” (see the below figure)

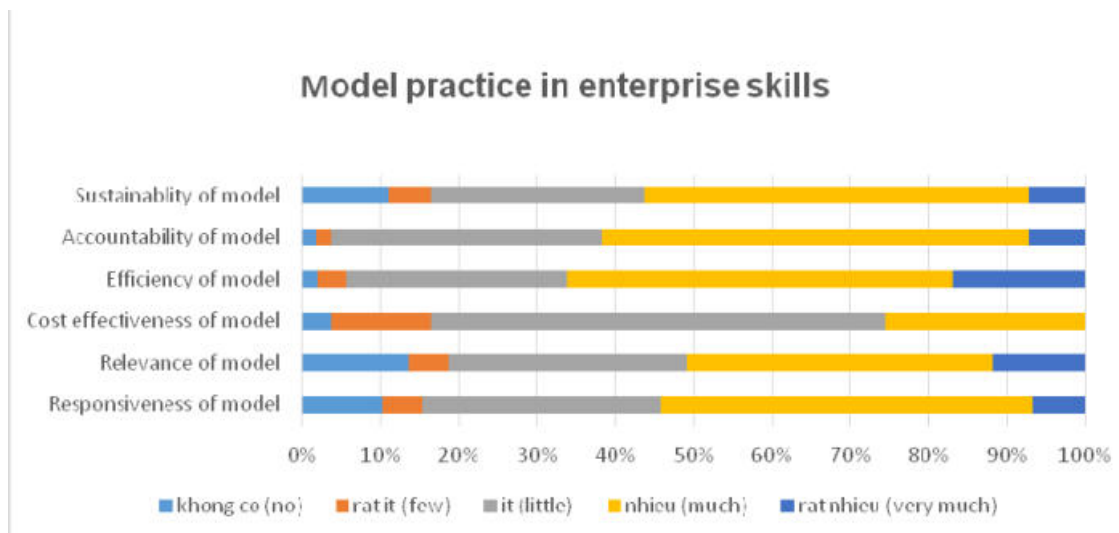


Figure 6. Review the characteristics of the link model practice schools

In Ha Xuan Quang et al.'s research, practice in enterprise skills have an important position (see Figure)

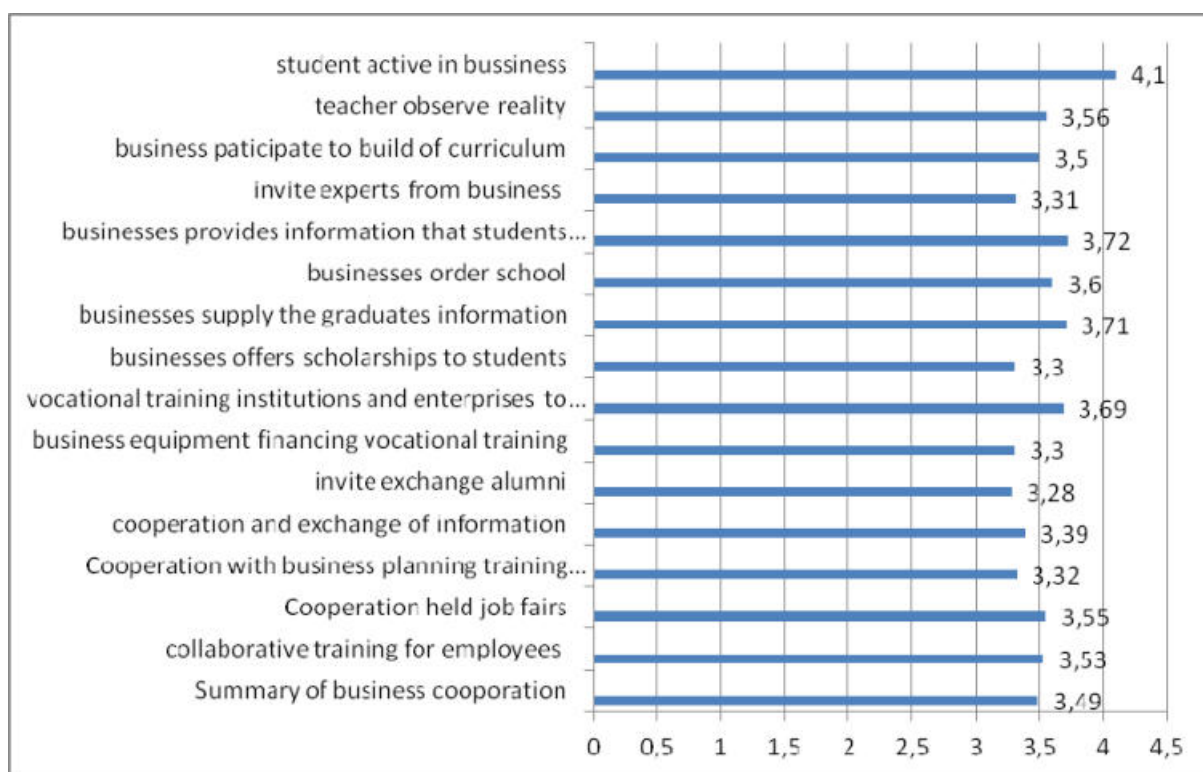


Figure 7. The importance of the model "practice in enterprise skills" (research by Ha Xuan Quang et al.)

## **8. Factors of success**

The key issue for the implementation of cooperation is how to make businesses and the community participate actively in vocational training. The method proved to be successful focuses on equal cooperation with mutual benefits.

According to results of the Cost - Benefit analysis of internship programs in 14 enterprises in 2014 by the National Institute for Vocational Training under General Department of vocational Training, some benefits can be realized<sup>12</sup>:

### **Results of the Survey**

The structure business benefits derived from internship activities basically includes three types: (i) benefits from students' participation in production, (ii) benefits from saving costs for recruiting and initial training (iii) and other benefits. 12 National Institute of Vocational Training - General Department of Vocational Training: Report on vocational training in Vietnam 2013-2014

According to the survey, the total of quantifiable benefits that businesses gain from the students' internship activities is up to the 11,712 million VND equivalent to 550,000 USD which mainly (97%) comes from students' direct participation on the production line (in stead of labors in enterprises) and recruitment cost savings (because at the end of the internship, students are officially employed instead of hiring new workers)

#### ***- Benefits from production activities during internships***

After calculating, equivalent to labor productivity and wages of employees in the corresponding positions, the total benefits owing to students' production during their internship in 14 enterprises are 11,396 million VND.

#### ***- Benefits from recruitment and initial training cost savings***

Besides the benefits of the productive activities that students give by practice, the survey calculates that businesses save nearly 310 million VND from officially employing interns. Instead of searching, organizing contests and interviews, probation and costly initial training for new workers, officially recruiting interns who show the capability and quality of doing good jobs is a reasonable choice, which helps save both cost and time for companies.

#### ***- Benefits that can not be quantified***

Besides contributing to the production, several businesses prove that students from vocational schools are well trained and have good technical knowledge, so some have initiatives to improve methods of production and to help businesses improve the quality and

labor productivity. Besides, students practice creates a competitive working environment for labors of the enterprises.

Receiving students for internship programs has helped businesses to contribute to the implementation of corporate social responsibility (CSR). Many businesses are able to develop their image and be locally identified through this activity.

Another practical benefit is that receiving students for internship helps businesses prepare the future workers. Therefore, these enterprises are willing and highly appreciate cooperation with vocational schools. The result of the survey shows a shortage of skilled laborers in some large enterprises. These enterprises say they would like to receive hundreds of students to practice in two surveyed jobs and they are willing to spend considerable costs for both students and schools during practice. This shows that many businesses are actually aware of the benefits of receiving students for internship and this activity also stems from the demand of enterprises.

### **Comparison of benefits and costs**

The result of the cost – benefit analysis shows that the total net benefit of the internship at 14 surveyed companies reaches VND 3.256 billion (the difference between the total cost of 8.455 billion and the total interest earned is 11.712 billion).

On average, the cost for one intern for 1 month is 3.65 million VND but the average benefit is about 4.85 million VND. Thus, the net benefit of each intern is 1.2 million VND per month. Therefore, if we know how to joint practice with the production, enterprises will gain significant benefits. This result can be considered a factor to induce and encourage enterprises to cooperate with vocational schools in organizing internship for the students.

## **9. Recommendations**

### **- For policy makers in the field of vocational education and training:**

- To promulgate regulations to ensure the training quality of internship in enterprises, such as regulations on the content of the program, qualifications for instructors in businesses.
- Develop specific regulations and mechanisms of cooperation in the system of vocational training such as:
- apprenticeship program should be developed and formalized in a specific and detailed regulation such as regulation on training criteria during internship. The principle of cooperation approach must be consistent with the internship program.
- The enterprise without organizing internship programs must pay a fee to the training fund (to be established in the future).
- Developing regulations to ensure the salary for interns to avoid using interns as cheap labors.

**- For enterprises:**

- + Coordinate with schools to develop internship program in line with the actual production of enterprises and curricula of the school;
- + Identify other cooperation activities with the vocational training institutions on the basis of mutual benefits;
- + Some businesses pay adequate allowances for the trainees.

**- For vocational training institutions:**

The vocational training institutions should strengthen cooperation with enterprises through such activities as:

- + Send teachers to practice at the enterprise;
- + Cooperate with businesses to develop curricula and clearly define the roles and responsibilities of each party in this activity;
- + Organizing compulsory internship in the curricula;
- + Coordinate to develop a mechanism to assess job skills for students before graduation

**10. Conclusion**

- The cooperation between enterprises and vocational education institutions is an important strategic element in the development of vocational education to meet the requirements of society. Privatization will be an important component in the activities / programs of cooperation between schools and businesses;
- The models of cooperation between schools and enterprises in vocational education include: By Place from the public; By Place from Businesses; Practice in enterprise skills; Dual Training System; School in Factory; Industrial Training.
- In the context of Vietnamese vocational education today, the model “practice in enterprise skills” to train vocational skills for students is a priority model selection with high feasibility.

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**Project Title:**

**Theoretical Approach On Public Private  
Partnership For Universities / Training  
Institutes In Technical Vocational  
Education And Training (TVET)**

Team members

**Prof. Dr. Boualinh Soysouvanh**

**Assoc. Prof. Dr. Bounseng Khammounty**

**Mr. Phannavong Bounphasouk**

**Ms. Soukkaseum Saleumsky**

## **Final Country Report**

Development Models of and approaches to Public Private Partnership  
between government, university and industry on TVET in ASEAN

### **Research Team:**

Prof. Dr. Boualinh Soysouvanh

Assoc. Prof. Dr. Bounseng Khammounty

### **Assistance Team:**

Mr. Phannavong Bounphasouk

Ms. Soukkaseum Saleumsy

**National University of Lao (NUoL)**

**Faculty of Engineering (FEN)/Vocational Teacher Education Department (VTED)**

**January - September 2016**

## **Final National Report**

Research Topic:

Development Models of and approaches to Public Private Partnership  
between government, university and industry on TVET in ASEAN

**Representative**

Family name:

Soys

ouvanh

First name:

Bou

alinh

Gender:

Mal

e: ☒Female: ☐ Date of birth: 12.07.1956

Current

position:

Dea

n of Faculty of Engineering

**Organization:**

National University of Laos/Faculty of Engineering/Vocational Teacher Education Department  
Soukpalouang campus, P.O.Box: 3166, Vientiane Lao PDR.

Telephone:

Office: ++856 21 312072

Mobile: ++856 20 55507321

Fax: ++856 20 314382

Email add.: [boualins@fe-nuol.edu.la](mailto:boualins@fe-nuol.edu.la) and [bounseng@fe-nuol.edu.la](mailto:bounseng@fe-nuol.edu.la)

## **Research Topic**

**Research Topic: Development Models of and approaches to Public Private Partnership between government, university and industry on TVET in ASEAN**

### **1.0 Introduction**

Lao PDR is a land linked country bordering Myanmar, Cambodia, China, Thailand, and Vietnam. About 6.5 million people live in its 18 provinces, with most people – 63 percent – still living in rural areas. However, urbanization is occurring at a rate of 4.9 percent each year. The country is largely mountainous, with the most fertile land found along the Mekong plains. The river flows from north to south, forming the border with Thailand for more than 60 percent of its length.

Despite still being a least developed country (LDC), Lao PDR has made significant progress in poverty alleviation over the past 2 decades with poverty rates declining from 46% in 1992 to 23% in 2015. The country is on course to achieve the Millennium Development Goal target of halving poverty by the end of 2015, however the challenge now is to ensure that all Lao people benefit in the country's development.

As a member of the Association of Southeast Asian Nations (ASEAN) Lao PDR is increasing its integration into the regional and global economy. The launch of the ASEAN Economic Community at the start of 2016 will further liberalize the movement of goods and services, capital and high-skilled labour in the regional block. On February 2, 2013, Lao PDR officially became a member of the World Trade Organization, the culmination of a 15-year process of reforms and negotiations.

In fact, the history of the first step in setting up some form of linkage between Public Private Partnership (PPP) and Lao PDR dates back to many years ago where the students from university had to complete periods of 4 weeks (and 6 weeks in some Departments) in industry as part of the requirements of the degree courses they are studying. In the training programmes the students get the first opportunity to have a glimpse of the “real life” in industry and prepare for their professional life after the completion of their university courses. It must be pointed out that in reality it is the industry that is helping the university and it can be viewed as a gesture of good will as far as the industry is concerned.

However, despite its limited benefit this programme of industrial training can, therefore, be used as the foundation for the establishment of professional linkage between the University and the industry in Lao PDR where the university will have an opportunity to make the industry aware of the very useful contribution, it can be to the advancement of the industry, It also give the university to find out how they can be more relevant to the needs of the industry by revising the contents of their courses in consultation with industry.

It is, therefore, very important for both the university or educational institution and industry to jointly develop a professional document aimed development of workable linkages ensuring the interests of both parties. It must clearly describe the aims, objectives, procedures and set of rules governing the linkage programme. In order to be successful in preparing this document the staff of the university or educational institution must convince the bosses of the commercial enterprise(s) why it is beneficial to both parties. It must also be stressed the that the setting up of the linkage is part of the plan of modernization the universities in Lao PDR to agree to work together in order to improve the educational standards and increase productivity in industries all over the country. Obviously, each Department of the university must come to a separate agreement with the individual enterprise concerned. Once the agreement is signed by both parties and all the financial arrangements are in place it can then be put to practice without delay.

A number of current Government of Laos – development partner initiatives in Higher Education, Technical Vocational Education and Training, and Skills Development recognize the need to strengthen Public-Private Cooperation. Many of the interventions include planned support to for example establishment of joint working groups for private sector input in development of standards, curricula and accreditation; formalization of cooperation between companies and educational institutions; and ‘training funds’ to support work force development.

## **2.0 Research Background**

In the competitive world of today the universities cannot expect to move forward without joining forces with the establishments engaged in Research and Development Projects and also Industrial & Commercial Enterprises. Perhaps it would be appropriate to describe the sustainability of universities in the ever-fast changing world as thinking university as a thriving lake. What actually keep the lake alive are the rivers and streams that end up in it. Otherwise the lake will die. In this analogy the university can be visualized as “the lake” with the R&D institutions, academia and industry as” rivers & streams” that keep it alive. In fact, the view that the universities are there for the sole purpose of teaching without paying attention to Research & Development (R&D), how it can be of benefit to industry and not encouraging its highly qualified staff with all their expertise & skills to explore how the

results of their experiences can be used to help the industry to become more competitive in the fast moving world of today. At the same time, the industry cannot afford not to appreciate the fact that the university is not simply a so-called “an Ivory Tower” full of people who do not relate to the “real world”.

A careful study of the factors contributing to the economic advancements and national prosperity of the modern industrial countries shows that the most important factor has been close cooperation between the universities, Research & Development centres and industry. In fact, on so many occasions this type of cooperation goes beyond the boundaries of countries. There are so many companies from one country farm out their R&D works to universities and research centres. Unfortunately, in so many developing countries, the universities and industrial enterprises do not show any meaningful interest in trying to join forces. This gap must come to an immediate end if the improvement of the state of the economy of the country is something they are interested in.

It is no wonder a lot of universities in Europe are competing with each other to win research contracts announced by major universities, companies and Research Centre in the United States, Canada and even inside Europe. Furthermore, recently there are several Research & Development Companies and also universities in India that are winning research contract from universities and companies outside India. This is the most convincing evident that the only way forward toward national prosperity is by universities Research & Development Centre and industrial & commercial enterprises joining forces. It is also interesting to note that in modern industrial countries several universities are working together, with each one working on a particular aspect of the one research project. This is how speed of technological progress gains momentum.

### **3.0 Research Objective**

The purpose of this study is to determine a relevant type of Public Private Partnership (PPP) model suitable to be incorporated in determining long-term contractual arrangements in terms of socio-economic impacts, investments and prospects, task efficiency and service enrichment to develop a feasible TVET hub in ASEAN (+3) countries that involved TVET actors as well as promoting “maintenance culture” among government private and academic sectors in the respective region.

- To explore numbers of existing programs/projects of TVET PPP among government, university and industry within TVET of your country based on relevant PPP model.
- To determine the extent of private participation in different types of PPP arrangements/agreements within of your country based on relevant PPP model.
- To compare between numbers of PPP programs with types of PPP arrangements/agreements within TVET of your country.

- To explore the influences of socio-economic impacts, investments and prospects, task efficiency and service enrichment in determining the prospects and pitfalls of TVET PPP programs/projects of developing TVET hub in your country.
- To formulate and propose a cohesive new PPP model involving government, university and industry in accordance TVET hub development in of your country.
- To recognize the major policy context regarding public-private partnership in TVET sector in your country.
- To examine the current situation of public-private partnership that exists in the TVET system in your country.
- To identify strategies to strengthen PPP.

All of these objectives follow the criteria of Quality / Accuracy / Objectivity, Credibility, Relevance, Practicalities!

It is, therefore, very important for University, vocational school and industry to jointly develop a professional document aimed development of workable linkages ensuring the interests of third parties. It must clearly describe the aims, objectives, procedures and set of rules governing the linkage programme. In order to be successful in preparing this document the staff of the university must convince the bosses of the commercial enterprise(s) why it is beneficial to third parties. It must also be stressed the that the setting up of the linkage is part of the plan of modernization the universities in Lao PDR to agree to work together in order to improve the educational standards and increase productivity in industries and vocational school all over the country. Obviously, each Department of the university must come to a separate agreement with the individual enterprise concerned. Once the agreement is signed by both parties and all the financial arrangements are in place it can then be put to practice without delay.

#### **4.0 Research Question**

- How is PPP organized in your country, what kind of programs exist and are implemented?
- Which economic and institutional elements are crucial to the successful implementation of PPP in VET in reality?
- What are the relationship and interactions among them? How do firms get involved in PPP?
- What benefits and costs do they expect to have and actually have?
- How is power distributed among the participating stakeholders in VET PPP?
- How are they defined and regulated in the process of program design?
- What are the government's expectations and worries in VET PPP?
- Which functions does and shall government take during the development and implementation stage?
- What are the most important policy implications?

## ❖ Research Methodology

Develop questionnaires and interview managers of Company, TVET School and students and information surrounding policy, strategy for the concept of “Dual Cooperative Training (DCT) in Lao PDR” between education institute and company (workplace) as follows:

- Study fundamental theory of cooperation between Education Institute and Company in Europe and Asian.
- Develop questionnaires for survey data collection as follows:
  - Survey 15 Companies (5 in Vientiane Capital, 5 in the north (Loungrabang, Oudomxay, Loungnamtha, Bokeo and Xayaboualy) and 5 in the south (Khammouane, Savannakhet, Salavan, Sekong and Attapeu) province of Laos),
  - Survey in 15 vocational School (5 in Vientiane Capital, 5 in the north and 5 in the south part of Laos),
  - Analysis the data with program SSP based on theory of “triangle method” (VTED/FEN/NUoL+VEDI, vocational school and Industry)
  - Research workshop (≈30 participants) for common understanding and summarize the results.
  - These results will use for comparing with Models of approaches to Public Private Partnership between government, university and industry on TVET in ASEAN.

| Activities                                                                                           | 2015-2016 |   |   |   |   |   |   |   |   |           |
|------------------------------------------------------------------------------------------------------|-----------|---|---|---|---|---|---|---|---|-----------|
|                                                                                                      | 1         | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | Remark    |
| This project will be done in nine months.                                                            |           |   |   |   |   |   |   |   |   |           |
| Study fundamental theory of cooperation between Education Institute and Company in Europe and Asian. |           |   |   |   |   |   |   |   |   | all time  |
| Develop questioners for survey                                                                       |           |   |   |   |   |   |   |   |   | Done      |
| Survey 12 relevant companies and 12 TVET School in Lao PDR.                                          |           |   |   |   |   |   |   |   |   | Done      |
| Analyse data                                                                                         |           |   |   |   |   |   |   |   |   | recently  |
| Workshop research and Capacity building                                                              |           |   |   |   |   |   |   |   |   | follow up |
| Writing report of the results                                                                        |           |   |   |   |   |   |   |   |   | follow up |
| Conclusions of the results                                                                           |           |   |   |   |   |   |   |   |   | follow up |
| Wrap up Research Workshop, Writing and submit a final report                                         |           |   |   |   |   |   |   |   |   | follow up |

## 5.0 Socio-economic framework in the country

In the national protection and development mission; particularly in the past decade up to the present time, it could be clearly seen that country's economy becomes gradually stronger in terms of industrialization and modernization. The industrial sector is growing, in which processing industries play an important role in creating employment opportunities in the provincial level. Gross Domestic Product (GDP) has grown steadily in reasonably good level every year; it is in its good trends comparing to the target of IX Party Congress Resolution (the party and government estimated that during 2014-2015, the economy will continue to grow at an average rate of not less than 8%. GDP per capita of 2015 will be able to achieve the target and possible to exceed the target planned. The economic structure is transforming into industrialization and modernization, where agriculture is estimated to cover 25.5%, industry 30.3% and services 44.2%. Investment into the development tends to be more in the past half era, total investment in the society reached 85,147.35 billion kips or equivalent to 40% of GDP. In this, government investment is estimated to cover 23.36% (ODA is 16.25%), investment from international and private sector covering 57.03%, and bank loan 19.6%. Macro-economy becomes more stable; inflation rate is at 5.8% per year in average, exchange rate toward currencies is strong not much fluctuation, reserves is able to cover for approximately 5 months.

In past year 2012-2013, GDP grow no less than 8%, creating value added for the present value at around 80,199 billion kips (approximately 10.19 billion US Dollars) and GDP per capita achieved 12.07 million kips (approximately 1,534 US Dollars) which has been increased 13.18% comparing to last year where:

Agriculture sector increased 2.79% covering 25.2%

- Industry sector decreased 14.45 % covering 28.04%
- Service sector increased 8.05% covering 38.86% of GDP (excluding import tariffs)
- Import tax 7.91%

State party has played a significant attention in education sector; as a result, its education development plan has been implemented at different levels within the past years which presenting the good outcome both in quantitative and qualitative. The vocational and university education either in public and private sector is growing. In 2014-2015, state party has set the target at: enrolment for primary school 98%, secondary school 75% and high school 43%, literacy rate for adult age above age 15 is 87%, proportion of students to population of 1 hundred people is 1,122 students.

Lao PDR has had continuing economic development for the past 10 years even if its financial context remains difficult. Economic perspectives are positive but they also depend on the ASEAN, Chinese and worldwide contexts. Needs of skills labour are very important either for Lao fundamental industries like agriculture, construction, furniture, garment, hospitality but also to support the necessary upgrade of Lao industry towards advanced manufacturing, modern building construction, agro-industry, and hydropower energy. This stable economic growth and future trend have generated a high demand for a suitable education system. The Ministry of Education and Sports has defined its strategy for the future development. Within the education system, TVET is given a more important role. Numbers of students in TVET public institutions have increased 10% per year for the past three years. Following the 2008-2015 TVET Master Plan, the TVET sector has moved forward especially with regard to the new laws, building and improvement of facilities, introduction of new models (standards, models, manuals), training for TVET personnel. However, the activities listed in TVET Master Plan 2008-2015 have not been fully implemented and various international and national reports show that there are still important issues which need to be addressed: orienting TVET towards labour market demand, reaching the dropouts and disadvantaged groups, development of an efficient public-private sector partnerships at national and local level, dissemination and implementation of systems after they are developed, efficiency of the teacher training activities, strengthening management capacities at the local and national level, optimize the use of the existing facilities. Additionally, the evidence base for policy making in TVET in a form of adequate labour market information or graduate tracer studies has still not been implemented. This hampers the options for monitoring of the system performance. Based on this context, TVET Development Plan 2016-2020 has been prepared with focus on strengthening and dissemination of the new systems developed during the implementation of the 2008-2015 phase, as well as optimization of resources for sustainable development.

## **6.0 Policy Framework for PPP**

### **Current and Future Support to Public-Private Cooperation in Higher Education & Technical Vocational Education and Training**

Human Resources Development in order to address skill shortages is one of the broad strategic directions outlined in the 7<sup>th</sup> Lao National Socio-Economic Development Plan for 2011 – 2016. Human Resources Development is also one of the four ‘break-through’ plans for accelerated socio-economic development, which were endorsed by the 9<sup>th</sup> National Congress of the Lao Revolutionary Party<sup>6</sup>. The Ministry of Education and Sports issued a Strategic Plan for developing the Technical Vocational Education and Training system in 2007, and the Ministry of Labor and Social Welfare developed its ‘Lao Labor and Social Welfare Strategic

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<sup>6</sup> Press Release on the IV National Congress of the Lao People’s Revolutionary Party (March 21, 2011)

Plan' which outlines priorities and goals for labor force skills development to meet ASEAN standards, and to develop an export-oriented and industrialized society.<sup>7</sup>

The Government of Laos has started to implement the strategies to improve the human resources base in the country, in many cases in cooperation with development partners.

Interventions aimed at improving primary and secondary education are coordinated by the Education Sector Working Group, which has been established under the Vientiane Declaration and is led by the Ministry of Education and Sports in partnership with the lead donor Australian Agency for International Development (AusAID).

The current and planned support interventions for Technical Vocational Education and Training remain limited in terms of geographic and sector coverage. To date there is no overarching strategy which covers all sectors, including informal sectors, and which clearly outlines the role of the public and private sectors, and sets out actions under a comprehensive policy and institutional framework.<sup>8</sup> In this context, the development of a comprehensive National Qualifications Framework is also key, since it would link all levels of basic education, Skills Development, Technical Vocational Education and Training, and Higher Education under one framework with a recognized assessment and accreditation system.

The Asian Development Bank (ADB) has recognized the need for a more comprehensive cross-sector Human Resources Development approach, and has commissioned a study on the 'Renewal of the Lao PDR National Human Resources Development'<sup>9</sup>. The Australian Agency for International Development (AusAID) is in the process of developing a National Human Resources Development Program together with the Department of Planning at Ministry of Education and Sports and the newly formed Ministry of Home Affairs, which is responsible for training of civil servants. Initially this national Human Resources Development Program was focusing on the Australian Agency for International Development (AusAID) Scholarship program for higher education. However, based on recent discussions with government counterparts it may include other components such as staff upgrading for officers at the Ministry of Education and Sports, and the program will be delivered through a 'Lao-Australia Centre of Excellence'.<sup>10</sup>

Most of the on-going and planned support interventions and analytical studies in Human Resources Development, Skills Development, Technical Vocational Education and Training, and Higher Education recognize the need for an increased role of the private sector. Below are examples of current and future interventions by the World Bank (WB), the Asian Development Bank (ADB), the Japan International Cooperation Agency (JICA), the Luxembourg

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<sup>7</sup> Draft concept note Lao Development Report 2013

<sup>8</sup> Draft concept note Lao Development Report 2013

<sup>9</sup> Lao Development Report HRD 2013, draft concept note

<sup>10</sup> Personal communication Australian Agency for International Development (AusAID), 27 April, 2012.

Agency for Development Cooperation (Lux Development), the German Society for International Cooperation Ltd. (GIZ), the International Finance Corporation (IFC), and the International Labor Organization (ILO), which all include components with support to Public Private Cooperation.

The concept notes for the WB Lao Development Report on Human Resources Development, which is being prepared for 2013, outlines four tentative gaps and weaknesses in the current analytical work underpinning the support to HRD in Laos:

- Insufficient evidence of the effectiveness of formal training and education, and limited ability to assess how education impacts the labor outcome of graduates;
- Most skills studies focus on the formal sector which only employs 15% of the Lao labor force in the current situation;
- Studies to date use years of education and training as a measure of skills, and do not differentiate between types of skills such as cognitive and non-cognitive skills, and do not take into account skills acquired through work experience;
- Most of the available information lacks descriptions of distribution of skills in the working-age population, and does not clarify how the labor market rewards and promotes skills development.

The draft concept notes outline three analytical components of the Lao Development Report 2013 on Skills development: Skills assessment of workers and firms, Institutional Assessment of skill training institutions, and a Tracer study on labor market outcomes of graduates.

The ongoing Asian Development Bank 'Strengthening Technical Vocational Education and Training Project's support to the National Technical Vocational and Skills Development Council focuses on developing four Trade Working Groups for furniture, automotive, printing, and construction.

The work with the Trade Working Groups is in its initial stages. Workshops have been held to explore priorities of private sector stakeholders. Over the coming months series of workshops will be held for each Trade Working Group to start the process of developing professional standards, curricula and teacher training.

Based on a concept note from the Project Preparation Technical Assistance for the Asian Development Bank 'Strengthening Technical Vocational Education and Training Project'<sup>11</sup>, the project is now in the process of developing a number of standard contract formats for

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<sup>11</sup> Asian Development Bank Project Preparation TA 7299-LAO: Preparing the Strengthening Technical Vocational Education and Training Project: Draft paper: Implementation of a Credit Line as a Public-Private Partnership Initiative.

bilateral Public-Private Cooperation agreements. The standard formats will be used to formalize cooperation regarding for example on-the-job training using high-tech industry equipment, teacher upgrades, and student work-place exposure. It is envisaged that there would be different templates for partnerships which focus on teacher upgrades and for partnerships which support student exposure and on-the-job training. An ADB project grant will be used to cover part of the training fees under the future agreements.

Further, the Project Preparation Technical Assistance for the Asian Development Bank ‘Strengthening Technical Vocational Education and Training Project’, outlined a fund support to contract training for mining and hydropower professionals, where the fund would contribute 600 USD per year for upgrading Technical Vocational Education and Training teachers, and students.<sup>12</sup>

The Asian Development Bank ‘Strengthening Higher Education Project’ Technical Assistance gives support to the Council of the National University of Laos. The Technical Assistance team is in the process of drafting Terms of Reference for a ‘Visiting Scholar for University Marketing and Linkage’<sup>13</sup>. The purpose of this intermittent assignment would be to assist the National University of Laos in Vientiane, Champasak University in Pakse, and Souphanouvong University in Luang Prabang, to enhance university marketing and linkage with industry and commerce both within each university and nation-wide.

Tentatively the outputs from the assignment would include an overview of existing private sector linkages and marketing agreements and, action plans for the three universities’ liaison offices. To support the capacity of the liaison offices, a distance education module on promotion and management of marketing and industrial and commercial linkages would be developed. The visiting scholar would support the development of guidelines for establishing second arrangements and sandwich programs with private companies, and draft a model Memorandum of Understanding for this type of bilateral cooperation.

The Japan International Cooperation Agency (JICA) is providing support to an IT advisory committee at the Faculty of Engineering at the National University of Laos. The advisory committee consists of 10 advisors from private and public sectors and is led by the chairperson from the Lao Internet Committee Association. To date, approximately half of the members have been actively engaged. The advisory committee holds 3-4 monthly meetings, and sometimes special events, and the members give inputs to the on-going review of the IT engineering curriculum.

As part of the Lux Development supported ‘Lao National Institute of Tourism Hospitality’ (LANITH) project an advisory group with members from private sector has been established,

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<sup>12</sup> Personal communication ADB TA Supporting Higher Education, April 2012.

<sup>13</sup> Early draft Concept Note for the WB Lao Development Report on HRD, April 2012.

and is giving on-going inputs into development of tourism related curricula and materials.<sup>14</sup> In the recent 6<sup>th</sup> LANITH symposium held in association with GIZ<sup>15</sup>, stakeholders agreed to form working groups for marketing and Human Resources Development respectively, both with the aim of strengthening Public-Private Cooperation and to align to ASEAN standards. The marketing group will be closely coordinated with the Lao Tourism Marketing Board.

The new German Society for International Cooperation Ltd. (GIZ) support to the Lao National Chamber of Commerce and Industry is called 'Human Resources Development for a Market Economy' (HRDME). The objective of the program is to support public and private organizations, which are engaged in private sector development and vocational education, to 'execute their mandates in a coordinated and efficient manner'. The first component of the support deals directly with private sector development, and the second component supports Vocational Education and Training.<sup>16</sup>

The Mining Private Sector Working Group under the Lao Business Forum provides a forum for raising private sector issues to higher levels of Government of Laos, but so far has not discussed Human Resources Development issues. There is a new planned International Finance Corporation (IFC) support to the Lao Business Forum hydropower group.

The International Labor Organization is supporting Skills Development Centre, and The German Society for International Cooperation Ltd. (GIZ) are strengthening Integrated Technical Vocational Education Centre in cooperation with government and employers, in order to develop and certify the labor force.<sup>17</sup>

## **7.0 Selected PPP-Models (PPP models of your country)**

### **A. EXAMPLES BILATERAL COOPERATION EDUCATIONAL INSTITUTIONS – MINING & HYDROPOWER COMPANIES**

1. In the present situation most of the cooperation between mining and hydropower companies and Lao educational institutions is through informal agreements, with some partnerships being formalized in brief Memorandums of Understanding.

2. In Technical Vocational Education and Training, some mining and hydropower companies use

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<sup>14</sup> Asian Development Bank Project Preparation TA 7299-LAO: Preparing the Strengthening Technical Vocational Education and Training Project.

<sup>15</sup> [www.lanith.com](http://www.lanith.com), 28 March 2012

<sup>16</sup> <http://www.bauernfeind-online.info>

<sup>17</sup> Personal communication ADB TA Supporting Higher Education, April 2012.

private training providers from abroad, or design in-house training. However, most of the public-private partnerships in Technical Vocational Education and Training are conducted through contract training under ‘sandwich’ models where students share their time between (i) formal education and training in a Technical Vocational Education and Training School, and (ii) on-the-job training and exposure in a mining or hydropower company. The examples of contract training described in this study (see annex 4) include ‘Pre-trade training’ which is a preparatory 1-year course, and ‘Pre-employment technical training’ and ‘Trades traineeships’ with durations between 2 and 4 years. Typically, in these contract training partnerships the Technical Vocational Education and Training Schools will provide venues and teachers, and in some cases testing and Lao certification of the graduates. The companies usually provide some or all of the following:

- Training equipment and consumables,
- TVET teacher upgrades and training, and
- Embedded teachers from private sector.

3. In Higher Education this study found examples of different types of partnerships between companies and the National University of Laos:

- Student work exposure and field trips
- Field work for university projects and theses
- Pre-employment graduates program
- Scholarships abroad
- Shared use of equipment
- Teacher training exchange
- Visiting university lecturers from private sector

Most cooperation between companies and the university is based on informal relationships and ad hoc requests. Sometimes formal letters of are needed from Ministry of Education and Sports or relevant line ministries to back up the informal requests. A few Memorandums of Understanding have been signed between the Faculty of Engineering at the National University of Laos, and larger companies and government organizations.

4. For examples of Public-Private Cooperation in Technical Vocational Education and Training, see annex 1, and for examples from Higher Education see annex 2.

## **B. OPTIONS FOR INSTITUTIONAL SET-UP OF COOPERATION FORUMS**

5. Based on stakeholders’ suggestions, this study puts forward two institutional set-up options for Public-Private sharing forums.

6. **Opti**  
**on 1:** Establish mining and hydropower Trade Working Groups under the National Technical Vocational and Skills Development Council<sup>18</sup>.

7. The  
National Technical Vocational and Skills Development Council is chaired by the Minister of Education and Sports, and vice chaired by the Ministry of Labor and Social Welfare and the Lao National Chamber of Commerce and Industry. Currently the Council has 9-10 standing members from line ministries and private sector. The Ministry of Energy and Mines is not currently represented in the Council. The Department of Technical Vocational Education hosts the Council's Secretariat.

8. Trad  
e Working Groups have been formally established<sup>19</sup> for 8 career groups including construction, furniture, printing, automotive, handicraft, garment, hotel and restaurant, and ICT, with the objective to 'enhance cooperation between public and private training schools to generate skillful labor for market'. Further Trade Working groups on secretarial, accounting, computing, and office management have been considered. Due to personnel turnover at the National Technical Vocational and Skills Development Council Secretariat, the 8 Trade Working Groups first established were not active for a period of time. With the recent Asian Development Bank 'Strengthen Technical Vocational Education and Training' technical advisory support to the National Technical Vocational and Skills Development Council, the four Trade Working Groups on furniture, printing, automotive, and construction now meet regularly and engage in standards and curriculum development supported by the Vocational Education Development Centre of Ministry of Education and Sports.

9. The  
Trade Working Groups link to existing professional associations established under the Lao National Chamber of Commerce and Industry, and are typically chaired by the head of the relevant professional association, vice chaired by a representative from the Department of Technical Vocational Education, the Department of Higher Education or the Vocational Education Development Centre of Ministry of Education and Sports, with members from Educational Institutions, the Ministry of Labor and Social Welfare, and the relevant line ministry which is normally represented by a division director or a technical staff member from relevant department.<sup>20</sup>

10. **Opti**  
**on 2:** Use the existing Lao Business Forum / Lao National Chamber of Commerce and Industry private sector working group for mining companies as a forum to enhance Public-Private

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<sup>18</sup> Earlier called 'National Training Council'.

<sup>19</sup> In line with the Ministerial Agreement no. 1134 (6 May, 2011) and Decree no. 425 (20 March, 2012), both on 'Establishment of Basic Business Services Trade Working Groups' and personal communication with National Technical Vocational and Skills Development Council secretariat April 201

<sup>20</sup> Personal communication National Technical Vocational and Skills Development Council secretariat April 2012.

Cooperation, and revitalize the private sector working group for hydropower developers for the same purpose.

With earlier support from the International Finance Corporation (IFC) private sector working groups have been developed under the Lao Business Forum, which has the Lao National Chamber of Commerce and Industry as its Secretariat. The Lao Business Forum process consists of at least two meetings held among the private sector before meeting with the relevant government agencies for resolving selected private sector issues. The private sector working groups will meet with the government competent agencies at the so call Inter-Ministerial Meeting chaired by representative from Ministry of Planning and Investment and the Lao National Chamber of Commerce and Industry to jointly select the issues of the private sector before a bi-annual Lao Business Forum.

11. The purpose of the forum is to improve the business environment in Laos, and the range of issues raised by the private sector working groups are diverse as these examples from the 7<sup>th</sup> Lao Business Forum show:<sup>21</sup>

- clarification of severance payment for employees,
- making court verdicts and the appeals process more transparent,
- enforcement of third-party liability insurance requirements,
- removing barriers to permit free movement of agricultural products throughout the country,
- developing regulations for transportation businesses in the tourism sector, and
- providing clarity on the completion of relevant implementing regulations of the Minerals Law passed in 2008.

The hydropower private sector working group has been inactive for several years, whereas the mining group meets regularly and has a number of active members.

12. A majority of the stakeholders consulted supported the idea of creating sector forums to support public-private cooperation in hydropower and mining, but a few private sector stakeholders were unsure of the value of large forums. They thought that the bilateral partnership between companies and educational institutions could be better tailored to each company's special skills needs, and saw a risk that the dialogue in larger forums may become too general.

13. One stakeholder from private sector suggested that task forces should be set up to develop labor market studies, professional standards, and curricula, and once the tasks were completed there may no longer be a need for a large forum, but instead the skills framework would

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<sup>21</sup> Examples from the 7th Lao Business Forum, 24 January, 2011. <http://www.laocci.com>

facilitate and improve the bilateral cooperation between companies and educational institutions.

14. Amo  
ngst the stakeholders who were in favor of establishing sharing forums, most recommended the National Technical Vocational and Skills Development Council as their institutional home (Option 1). However, all of them recognized the challenges that had to be overcome to make sure that the future hydro and mining Trades Working Groups would be active and have adequate private sector engagement.

15. A  
smaller number of stakeholders preferred the existing private sector working groups for hydropower and mining under the Lao Business Forum (Option 2) to become the forum for enhanced public-private cooperation in education and training. The reasons were that the Lao Business Forum mining group is already well established and functioning, and that the Lao National Chamber of Commerce and Industry is in a better position to advocate private sector interests than Ministry of Education.

### **C. PRIORITY ISSUES & TASKS FOR A FUTURE WORKING GROUP**

16. The  
stakeholders interviewed recognized that the key challenges to be addressed by future Public-Private Cooperation forums for mining and hydropower are the low quality of graduates and teachers, and the fact that curricula do not meet the current and future needs of the industry.

17. It  
was proposed that the key tasks for the future forums should be to  
(i) fill gaps in labour market information, (ii) develop professional standards, and (iii) develop curricula and course materials. The new standards and curricula should respond to industry needs, align with ASEAN competency standards, and be integrated into a future Lao National Qualifications framework where Technical Vocational Education and Training qualifies students directly for BSc level studies in Higher Education.

18. The  
forums should also find ways to encourage more bilateral Public-Private cooperation, and some stakeholders thought that the partnerships should be more formalized to a greater extent. The Educational Institutions expressed a wish to form more bilateral partnerships with companies. The partnerships should be formalized by Memorandums of Understanding with larger companies, and for Small and Medium Enterprises, the educational institutions would like to find better ways of engaging with companies which may be reluctant to enter into Memorandums of Understanding. The private sector emphasized that they should be seen as customers and clients, buying tailored training and education services from educational institutions.

19. The private sector saw the future forums as an opportunity to discuss levels of respective private and government investment and effort in the development of the Lao skills base, including investments in basic schooling to ensure sufficient number of students could enter into Technical Vocational Education and Training, and Higher Education.

## **8.0 Impact of the PPP models which has been implemented to your country towards economic impacts (Outcomes of the model)**

How is PPP organized in your country, what kind of programs exist and are implemented?

### **1. In-Company Trainers Training (ITT) at VEDI/Entrepreneurship Training Centre (ETC) Vientiane, Lao PDR**

- Since September 2014 to February 2015, the project organized workshops with all relevant stakeholders from both the public and private sectors to develop the standard. Afterwards, in April 2015, the curriculum for In-Company Trainers was developed, the content of was later used for the 1<sup>st</sup> Pilot Training for Master Trainer Course in Vientiane, Lao PDR. The qualified master trainers will then act as multipliers to train in-company trainers in their countries in order enhance their training skills and knowledge for more effective in-company training as a whole.
- The project “Effective In-Company Vocational Training in the Mekong Region” funded by Federal Ministry of Economic Cooperation and Development (BMZ) on behalf of GIZ aims to promote Dual Vocational Education System by stressing the role of private sector in workforce development as an approach to tackle the lack of skilled labour in the region.
- In-Company Trainers Training (ITT) Course is organized at Entrepreneurship Training Centre (ETC) Vientiane, Lao PDR with an aims to train the trainers from companies on pedagogical and didactical aspects of training by using the curriculum for In-Company Trainers and “The Standard for In-Company Trainers in ASEAN Countries” as baseline. After the training, the trainers will be able to train trainees and employees in their respective companies.
- In-Company Trainers Training Course is a 2-week course (min 80 hours) created to enhance training skills of the trainers. The contents of 4 modules as follows:
  - Module 1: Analysing work tasks and defining learning requirements (8 hours).
  - Module 2: Planning and Preparing Training (16 hours).
  - Module 3: Conducting Training (40 hours).
  - Module 4: Evaluation and Further Development of Training (16 hours).

During the course, In-Company Trainers will be trained by a qualified Master Trainer. Practice-oriented training is the focal point of the course in which In-Company Trainers will perform on the basis of learning by doing.

### **2. Dual Cooperative Training (DCT)**

Dual Cooperative Training (DCT) is a German model of vocational education promoted by Vocational Education in Laos (VELA) which focuses on practical training of students by partnering with employer enterprises. The DCT model provides work skills through training partnership agreements between employers, TVET schools, and/or student, where the TVET provides basic and theoretical training and the employer provides practical training in the workplace.

Currently DCT has been adopted only in the Lao-German Technical College in Vientiane. The other TVET schools implement other forms of workplace training or internship through the competency Based Techniques (CBT) or similar models.

Workplace training may take different forms and may be called by different names. This includes the DCT system at the Lao-German Technical School as well as apprenticeship and internship at other TVET schools. The generic term, 'workplace training' will be used to refer to any of the above scenarios (Report of VELA-Project-Survey of Vocational Training Dual Cooperative Training, 2015, s.1).

### **3. Job and Education Fair at FEN/NUoL**

The Faculty of Engineering (FE) together with the European Chamber of Commerce and Industry in Lao PDR (ECCIL) and the Lao National Chamber of Commerce and Industry (LNCCI) are organizing every year Job Fair. The upcoming Job Fair is the 5<sup>th</sup> Job and Education Fair @ Faculty of Engineering, carried out in May 2016.

The main purpose of the Job and Education Fair is to establish contacts between the students and the business community. The participating companies / organizations will be provided space for their booth to showcase them and establish contacts with and academic institutions in general and prospective employees in particular. This will expose the students to a variety of job opportunities and put them in direct contact with potential employers as follows:

- The companies can also attract the young people to interest in the companies, by providing some attractive activities. Ex: games, technical training, etc. ...
- The vocation school also participates in the Fair and has shown the student's projects, a good outcome of students which is very attractive for the industry as well as the company.
- Good PR, Good designing to public relation material
- The visualization equipment has been show directly of the students and visitors. Ex: the show of the Robot.

Otherwise, Department at the Faculty of Engineering has opportunity to present and improve their curriculum on demand side of Labour market.

All booths are located in the Faculty's classrooms and have power provided. Per booth about 45 sq. are at disposal. Last Year registered more than 31 Companies and visited more than 1536 students from Universities and High school in Vientiane Capital.

From 21<sup>st</sup> – 27<sup>th</sup> February 2014 the representatives from various institutions (Faculty of Engineering, European Chamber of Commerce and Industry in Laos, Lao National Chamber of Commerce and Industry, Electricité du Laos), involved in the organization of the Job Fair, to participated in this important and meaningful study tour in Ulm, Germany. The study tour was organized by Vocational Teacher Education Department (VTED) at the Faculty of Engineering (FE) with the supported from GIZ. The general purpose of this excursion is to foster the linkage between the academic world and the industry. Specifically, the study tour has focused on an education fair, which is took place in Ulm (20th - 22nd February 2014). The participants have chances to get the benefit from the lessons learned in order to organize and carry out the Job and Education Fair at Faculty of Engineering for more professional and customized way.

#### **4. " Teaching and Research Close to Practice" at the Faculty of Engineering (FEN)/NUOL, DAAD-Project- Workshop on Tuesday, 22<sup>nd</sup> March 2016 from 13:30-16:00.**

**Summary of Group Work session, to define and improve ways of cooperation between University and Private sector or industrials as details below:**

##### **1. Internship of students (From 2 groups presentation)**

- Need to have MOU between University and Industrials
- Select students and send them to training in industrials
- Industrial need to have plan and training for internship students that suitable with schedule and Uni. objectives.
- Industrial have to follow up and evaluation internship students and report to University
- Purpose to industrial to support internship student for training in their companies
- Need 10 student to training each Dams,
- Need to prepare:
  - MOU between University and Industrials
  - Context
  - Purpose, objectives
  - Co-Planning
  - Budget
  - Resources
  - Time Frame, Period, Duration 1-2 months
  - Outcome
  - Assessment

##### **2. Joint research University and private industrial**

###### **Problems:**

- Need more corporate between Universities and Industrial, lecturers/researchers need to know industrial's problems and industrial need to know researcher ability.

- At University need to provide information of Human resource for research and lab equipment in each departments that could support industrial
- In industrial they used high technology system such as electronic, automation but they lack of human resource for using, development and management.
- Need corporate for exchange skill and knowledge, equipment and human resource

#### **Problem Solving:**

- Need MOU between University and Industrial
- Data collection for industrial problem and industrial need to do research and development their products, this activity need budget.
- Set up research team in related field of Engineering
- Present academic research and research results, promote how they solve problems in industrial as they request.
- Need Corporate social responsibility (CSR)
- Built training centre and research centre
- **Most important need assistant from Government policy for support corporate between University and industrial**

#### **3. Participation in curriculum development**

- They request water supply subject in FE, since 1995, they are no water supply Engineer. Who study in this would be able to design, analysis water supply need, pumping selection and maintenance of pumping, etc.
- Know how to do hydraulic model (water supply Factory, water supply network)
- Some new graduated students were less basic of engineering especially Mathematic, quantity and volume calculation.
- Need training every year for Engineering student, and training period too short for one month, need two months. For period of time some not suitable with companies' project, no work for students do on the job training.
- Industrial need more logistic persons, they have to knowledge on logistic, warehouse management
- Need regularly meeting of University, industrial and Chamber of Commerce to know problems and industrial need
- Engineers before go to work need to attend training 6 months to 1 years before enter to Engineering work
- Some lecturer doesn't know about industrials and don't interesting in industrial problems
- University would purpose Industrial to participate and facilitate for student internship and provide information for researches
- For Hydraulic Engineering Program, Knowledge but lower skills, they could find Problems:
  - Need to do research topics: related to practice, case study, problems, Hydraulic process
  - Need internship practical training in specific for lecturers and students, lecturers do internship and bring knowledge to teach for students, students go for internship in Hydraulic,
  - Lab Equipment
  - Lecturers external

- External professors from Industrial
- Networking
- Opportunity for job after student graduated
- Job fair, gender issue more opportunity of women

Which economic and institutional elements are crucial to the successful implementation of PPP in VET in reality?

- At the moment, the Mekong Region is facing a lack of technicians and skilled labour, which is foreseen to intensify in the near future. This can potentially effect productivity and competitiveness of the region. Effort for the promotion of dual vocational education was given to change the existing scenarios. Effective In-Company Vocational Training in the Mekong Region on behalf of GIZ (German Development Cooperation) in cooperation with regional stakeholders, thus, initiated the project which will ensure effective training in company to create more and demand-oriented skilled workers in ASEAN labour market.
- Entrepreneurship Training Centre (ETC) Vientiane, Lao PDR was established on 11<sup>th</sup> March 2015 under cooperation between the project and Department of Technical and Vocational Education and Vocational Education Development Institute on behalf of Lao Ministry of Education and Sports, Integrated Vocational and Education Training Project and Vocational Laos Project on behalf of GIZ Laos. The Counterparts altogether cooperated in renovating the training centre with expectations to improve vocational education and training program as well as economic competitiveness and sustainable development of Lao PDR.

What are the relationship and interactions among them? How do firms get involved in PPP?

Willingness:

In this survey was selected based on general interest of company in the In-Company Trainers Training (ITT) and Dual Cooperation Training program:

- Interested in giving the students an opportunity to return and work at the company.
- Willing to provide wages to the students for internship.
- Want to contribute to the education costs of the student in the form of a scholarship.

Preparedness:

This index based on responses the company, regarding the training resources and policies available to join In-Company Trainers Training (ITT) and Dual Cooperation Training:

- Qualify trainers (Instructors) for practical training (teaching experience)
- Develop training curriculum together
- Support equipment, material or tools for using specifically for training
- Implement regulation work health and safety standards

What benefits and costs do they expect to have and actually have?

- Enhancement of training skills, emphasizing on pedagogical and methodological aspects of training.
- Improvement of quality of training at the participating companies.
- More productive performance of trainees and employees.
- Career advancement.
- Regional Credibility and Acknowledgement.
- Reduction of retraining cost.
- Qualification based on regional standard “the Standard for In-Company Trainers in ASEAN Countries.
- Certificate issued by Ministry of Education and Sports and German Development Cooperation (GIZ) commissioned by Federal Ministry of Economic Cooperation and Development (BMZ).

How is power distributed among the participating stakeholders in VET PPP?

**on going**

How are they defined and regulated in the process of program design?

- In principle, the standard follows the common scope of standards in the ASEAN region. It was developed using a bottom-up approach by emphasizing the needs of local stakeholders. Four main areas of action of an In-Company Trainer were identified by the group of experts.
- Process of program as follows:
  1. WS: Kick-off workshop of standard development from 10-12 September 2014.
  2. WS: Content development and learning fields from 29-31 October 2014.
  3. WS: Workshop and study trip in Munich, German from 24-28 November 2014.
  4. WS: Public announcement of the standard from 4-8 February 2015.
  5. WS: Quality Assurance, Certification System and Strategy Planning for Standard Implementation from 25-27 May 2015, Rayong, Thailand.
  6. WS: Curriculum Development Workshop from 20 April – 1 May 2015, Feldafing, German.
  7. WS: 1<sup>st</sup> Pilot Master Trainer Training from 18 May – 5 June 2015, Vientiane Lao PDR.
  8. WS: 2<sup>nd</sup> Pilot Master Trainer Training from 20 July – 7 August 2015, Manila, Philippine.
  9. WS: Curriculum Assessment & Progress of Standard Implementation from 2-4 September 2015, Bangkok, Thailand.
  10. WS: 3<sup>rd</sup> Pilot Master Trainer Training from 21 September -2 October 2015, Bangkok, Thailand.

Identify of research with this 6 characteristics **responsiveness, relevance, cost-effectiveness, efficiency, accountability and sustainability.**

1. Information surrounding policy, strategy to develop a concept of “Dual Cooperative Training” (DCT) in Lao PDR between education institute and company (workplace training locations).
2. Develop a database where students will be connected to employers that are relevant to their fields of study. This database could identify which companies are participating in DCT.
3. Find out, which competence (knowledge, Skill and Attitudes) are necessary for the students and develop curriculum, instructor (trainer) and mentoring concept together to provide them.
4. Develop a clear standard of agreement letter between education institute and company.

It is interesting to report that the representative of the company had very interesting comments like:

- University can produce more graduates with sufficient background knowledge relevant to the on-going needs of industry,
- They can be taught, as part of their university education, to be motivated enough to perform according to the needs of industry when they are given the opportunity of working in industry,
- The industry is finding it difficult to fill up their vacancies with “suitable” graduates,
- The country is, indeed, short of young people with good hands on skills,
- Technical & vocational educational institutes and universities work together to compliment the knowledge they impart to their students,
- The post-secondary educational establishments must revise the contents of the syllabi of their courses in line with the modern technological developments, and
- The industries welcome ideas on research topics relevant to them and are prepared to participate in such activities.

It is interesting to appreciate that how program of linkages between post-secondary educational establishments and industry show their roles in modernization of both establishment and be of positive impact on the state of the economy of the country.

|  | <b>Characteristic<br/>versus<br/>Model/Activities</b> | 1. Dual Cooperative<br>Training (DCT) | 2. In-Company Trainer:<br>Training (ITT) | 3. Research and learning<br>close to i practice | 4. Job and Education Fair |
|--|-------------------------------------------------------|---------------------------------------|------------------------------------------|-------------------------------------------------|---------------------------|
|--|-------------------------------------------------------|---------------------------------------|------------------------------------------|-------------------------------------------------|---------------------------|

|          |                           |                                                                                                                                                                    |                                                                                                                                       |                                                                                                                                                         |                                                                                                                                                  |
|----------|---------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>1</b> | <b>RESPONSIVENESS</b>     | Educational Institution is responsible for student selection, local transport, Industry is responsible for in service trainer, accommodation, some living expenses | Educational Institution provide training service, Company is responsible for training fee including local transport and accommodation | Educational Institution is responsible for providing research service, and selection of student, Industry provide research fund, and in service trainer | Educational institution is for venues, organization, Industry is responsible for organisation fund by collecting registration fee from companies |
| <b>2</b> | <b>RELEVANCE</b>          | It is relevant to the needs of educational institution                                                                                                             | It is relevant to the needs of educational institution                                                                                | It is relevant to the needs of educational institution                                                                                                  | It is relevant to the needs of educational institution                                                                                           |
| <b>3</b> | <b>COST EFFECTIVENESS</b> | There is cost effectiveness                                                                                                                                        | Needs more fund to conduct, however it is necessary to develop the skill of labour force                                              | It is expansive but it is necessary for mutual benefit                                                                                                  | Short term is expansive, cost effectiveness for long term                                                                                        |
| <b>4</b> | <b>EFFICIENCY</b>         | There is efficiency                                                                                                                                                | At initial phase, it poses some difficulty do to public awareness, in future may be more efficient                                    | It is efficient but need awareness from industry                                                                                                        | There is efficiency, student has opportunity to meet industry and learn experience for interview.                                                |

|   |                       |                                                  |                                                                                    |                                                 |                                                                                               |
|---|-----------------------|--------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------|-----------------------------------------------------------------------------------------------|
| 5 | <b>ACCOUNTABILITY</b> | Some Industries have an accountability, some not | Some industry has accountability; however, SME do not have enough fund to organise | Only large Industry has, SME do not have        | Foreigner investor has more interest and participation, a few industries from local investors |
| 6 | <b>SUSTAINABILITY</b> | It is sustainable and necessary                  | Uncertain, needs support from donor for sustainability                             | It depends on the size and interest of industry | Uncertain, needs support from donor for sustainability                                        |

|   | <b>Characteristic versus Model/Activities</b>             | 1. Dual Cooperative Training (DCT)                               | 2. In-Company Trainer: Training (ITT)                    | 3. Research and learning close to i practice         | 4. Job and Education Fair                                |
|---|-----------------------------------------------------------|------------------------------------------------------------------|----------------------------------------------------------|------------------------------------------------------|----------------------------------------------------------|
| 1 | <b>Documentation of agreement (MoU/MoA)</b>               | Needs documentation of agreement                                 | Needs documentation of agreement                         | Needs documentation of agreement                     | Needs permission from Ministration                       |
| 2 | <b>Duration-Short term / long term agreement</b>          | Ne needs short term agreement, agreement is needed for long term | Both short term and long term are needed agreement       | It needs agreement for short and long term agreement | No needs agreement, but needs organization committee     |
| 3 | <b>Equal beneficiaries (Government, TVET Institution,</b> | The is equal beneficiaries for triparty (Government, TVET        | The is bilateral beneficiaries for TVET Institution, and | The is mutual beneficiaries for (TVET Institution,   | The is bilateral beneficiaries for TVET Institution, and |

|          |                                                                                          |                                                                               |                                                                               |                                                                               |                                                                               |
|----------|------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
|          | <b>Industry)</b>                                                                         | Institution,<br>Industry                                                      | Industry                                                                      | Industry                                                                      | Industry                                                                      |
| <b>4</b> | <b><i>Potentially Transferable program/Model to regional and transnational level</i></b> | It is not potentially transferable/m odel to regional and transnational level | It is not potentially transferable/m odel to regional and transnational level | It is not potentially transferable/m odel to regional and transnational level | It is not potentially transferable/m odel to regional and transnational level |
| <b>5</b> | <b><i>Less challenge in implementation</i></b>                                           | There less challenge in implementation                                        | There is challenge in implementation                                          | There is more challenge in implementation                                     | There less challenge in implementation                                        |
| <b>6</b> | <b><i>Highly aware by public</i></b>                                                     | Highly aware by public                                                        | Not really aware by public                                                    | Not aware by public                                                           | Job and education fair is Aware by public                                     |

## 9.0 Factors of success

- Description on successful model (list out what is the wow factor that contributes the successful of the model)
- Have Instructor in special fields
- Have training curriculum
- Provide facilities specifically to trainees (Class room, workshop, machinery, tools...)
- Ability to pay a wage,
- Provide apartment for trainees
- Provide work health and safety standards: mean Company provides wearing proper safety equipment (Clothing, properly handling toxic or harmful materials and using machinery with the necessary precautions).
- Research activities

### Factors of success

The table below presents an overview of some strengths and challenges for consideration for **Option 1**: Establish mining and hydropower Trade Working Groups under the National Technical Vocational and Skills Development Council:

| Strengths                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Challenges and considerations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Option 1 has been indicated by the Ministry of Energy and Mines as the appropriate institutional home for future Public-private cooperation in education and training for mining and hydropower.</li> <li>The Chairperson of the National Technical Vocational and Skills Development Council is the Minister of Education and Sports who is an influential person at the national level.</li> <li>The National Technical Vocational and Skills Development Council brings together the Ministry of Education and Sports (chair), the Ministry of Labor and Social Welfare (vice chair), and the Lao National Chamber of Commerce and Industry (vice chair), and could enable linkages between Technical Vocational Education and Training, Skills Development, Higher Education, and professional associations under Lao National Chamber of Commerce and Industry.</li> <li>Four of the Trade Working Groups are gaining momentum, and benefit from the Asian Development Bank support.</li> <li>The structure and composition of the Trade Working Groups is appropriate for tasks such as developing professional standards and curricula.</li> </ul> | <ul style="list-style-type: none"> <li>Limited resources and slow progress of the work under the National Technical Vocational and Skills Development Council since its establishment in 2003.</li> <li>Weak coordination between National Technical Vocational and Skills Development Council and other stakeholders.</li> <li>The existing Trade Working Groups under the National Technical Vocational and Skills Development Council do not include support to Public-Private Cooperation with Higher Education.</li> </ul> <p>However, National Technical Vocational and Skills Development Council engagement with the National University of Laos BSc program for Technical Vocational Education and Training teachers would provide some linkage to higher education. From interviews stakeholders believe that the formal scope of the Trade Working Groups can include Higher Education.</p> <ul style="list-style-type: none"> <li>The role of the Ministry of Energy and Mines in a future Trade Working Group would be as technical members, and not through representation at higher levels.</li> <li>The response and engagement of private sector in the Trade Working Groups has been limited to date, and</li> </ul> |

| Strengths | Challenges and considerations                                                                                                                                                                                                                                                  |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|           | <p>remains a challenge for the Asian Development Bank support.<sup>22</sup></p> <ul style="list-style-type: none"> <li>Some stakeholders have the impression that the current work of the Trade Working Groups is not sufficiently reflecting private sector needs.</li> </ul> |

The Asian Development Bank Project Preparation Technical Assistance for the Strengthening Technical Vocational Education and Training Project makes the following recommendations to enhance engagement of employers and private sector<sup>23</sup>:

- Considering that many employers in Laos are small and medium-sized companies mainly using cheap and unskilled labor, ADB recommends a practical and gradual approach to increase employer engagement.
- Raise employers' interest in skills training through combining support for skills training and business development. This could be supported through cooperation between Ministry of Education and Sports, Ministry of Labor and Social Welfare, and government agencies responsible for promoting SMEs.
- Expand the network of Trades Working Groups to provincial level.
- Involve employer representatives in the trade working groups who have substantial industrial base, and sufficient capacity and understanding of policy issues, and curriculum and standards development.

20. The table below presents an overview of some strengths and challenges for consideration for **Option 2**: Use the existing Lao Business Forum / Lao National Chamber of Commerce and Industry private sector working group for mining companies as a forum to enhance Public-Private Cooperation, and revitalize the private sector working group for hydropower developers for the same purpose.

| Strengths                                                                                                                                                                                                                                                                                                   | Challenges and considerations                                                                                                                                                                                                                 |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Some stakeholders consider the Lao National Chamber of Commerce and Industry to be stronger than the National Technical Vocational and Skills Development Council, because it better reflects private sector interests and has provincial representation.</li> </ul> | <ul style="list-style-type: none"> <li>The scope of work, and the issues raised to date in the Lao Business Forum private sector working groups cover a broad range of topics, and has not focused on Human Resources Development.</li> </ul> |

<sup>22</sup> Personal communication National Technical Vocational and Skills Development Council Secretariat, April 2012.

<sup>23</sup> Asian Development Bank Strengthening Technical Vocational Education and Training Project Preparation Technical Assistance

| Strengths                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Challenges and considerations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>Some stakeholders emphasize that the Technical Vocational Education Training system is weak and does not produce high quality graduates, and sees contract training directly by companies as the preferred option for skills development in the short and medium term.</li> <li>The Lao Business Forum seems to be a good forum to raise high-level policy issues regarding Human Resources Development bottlenecks for companies.</li> </ul> | <ul style="list-style-type: none"> <li>It is unclear whether the private sector working group forum is appropriate for engaging with Educational Institutions.</li> <li>It is unclear whether the private sector working groups are appropriate for completing the high-priority tasks of labor market studies, standards and curriculum development.</li> <li>The Lao Business Forum has had difficulties in engaging with small and medium companies, who often have few human resources to spend on cooperation work which needs some additional time inputs.</li> </ul> |

Key considerations / discussion questions for Options 1 & 2:

- Look at characteristics of similar successful councils and working groups such as the National University of Laos Council, the Architecture Association, and the Automotive Trade Working Group. What are success factors? What are real incentives for private sector engagement?
- Ensure adequate incentives in terms of recognition and win-win partnerships.
- Be clear on what the working groups set out to do, and set realistic goals and tangible outputs in the short and medium term.
- Would it be possible to combine options 1 & 2 into '**Option 3**', and make the National Technical Vocational and Skills Development Council the home for developing standards and curricula, and then use the private sector working groups in the Lao Business Forum for private sector inputs, and to raise HRD issues at the policy level?

## 10.0 Suggestions

The following next steps are recommended for the support to Private-Public Cooperation in Higher Education and Technical Vocational Education and Training, and could be included as activities in the work plan for the Technical Assistance:

- Step 1: Set up Steering Committee to indicate which option they prefer for the institutional set-up.
- Step 2: The Steering Committee to appoint lead for the support to establishing PPC working groups, and develop a work plan for the support. The work plan should include:
  - Discussion workshop with wide range of stakeholders on institutional set-up, policy priorities, and nomination of members for future working groups.

- (b) Educational Institution to submit application for Trade Working Groups to the National Vocational and Skills Development Council.
- (c) Consider task forces with Technical Assistance support for key tasks such as labor market study, development of standard formats for bilateral Memorandums of Understanding, professional standards development, curriculum development, assessment and certification standards, and other to be defined. The labor market studies could be initiated before the formal establishment of the Trade Working Groups.

The Lao German Technical School has been selected as a model for Public-Private Cooperation in technical and vocational training. An activity to support the establishment of the mining and hydropower Trade Working Groups has been proposed in the work plan for the Lao German Technical School's work plan under the Learning Component of the Hydropower and Mining Technical Assistance.

## **11.0 Conclusions**

### **Suggestions on the necessary steps to be taken first before the setting up of linkages.**

It is very important for the university or Educational institution to accept the proven fact that having meaningful and workable linkage with industry is one of the most essential requirements of modernization of Higher Education, and that safeguard the interests of both the university and industry, help the university to modernize itself and play a major role in improving the state of the economy of countries. This is how Higher Education can become more and more relevant to the needs of the country and keep up with fast pace of advances in science & technology which can be used in trying to find solutions the problems industry faces on daily basis.

The following procedure, which is a well tried and tested approach, may perhaps be the most effective one to be used in Lao PDR. The steps to be taken are:

- The university or institutional must accept that without linkage with industry it cannot be able to play a significant role in the improvement of National Economy of the country.
- The industry must accept that there are great deals of high level expertise and skills in the university the industry cannot afford not to use them if it wants to remain competitive and stay ahead of competition.
- The university or educational institution must establish Industrial Liaison Office (ILO) charged with the responsibility of establishment and management of all the linkage programmes between university or educational institution and industry.
- The university educational institution ought to show the industry that it is prepared to consider programmes of Programmatic Reviews (PR), every 2 years, aimed at upgrading its courses and bringing them more and more in line with the needs of industry.

- The Industrial Liaison Office must arrange meetings so that industry can tell university educational institution about the topics of courses and syllabi the industry wishes to be included in the teaching programmes of the university courses.
- The industry must agree to commit the necessary financial and technical resources to the programmatic Review programmes aimed at establishing linkage(s).

The Industrial Liaison Office must inform the **Ministry of Education and Sport, Ministry of Industry and Commerce about the aims and objectives of the linkage programme.** The Ministries must be enlightened about the benefits such programmes in the modernisation of Higher Education and Industry and the positive impact the linkage programmes can have on improvement of the state of the economy.

### **Setting up of General Development Office (GDO) and Industrial Liaison Office (ILO).**

The first and foremost step any university educational institution can take in managing all the dealings it will have with the establishments outside the university is through the setting up of a “General Development Office” (GDO). The Industrial Liaison Office (ILO) and the Business Innovation Centre (BIC), which will be responsible for the running of the Business Incubation Units (BIU), and the International Relations Office (IRO) must operate under the manager of the General Development Office (GDO). In liaison with a committee comprising the President of the university, Deans of all the Faculties and also the Financial Controller of the university (which must be answerable to the Ministry of Finance) the GDO must hire managers to manage these Offices. These managers will be answerable to the manager of the GDO and the university. The manager of the GDO must also liaison with the Academic Council of the university. The university must hire a professional manager for the GDO on full-time basis.

Since the present Subsection is concerned about linkage programmes, and it must operate under the Industrial Liaison Office the main activities of this office can be summarized as follows;

- Preparing a reliable and up-to-date data base on all the industries in the region and the country as a whole,
- Listing them as indigenes or multinational,
- Grouping them as manufacturing or service enterprises,
- Listing the products and services they offer,
- Grouping the companies as large, medium and small sizes,
- Preparing up-to-date contact details (names and addresses of companies, name(s) and contact details of the person(s) in charge, and the number of employees for each enterprise,
- Full list of all academic and support staff of the university with their names and their field of expertise & skills. and
- workshop/and laboratory facilities available in the university

The information given in the last 2 bullet points will be very useful in making the bosses of the industry aware of the services the university is capable of offering to the industry.

### Important Remarks

- At this stage it is important to highlight the fact that all the expertise, skills and facilities of the university educational institution are primarily there for the benefit of the students. However, there are days, weeks and months that the students will not be using them. In these cases, they can be made available to be used in industrial linkage programmes that might need them at a cost to the programme. Hence generate some much-needed revenue for the university.
- It is important to emphasize that the above-mentioned Industrial Liaison Office must serve the entire university. Its duties and responsibilities are not limited to serve one particular Faculty of the university. In other words, each university, such as National University of Laos (NUOL), Champasak University (CU) in Pakse and Souphanouvong University (SU) in LuangPrabang, must have their own General Development Office (GDO), and following that, their own Industrial Liaison Office (ILO) solely dedicated to serve their universities.
- The role of the General Development office (GDO) is not limited to the industrial linkage programmes. As will be discussed later on in this report there are other programmes of the modernisation of the university the GDO has important roles to play.

### **Annex 1:** Examples of Public-Private Cooperation in Technical Vocational Education and Training for Mining and Hydropower.

| Examples of Public-Private Cooperation in Technical Vocational Education and Training | Partners                                                       | Description                                                                                                                                                                                                 |
|---------------------------------------------------------------------------------------|----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Apprentice &amp; trainer translator training</b>                                   | MMG LXML Sepon Mining                                          | <b><i>Contract training private provider</i></b><br><br>40 apprentices and over 10 trainer translators were trained and certified to Australian standards over a 6-year period by RMIT Training, Australia. |
| <b>Welding and electrical training equipment donations</b>                            | MMG LXML Sepon Mining investments in Savannakhet Technical and | <b><i>Training equipment donations:</i></b><br><br>MMG has donated 50,000 USD welding equipment, and 50,000 USD electrical                                                                                  |



| Examples of Public-Private Cooperation in Technical Vocational Education and Training | Partners                                                                                              | Description                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                                       |                                                                                                       | <p>Fixed Plant Mechanical<br/>Fixed Plant Electrical</p> <p>It is envisaged that 8 Lao Nationals will undertake each discipline, making up 32 in total.</p> <p>LGTS provides facilities, and PBM provide staff development and embedding teachers. PBM investments in workshop and upgrade of facilities. The cooperation is based on short MoU and implementation strategy.</p> |
| Trades programs in local mining area.                                                 | Phu Bia Mining & Ponesavanh Technical College, Xieng Khouang Province.                                | <p><b>Contract training and training equipment donations:</b></p> <p>PBM contributing equipment and trainers.</p>                                                                                                                                                                                                                                                                |
| Technical Training Automotive Maintenance and Repair                                  | Toyota Motors Thailand & Lao German Technical School                                                  | <p><b>Contract training</b></p> <p>Toyota qualification standards.</p> <p>MoU 1: 2007-11 – LGTS trainers trained in Thailand</p> <p>MoU 2: 2012 – 2017</p> <p>Toyota provides trainers to LGTS, and also supports Teacher Training for LGTS staff in Thailand.</p> <p>50 per year will be employed by Toyota who are expanding their dealerships in Laos.</p>                    |
| Electrical equipment donations                                                        | Rachaburi Electricity Generating Holding PLC (Nam Ngum II, Hongsa Mine) & Lao German Technical School | <b>Training equipment donations</b>                                                                                                                                                                                                                                                                                                                                              |
| Skills testing for Lao                                                                | MMG LXML Sepon                                                                                        | <b>Skills testing for diploma certification</b>                                                                                                                                                                                                                                                                                                                                  |

| Examples of Public-Private Cooperation in Technical Vocational Education and Training | Partners                             | Description                                                                                                                                                                         |
|---------------------------------------------------------------------------------------|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MoEs certificate                                                                      | Mining & Lao German Technical School |                                                                                                                                                                                     |
| Trades Trainee Program                                                                | Theun Hinboun Power Company          | <p><b><i>In-house training mechanical and electrical</i></b></p> <p>Salaried in-house trainee program in mechanical and electrical. No certificate, filed as 'work experience'.</p> |

**Annex 2:** Examples of Public-Private Cooperation in Higher Education for Mining and Hydropower.

| Examples of Public-Private Cooperation in Higher Education                                   | Partners                             | Description                                                                                                                                                                                                                                                                                 |
|----------------------------------------------------------------------------------------------|--------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Work Placement Program for University Students</b>                                        | MMG LXML Sepon Mining & NUOL         | <b><i>Student work experience</i></b><br><br>The 4-week Work Placement Program is for University students to gain some work experience on site in for example fields of environment, geology, production, metallurgic, community, and mining.                                               |
| <b>University Lectures by Mining experts from private sector</b>                             | MMG LXML Sepon Mining & NUOL         | <b><i>Lecturers from private sector</i></b><br><br>Ad hoc lectures by MMG staff on request from NUOL                                                                                                                                                                                        |
| <b>Pre-Employment Graduate Programme, Internal Scholarship programme for technical areas</b> | Phu Bia Mining                       | <b><i>Pre-employment Graduate Programme</i></b><br><br>Curriculum for engineers /other tertiary not meeting needs of mining actors in Laos, and of Australian companies in particular.<br><br>Accepting 20 graduates per year upgrading their low technical capacity. Potential employment. |
| <b>Scholarships for tertiary engineers and geologists</b>                                    | Phu Bia Mining                       | <b><i>Scholarships abroad</i></b><br><br>3-5 persons per year are sent on scholarships to Australia, and 4 geologist scholarships are offered in Chiang Mai every year.                                                                                                                     |
| <b>Field work for university projects</b>                                                    | Theun Hinboun Power Company          | <b><i>Field work for university projects</i></b><br><br>MSc, PhD and undergraduate level projects and thesis work<br>THBPC have initiated preliminary discussions with NUOL on a formalized trainee programme<br><br>Currently ad-hoc cooperation on request.                               |
| <b>Draft proposal for post-graduate</b>                                                      | Nam Theun 2 Power Company & Ministry | <b><i>Draft proposal for post-graduate internship programme</i></b>                                                                                                                                                                                                                         |

| Examples of Public-Private Cooperation in Higher Education          | Partners                                                                                                                                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| internship programme for MSc students                               | of Energy and Mines / National University of Laos                                                                                                                   | <p>The draft proposal suggests a partnership between the Nam Theun 2 Power Company and the NUOL for a 1-year post-graduate internship with 75% of the time allocated to in the job work and coaching, and 25% of the time spent at university.</p> <p>Tentative priority areas for the Nam Theun 2 Power Company are engineering (civil works, mechanics, electrics) and environment (ecology, laboratory).</p> |
| Work experience for final year IT engineering students              | A number of IT companies and government IT departments (e.g. BCL Bank, NUOL database, Nam Pa Lao, Ministry of Education IT support) & NUOL Faculty of Engineering & | <p><b>Work experience IT engineers</b></p> <p>Students develop databases or software tailored to clients' needs as part of their final theses.</p> <p>The cooperation is based on 5 MoUs with host organisations.</p>                                                                                                                                                                                           |
| Shared equipment use and training exchange                          | Electricite du Laos & NUOL Faculty of Engineering                                                                                                                   | <p><b>Shared equipment use and training exchange</b></p> <p>Equipment use, training exchange for NUOL and EdL staff, and professional training for BSc level. The cooperation is very smooth since many of the EdL staff are NUOL graduates.</p>                                                                                                                                                                |
| Work exposure and field trips for construction engineering students | Vang Vieng Cement Factory & NUOL Faculty of Engineering                                                                                                             | <p><b>Work exposure and field trips</b></p> <p>The cement factory receives 3<sup>rd</sup> and 4<sup>th</sup> year construction engineering students for 'intensive practice' as part of the course on construction materials.</p> <p>The cooperation is based on ad hoc requests from NUOL, and the number of students is low.</p>                                                                              |
| Work exposure for engineering students                              | Phu Bia Mining, various construction                                                                                                                                | <p><b>Work experience Engineering Students</b></p>                                                                                                                                                                                                                                                                                                                                                              |

| Examples of Public-Private Cooperation in Higher Education | Partners                                                                                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                            | companies, MMG LXML Sepon Mining, Mekong bridge construction, etc. & NUOL Faculty of Engineering | <p>Work exposure and practice for engineering students at different levels. The 3<sup>rd</sup> and 4<sup>th</sup> year students have one month of work practice, and the 5<sup>th</sup> year students do 3 months of field work for their thesis.</p> <p>The cooperation is based on ad hoc requests from the NUOL. In some cases, the companies need formal letters from respective line ministry to be able to provide the work experience to students.</p> |



**for the Collaborative Research Project on  
Public Private Partnership in the Philippines**



**By:**

**Dr. Felino B. Javines Jr., SVD**

**Dr. Cristie Ann Jaca Delfin**

## Abstract

This study aims to present and describe the nature of Public-Private Partnership in the Philippine educational system. Using convenience sampling method and some selected interview schedule, pertinent data were gathered to explore the number of existing programs/projects on TVET Public-Private Partnership among government, university and industry within the country based on existing PPP models. Based on the findings it was noted that the current practices related to PPP models in the Philippines are almost the same; however, they vary in the implementation process. The data revealed that the PPP models though similar have unique nuances in terms of process, implementation and the nature of partnership. Thus, the current practices related to PPP models are attributed to the governance, industry and the academe. Majority of the PPP models conservatively aligned itself with the characteristics related to responsiveness, relevance, cost effectiveness, efficiency, accountability and sustainability.

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**Keywords:** Technical-Vocational Education, Skills and Development Training, TVET, Public-Private Partnership

## Introduction

The nature of the PPP in the Philippines is anchored on the framework of the government initiative to facilitate basic and major services that will cater to the majority be it in the industry or academe. Different government agencies linked with private stakeholders in order to efficiently deliver the services intended for the populace concerned vis a vis programs and initiatives. Based on the current practices, there are varied ways of implementing specific programs depending on objective and goal to be achieved.

According to the Public-Private Partnership Center of the Philippines, (PPP) is broadly defined as a contractual agreement between the Government and a private firm targeted towards financing, designing, implementing and operating infrastructure facilities and services that were traditionally provided by the public sector. It embodies optimal risk allocation between the parties – minimizing cost while realizing project developmental objectives. Thus, the project is to be structured in such a way that the private sector gets a reasonable rate of return on its investment. PPP offers monetary and non-monetary advantages for the public sector. It addresses the limited funding resources for local infrastructure or development projects of the public sector thereby allowing the allocation of public funds for other local priorities. It is a mechanism to distribute project risks to both public and private sector. PPP is geared for both sectors to gain improved efficiency and project implementation processes in delivering services to the public. Most importantly, PPP emphasizes Value for Money – focusing on reduced costs, better risk allocation, faster implementation, improved services and possible generation of additional revenue.

[http://ppp.gov.ph/?page\\_id=27574](http://ppp.gov.ph/?page_id=27574)june28,2016

PP can be broadly defined as a contractual agreement between the Government and a private firm targeted towards financing, designing, implementing and operating infrastructure facilities and services that were traditionally provided by the public sector. It embodies optimal risk allocation between the parties – minimizing cost while realizing project developmental objectives. Thus, the project is to be structured in such a way that the private sector gets a reasonable rate of return on its investment.

PPP offers monetary and non-monetary advantages for the public sector. It addresses the limited funding resources for local infrastructure or development projects of the public sector thereby allowing the allocation of public funds for other local priorities. It is a mechanism to distribute project risks to both public and private sector. PPP is geared for both sectors to gain improved efficiency and project implementation processes in delivering services to the public. Most importantly, PPP emphasizes Value for Money – focusing on reduced costs, better risk allocation, faster implementation, improved services and possible generation of additional revenue.<sup>24</sup>

### **Purpose/Objective**

his study aims to:

1. explore the number of existing programs/projects on TVET PPP among government, university and industry within Technical Vocational Education for Teachers (TVET) ASEAN countries based on relevant PPP model.
2. determine the extent of private participation in different types of PPP arrangements/agreements within TVET ASEAN countries based on relevant PPP model.
3. compare the PPP programs with types of PPP arrangements/agreements within TVET of ASEAN countries

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<sup>24</sup> A PPP MANUAL FOR LGUs | I Understanding PPP Concepts & Framework pp 18

4. formulate and propose a cohesive new PPP model involving government, university and industry in accordance with TVET hub development in ASEAN countries.
5. identify strategies to strengthen PPP.

## Results and Discussion

T

he table below, reflects the responses of the higher administration officials from the different branches of government namely National Economic Development Authority (NEDA), Department of Interior and Local Government (DILG), Department of Trade and Industry (DTI) and University of the Philippines (UP) faculty. Other pertinent data are still in the process of being collected.

| Questions                                                                                                                                                                                                                      | YES                         | NO                      | Remarks/Comments                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------|------------------------------------------------------|
| 1. Are there current practices related to Public Private Partnership (PPP) models in the Philippines?                                                                                                                          | 10                          | 0                       |                                                      |
| 2. Are there current practices related to Public Private Partnerships (PPP) models that are related to governance, business, training models and likewise type of collaboration?                                               | 10                          | 0                       |                                                      |
| 3. Are there existing comparison and contrast of the existing PPP models with partner countries in the Philippines?                                                                                                            | 10                          | 0                       |                                                      |
| 4. Are the existing PPP models in the Philippines that reflect the following characteristics:<br>4.1 responsiveness,<br>4.2 relevance,<br>4.3 cost-effectiveness,<br>4.4 efficiency,<br>4.5 accountability and sustainability. | 10<br>3<br>3<br>1<br>1<br>2 | <br><br><br>2<br>2<br>1 |                                                      |
| 5. Are you in favor of designing a new and common PPP model that will serve as                                                                                                                                                 | 10                          |                         | If there is no conflict with existing laws/issuances |

|                                                                                                           |   |   |                                                                                                                |
|-----------------------------------------------------------------------------------------------------------|---|---|----------------------------------------------------------------------------------------------------------------|
| framework for all stakeholders?                                                                           |   |   |                                                                                                                |
| 6. Do you have any recommendations for the development and implementation of a common PPP for the Region? | 3 | 6 | -Cultural considerations must be a priority<br>-Focus on best practices<br>-Take into consideration labor laws |

Based on the initial data gathered, it was noted that the current practices related to Public Private Partnership models in the Philippines are almost similar except that they differ in their mode of implementation. These current practices are existing in the Industry and Academe. Furthermore, the current PPP models and practices reflect the characteristics on the areas of – responsiveness, relevance, cost effectiveness, efficiency, accountability and sustainability.

### **Brief Historical Account on Public-Private Partnership in the Philippines**

Public-private partnership, also called PPP or P3 is a joint venture between the government (public) and one or more private companies (which can either be profit or non-profit organizations) in running a business or service. By entering into this kind of agreement, both resources and risks are shared by contracting partners, thereby increasing the resource base and reducing the potential risks. Under the partnership, the government may opt to shield the private organizations from certain regulations that could cause delay or disturb project implementation. Protective measures that will be granted to private organizations will be part of the PPP contract.<sup>25</sup> PPP has been in the Philippines since 1990. It took effect by virtue of Republic Act 6957 known as “An Act Authorizing the Financing, Construction, Operation and Maintenance of Infrastructure Projects by the Private Sector, and for the Other Purposes”. It was signed by former President Corazon Aquino on 9 July 1990. Under Section 1, Declaration of Policy, RA 6957 recognized the “indispensable role of the private sector as the main engine for national growth and development”.

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<sup>25</sup> [http://en.wikipedia.org/index.php?title=Public-private\\_partnership](http://en.wikipedia.org/index.php?title=Public-private_partnership)

The Act was meant to mobilize the private sector to invest in building, operating and maintaining infrastructure projects and other developmental programs that have been under the responsibility of the government. RA 6957 was amended on 5 May 1994 when former President Fidel V. Ramos signed Republic Act 7718 otherwise known as an act amending certain sections of republic act no. 6957. RA 7718 is known as "An Act amending certain sections of Republic Act no. 6957, entitled "An Act authorizing the Financing, Construction, Operation and Maintenance of projects by the private sector, and for other purposes". Under Section 1, Declaration of Policy, Republic Act 7718 clearly stated its intent to provide financial incentives and minimize government regulations to motivate and support the private sector undertake certain projects.<sup>26</sup>

In 1986, right after the martial law regime of the Marcos Administration, then President Corazon C. Aquino, government divested itself from non-essential business-related assets acquired during the Marcos era. It also enacted Presidential Proclamation No. 50 in December 1986, which created the Asset Privatization Trust (APT) and the Committee on Privatization (COP) to handle this move.

The following year, Congress passed the 1987 Philippine Constitution. It defined the role of the private sector as a valuable partner in achieving the development goals of the country. Section 20, Article II specifically states that, "the State recognizes the indispensable role of the private sector as the main engine of national growth."

In 1990, the passage of Republic Act 6957 entitled, "An Act Authorizing the Financing, Construction, Operation and Maintenance of Infrastructure Projects by the Private Sector, and for other Purposes," also known as the Build-Operate-Transfer (BOT) Law brought the participation of the private sector into the frontline of development efforts.

In 1993, then President Fidel Valdez Ramos amended the BOT law to what is currently known as Republic Act 7718 or the Amended BOT Law and its Implementing Rules and Regulations.

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<sup>26</sup> [http://en.wikipedia.org/index.php?title=Public-private\\_partnership](http://en.wikipedia.org/index.php?title=Public-private_partnership)

President Ramos then issued Memorandum Order No166 directing the Coordinating Council of the Philippine Assistance Center (CCPAP) of the Office of the President to establish a BOT Center with the CCPAP Chairman as BOT Action Officer.

During the administration of President Joseph E.Estrada, the CCPAP- BOTC enter was reorganized into the Coordinating Council for Private Sector Participation (CCPSP) by virtue of Administrative Order 67. This expanded the coverage of the BOT Program into other forms of private sector participation. It was as also during the Estrada administration that the CCPSP formalized its provision of technical assistance support through technical assistance agreements (TAAs) with IAs/LGUs.

During her presidency Gloria Macapagal-Arroyo signed Executive Order 144. This was in 2002. It converted the CCPSP into the BOT Center and lodged it under the Department of Trade and Industry's (DTI) Industry and Investment Group (IIG). Its task was to promote and market not just BOT projects, but transform Public- Private Partnerships (PPP) as the cornerstone of the national infrastructure development plan.

### **Public Private Partnerships (PPP's) TODAY**

Under the Presidency of Benigno Simeon C. Aquino III, public-private partnership was tagged as a powerful machinery to help push forward the country's development. Under his administration, private sector participation in the country's economic agenda is clearly defined in his "social contract" with the Filipino people.

On September 9, 2010, President Aquino signed Executive Order No. 8 entitled "Reorganizing and Renaming the Build-Operate-and-Transfer (BOT) Center to the Public-Private Partnership (PPP) Center of the Philippines and Transferring its Attachment from the Department of Trade and Industry to the National Economic and Development Authority and for Other Purposes."

The Public-Private Partnership Center of the Philippines is the sole body tasked to facilitate and coordinate the country's PPP program. Part of its task is to manage a revolving fund called the Project Development and Monitoring Facility. At the same time, the PPP Center provides Implementing Agencies (IAs) technical advisory support in project development and management and monitors the implementation of PPP priority

projects. Also part of its task is to formulate policy guidelines for PPP transactions, and develop and manage a central database of all PPP programs and projects.

On May 2013, Executive Order No. 136 amended certain sections of the BOT law, including the creation of a PPP Governing Board, chaired by the Socioeconomic Planning Secretary, with the Finance Secretary as co-Chair. Included as members of the Board are the Secretaries of Budget and Management, Justice, Trade and Industry, the Executive Secretary and the Private Sector co-chair of the National Competitiveness Council.

The PPP Governing is the overall policy-making body for all PPP-related matters, including the Project Development and Monitoring Facility. It shall be responsible for setting the strategic direction of the Philippine PPP Program while creating an enabling policy and institutional environment for PPPs in the Philippines.<sup>27</sup>

### **Policy and Legal Framework**

Section 20, Article II of the 1987 Philippine Constitution provides that “The State recognizes the indispensable role of the private sector, encourages private enterprise, and provides incentives to needed investments.” In recognition of this role in sustainable development, Congress enacted two primary laws to implement the same: the Government Procurement Reform Act (RA 9184) for the procurement of goods, supplies and services, and the RA 6957 as amended by RA 7718 or the Philippine BOT Law which provided a more focused framework in PPP infrastructure development. The enactment of RA 6957 allowed LGUs to enter into contractual arrangements with the private sector to implement infrastructure projects through two variants – Build-Operate-and-Transfer (BOT) and Build-Transfer-and-Operate (BTO). RA 7718 enhances the provision of RA 6957 by broadening the list of PPP government implementing agencies such as government owned and controlled corporations (GOCCs), government financing institutions (GFIs) and state universities and colleges (SUCs); putting in place incentives for attracting private sector investments to venture into PPP projects; and allowing negotiated unsolicited proposals provided that these comply with conditions outlined in the Law. More importantly, RA 7718 provided for the inclusion of other contractual arrangements or schemes to implement PPP projects.<sup>28</sup>

|                                                             |
|-------------------------------------------------------------|
| <b>Policy and Legal Framework of PPP in the Philippines</b> |
|-------------------------------------------------------------|

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<sup>27</sup> [https://ppp.gov.ph/?page\\_id=44](https://ppp.gov.ph/?page_id=44)

<sup>28</sup> A PPP MANUAL FOR LGUs | I Understanding PPP Concepts & Framework pp 19

|                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------|
| 1987 Constitution Section 20, Article II •                                                                                      |
| Build-Operate-Transfer Law •                                                                                                    |
| RA 6957 as amended by RA 7718 •                                                                                                 |
| Other Related Laws and Executive Issuances                                                                                      |
| Local Government Code                                                                                                           |
| Public Service Act (Commonwealth Act No. 146, as amended) •                                                                     |
| Foreign Investments Act of 1991 (RA 042, as amended by RA 8179)iii •                                                            |
| Foreign Borrowings Act of 1966 (RA 4860) •                                                                                      |
| Omnibus Investments Code of 1987 (EO 226, as amended)iv •                                                                       |
| Government Procurement Reform Act of 2003 (RA 9184)v •                                                                          |
| EO 423, “Prescribing the Rules and Procedures on the Review and Approval of all Government Contracts to Conform with RA 9184” • |
| Various laws related to quality and economic regulations • Laws related to environment protection <sup>29</sup>                 |

### Variants of PPP in the Philippines

| PPP Modality                    | Role of the Private Proponent                                                                                                                                                                                      | Role of the Government                                                                                                                         | Notes/Remarks                                                                                                                                                                                                              |
|---------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Build-Operate-andTransfer (BOT) | Finances and constructs; operates and maintains facility for a fixed term; collects fees and charges to recover investments plus profit; transfers facility at the end of cooperation period (maximum of 50 years) | Provides franchise (if required) and regulates activities of BOT contractor; acquires ownership of facilities at the end of cooperation period | Includes a supply-and-operate scheme, a contractual arrangement whereby the supplier of equipment and machinery for a given infrastructure facility, if the interest of the Government so requires, operates the facility. |
| Build-and-Transfer (BT)         | Finances and constructs; turns                                                                                                                                                                                     | Acquires ownership of facility after                                                                                                           | May be employed in any project,                                                                                                                                                                                            |

<sup>29</sup> A PPP MANUAL FOR LGUs |1 Understanding PPP Concepts & Framework pp 23

|                                 |                                                                                                                                                                                         |                                                                                                                                                         |                                                                                                                    |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------|
|                                 | over after project completion ownership of the facility to government                                                                                                                   | construction; compensates proponent at agreed amortization schedule                                                                                     | including critical facilities which, for security or strategic reasons, must be operated by the Government.        |
| Build-Own-and-Operate (BOO)     | Finances, constructs and owns facility; operates and maintains facility in perpetuity (facility operator may be assigned); collects fees and charges to recover investments and profits | Provides authorization and assistance in securing approval of BOO contract; possesses the option to buy the output/service provided by the BOO operator | All BOO projects upon recommendation of the NEDA-ICC shall be approved by the President of the Philippines         |
| Build-Lease-andTransfer (BLT)   | Finances and constructs; turns over project after completion; transfers ownership of facility after cooperation/lease period                                                            | Compensates proponent by way of lease of facility at agreed term and schedule; owns facility after cooperation/lease period                             | Akin to Lease-to-Own                                                                                               |
| Build-Transfer-andOperate (BTO) | Finances and constructs on a turn-key basis; transfers title of facility after commissioning; operates the facility under an agreement                                                  | Owens facility after commissioning                                                                                                                      | Minimizes construction risk delays                                                                                 |
| Contract-Addand-Operate (CAO)   | Adds to an existing facility; operates expanded project for an agreed franchise period                                                                                                  | Collects rental payment under agreed terms and schedule; regains control at the end of lease term                                                       | There may or may not be a transfer arrangement with regard to the added facility provided by the Project Proponent |

|                                         |                                                                                                            |                                                                                                      |                                                                                                                                                                         |
|-----------------------------------------|------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Develop-Operate-and-Transfer (DOT)      | Builds and operates a new infrastructure; transfers property/facility at the end of the cooperation period | Regains possession of property turned over to investor after cooperation period                      | Project proponent enjoys some benefits the initial investment creates such as higher property or rent values; akin to BOT with the option to develop adjoining property |
| Rehabilitate-Operate-and-Transfer (ROT) | Refurbishes, operates, and maintains facility; facility is turned over after the franchise period          | Provides franchise to ROT company; regains legal title of property/facility after franchise period   | Also used to describe the purchase of facility from abroad, importing, refurbishing, erecting and consuming it within the host country.                                 |
| Rehabilitate-Ownand-Operate (ROO)       | Refurbishes and owns facility; operates facility in perpetuity as long as there is no franchise violation  | Turns over facility and provides franchise to operate; may opt to share in the income of ROO company | Period to operate is dependent on franchise agreement.                                                                                                                  |



PROJECT TITLE:  
THEORETICAL APPROACH ON  
PUBLIC PRIVATE  
PARTNERSHIP FOR  
UNIVERSITIES / TRAINING  
INSTITUTES IN TECHNICAL  
VOCATIONAL EDUCATION  
AND TRAINING (TVET)  
**UNIVERSITI TUN HUSSEIN ONN  
MALAYSIA**

Assoc Prof. Dr Razali Bin Hassan  
Assoc. Prof. Dr Mimi Mohaffyza bte Mohamad  
Dr D'oria Islamiah bt Rosli  
Dr Affero Bin Ismail  
Dr Nor Lisa bt Sulaiman  
Dr Saifullizam bin Puteh

## Country Report

### **“PUBLIC PRIVATE PARTNERSHIP BETWEEN GOVERNMENT, UNIVERSITY AND INDUSTRY IN TVET – MALAYSIA MODEL”**

*Faculty of Technical and Vocational Education and Training  
86400 Parit Raja, Batu Pahat, Johor Malaysia.  
Universiti Tun Hussein Onn Malaysia,*

## **Abstract**

This study entitles “Public Private Partnership between Government, University and Industry in TVET” is produced within the framework of the project “Regional Cooperation in TVET Programme (RECOTVET)” which is funded through the GIZ/VOCTEC SEAMEO. The report cover PPP model for TVET in the Malaysia. The report represents an overview of the PPP model of Malaysia implementation, covering topics such as policy, governance arrangement, funding, institutional landscape, and quality while focussing on the major reforms and trends in the recent year. Aiming to secure a comparative perspective in writing the reports, their structure is built around the questionnaire produced by the project team. Apart from striving to complement our knowledge base on the dynamics of PPP model in the ASEAN region, the purpose of the reports is to introduce this model in a structured manner, as well as to offer a basis for prospective comparative research.

**Keywords:** Public Private Partnership, Government, University, Industry, TVET.

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## List of abbreviations

### **DSD**

Department of Skills Development

### **GDP**

Gross Domestic Product

### **MOE**

Ministry of Education

### **MOHE**

Ministry of Higher Education

### **NEM**

National Economic Model

### **NKRA**

National Key Result Area

### **PFI**

P

Private Finance Initiative

### **PPP**

P

Public Private Partnership

### **PSDC**

P

Penang Skills Development Centre

**SRI**

S

strategic Reform Initiatives

**TVET**

T

technical, Vocational, Education & Training

**UNESCO**

United Nations Educational, Scientific and Cultural Organisation

## INTRODUCTION

### 1.1

#### Country History

As of the 2010 census, the population of Malaysia was 28,334,135, making it the [42nd most populated country](#). 91.8 per cent of the population are Malaysian citizens. Malaysian citizens are divided along ethnic lines; with 67.4 per cent considered [bumiputera](#). The largest group of *bumiputera* are [Malays](#), who are defined in the constitution as [Muslims](#) who practice Malay customs and culture. They play a dominant role politically. *Bumiputera* status is also accorded to certain non-Malay indigenous peoples, including ethnic [Thais](#), Khmers, [Chams](#) and the natives of Sabah and Sarawak. Non-Malay *bumiputera* make up more than half of Sarawak's population and over two thirds of Sabah's population. There also exist aboriginal groups in much smaller numbers on the peninsula, where they are collectively known as the Orang Asli. Laws over who gets *bumiputera* status vary between states.

Other minorities lack *bumiputera* status. 24.6 per cent of the population are of Chinese descent, while those of Indian descent comprise 7.3 per cent of the population. The Chinese have historically been dominant in the business and commerce community, and form a plurality of the population of Penang. Immigrants from India, the majority of them Tamils, began arriving in Malaysia early in the 19th century. Malaysian citizenship is not automatically granted to those born in Malaysia, but is granted to a child born of two Malaysian parents outside Malaysia. Dual citizenship is not permitted. Citizenship in the states of Sabah and Sarawak in Malaysian Borneo are distinct from citizenship in Peninsular Malaysia for immigration purposes. Every citizen is issued a biometric smart chip identity card known as MyKad at the age of 12, and must carry the card at all times.

### economy

Malaysia is a relatively open state-oriented and newly industrialised market economy. The state plays a significant but declining role in guiding economic activity through macroeconomic plans. Malaysia has had one of the best economic records in Asia, with GDP growing an average 6.5 per cent annually from 1957 to 2005. Malaysia's economy in 2014–2015 was one of the most competitive in Asia, ranking 6th in Asia and 20th in the world, higher than countries like Australia, France and South Korea. In 2014, Malaysia's economy grew 6%, the second highest growth in ASEAN behind Philippines' growth of 6.1%. The economy of Malaysia (GDP PPP) in 2014 was \$746.821 billion, the third largest in ASEAN behind more populous Indonesia and Thailand and the 28th largest in the world.

In 1991, former Prime Minister of Malaysia, Mahathir Mohamad outlined his ideal in Vision 2020, in which Malaysia would become a self-sufficient industrialised nation by 2020. Najib Razak has said Malaysia could attain developed country status much earlier from the actual target in 2020, adding the country has two program concept such as Government Transformation Programme and the Economic Transformation Programme.

According to a HSBC report, Malaysia will become the world's 21st largest economy by 2050, with a GDP of \$1.2 trillion (Year 2000 dollars) and a GDP per capita of \$29,247 (Year 2000 dollars). The report also says "The electronic equipment, petroleum, and liquefied natural gas producer will see a substantial increase in income per capita. Malaysian life expectancy, relatively high level of schooling and above average fertility rate will help in its rapid expansion". Viktor Shvets, the managing director of Credit Suisse, has said "Malaysia has all the right ingredients to become a developed nation".

International trade, facilitated by the shipping route in adjacent Strait of Malacca, and manufacturing are the key sectors. Malaysia is an exporter of natural and agricultural resources, and petroleum is a major export. Malaysia has once been the largest producer of tin, rubber and palm oil in the world. Manufacturing has a large influence in the

country's economy, although Malaysia's economic structure has been moving away from it. Malaysia remains one of the world's largest producers of palm oil.

In an effort to diversify the economy and make it less dependent on export goods, the government has pushed to increase tourism to Malaysia. As a result, tourism has become Malaysia's third largest source of foreign exchange, although it is threatened by the negative effects of the growing industrial economy, with large amounts of air and water pollution along with deforestation affecting tourism.

### **1.3 Education attainment**

The World Economic Forum (World Economic Forum) has recognized Malaysia as a country with a level of competition that is better than 142 countries around the world and based on the latest report, Malaysia was ranked 21<sup>th</sup> in 2010 than in the 26<sup>th</sup>. According to the report, the level of global competition in 2011/2012, the better position is due to the intensification of Malaysia to improve its position in line with the changes that are needed to enable the level of developed countries in 2020, and subsequently removed from the situation of middle-income economy high to high income countries. Greater emphasis on the development of the education sector for example also makes Malaysia is ranked 14<sup>th</sup> overall and second after Singapore for Southeast Asia. This position also makes the Malaysian education system is better than the United States, United Kingdom and Germany.

The actual achievement reflects the government's determination to ensure that all citizens receive quality education and are not left out of the school system, because Malaysia is confident that through the development of human capital will boost the performance as a developed country by 2020. Concerted efforts of the government through the initiative of the National Key Result Area (NKRA) for example in the field of education has managed to improve the access of students to access education. Since its launch a year ago, in 2011 enrolment for children over 4 years old has increased by 732.902 preschool children make it reach the level of 77.23 percent. A total of 3,089 pre-school classes have been operating and the number is double that of 2010.

NKRA initiatives at primary school level has proved that the LINUS program (Literacy and Numeracy) to the children of degrees 2 show considerable improvement, ie 97.5 per cent literacy and numeracy rate of 98.6 percent. For children who are in year 1 bago cohort 2, the literacy rate is 91 percent while the numeracy rate is 95.4 percent. Measurement of literacy and numeracy rates can help businesses detect pupils with learning difficulties at an early stage and in 2011, for example, a total of 3,916 poor students in Year 2 can be effectively addressed.

Measurements are made that have succeeded in promoting Malaysia as a country that is undergoing a transformation that effective education and be able to compete globally. To further improve the competitive position globally, especially in primary and secondary education, Malaysia had always been open to all parties to help introduce various reforms and improvements. This is something that is very important as education is constantly evolving and is highly dependent on changes in the environment. In order to understand the aspirations of all the people, the Ministry of Education will launch a series of dialogues education nationwide from April 2012, bringing together the various parties, from professionals, educators, community leaders and parents to work together to contribute their ideas to create a blueprint for education that will shape direction of the education system in the future.

## 2.0:

R

## RESEARCH BACKGROUND

### 2.1

T

#### **VET Definitions and concepts**

Rapid changes in technology and markets have created new demands for vocational education and training organizations to provide graduates who are globally competitive. Debates about the most appropriate forms of training to meet these demands are concerned not only with curricula and resources within [technical and vocational education training] TVET organizations, but also with the most effective strategies for improving collaboration with industry.

Tenth Malaysia Plan (10MP) for the period 2011 to 2015 show a significant change in the system of Technical and Vocational Education (Technical and Vocational Education Training -TVET / TEVT) in Malaysia. Cultivation of ideas and strategies, based on the achievement and increase foreign countries like Korea and German into a high-income country into a model for Malaysia to continue to uncoil step and be competitive on the world stage. To work with a more holistic approach in first class human capital formation will be the first one embodiment Malaysia a high-income country and respected. World-class human capital development in Malaysia requires business comprehensive and integrated from both the public and private sectors and the community. Collaboration between various ministries and the private sector should be strengthened to increase the effectiveness of human capital development and take advantage of all the layers society. A holistic approach will meet the needs of all Malaysians in the stages of life

(Tenth Malaysia Plan, 2010:  
195)

### **Definition of TEVT**

According to the Malaysia Education Blueprint 2013-2025 Preliminary Report, TEVT is defined as follows:

“Vocational education prepares students for career requiring expertise in a specific set of techniques. These careers range from technical or vocational skills like carpentry to positions in engineering and other occupations. In contrast to the technical stream which prepares students for further education, the vocation stream is more career oriented.”<sup>30</sup>

The United Nations Educational, Scientific and Cultural Organisation (UNESCO) defines “Technical and vocational education to aspects of educational process involving, in addition to general education, the study of technologies and related sciences, and the acquisition of practical skills, attitudes, understanding and knowledge relating to occupations in various sectors of economic and social life.”

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30. Ministry of Education, Malaysia Education Blueprint 2013-2025: Preliminary Report, <http://www.moe.gov.my/userfiles/file/PPP/Preliminary-Blueprint-Eng.pdf>, page 7-7

## 2.2

### Definition of PPP

PPP is generally defines as a system in which a government service or private business venture is funded and operated through a partnership for the purpose of delivering a project or service that was traditionally provided by the public sector. In some forms of PPP, the government uses tax revenue to provide capital for investment, with operations run jointly with the private sector to under contract (contraction out). In other forms, such as the Private Finance Initiative (PFI), the private sector invests capital and a private operator provides services under contract. Government contributions to PPP may also be in kind, for example in the transfer of existing assets. In the PPP process, it is recognized that both public and private sectors have certain advantages in performing specific projects/services.

In contact of this research PPP was defined as a collaboration within three parties which involved TVET institution, Industries and Government. In a market economy, public private partnerships are the glue that links education and employers. The term is really used as shorthand for a range of public policies, funding systems, and curriculum frameworks that have as a shared goal to tighten the level of communication among educators and employers. The policy framework that governs these partnerships is varied, although there are archetypical systems. Germany's "dual system" is one model of public private engagement.

### PPP in TVET sector

According to UNESCO (2006), PPP in the TVET sector can take several forms (namely, piloting new initiatives, training partnership, sectorial partnership, and system-wide partnership). The report also states that a "partnership between the state and the private sector must be seen at the different levels, e.g. the local enterprise, economic sector and national level. It could take the form of simple relationship between two bodies or a

wider scope. It could become a part of national TVET policy or rely on a partnership culture and just encourage participative approaches”

The German system is based on a law from 1969 that mandates a particular governance structure for vocational education and training. At the heart of the German system is a delegation of responsibility for curriculum and assessment to a coalition of labor representatives, 3 businesses, and educators. The business associations play a particularly complex role, managing the system by monitoring the quality of training provided by firms in the dual system (Brand, 1998; Gill & Dar, 2000; Rauner, 1998). Studies of the German model lay out the following as key components that need to be in place: 1. A legislative framework that requires firms to invest in training of newly hired workers; 2. A funding mechanism through a combination of federal, regional, and business spending; 3. The capacity to carry out job analysis and curriculum development; 4. Local institutions that represent the interests of businesses; and 5. Trained professional instructors and administrators. The German model has proven difficult to replicate internationally. Some countries, such as Thailand or Korea, have managed to put into place a small number of dual system places (Gill & Dar, 2000). However, even the former Eastern Germany has had challenges in extending the dual system. Culpepper’s book (2003) is a detailed examination of the reasons that the dual system can and can’t be expanded within Europe. There are several lessons, most importantly that unless companies see participation in their best interests they will not participate in and ultimately pay for training and hiring of vocational education graduates. The reality is that as labour markets are liberalized, and the cost of doing business in Germany itself has increased relative to other manufacturing intensive countries like China, the dual system has become less important as a critical part of the VET structure. The need to lower labour costs and 4 maintain flexibility in the hiring and assignment of labour among nations means that firms are less interested in participating in a dual system (Culpepper, 2003).

### **The combination of PPP in the TVET sector**

The combinations of public and private sectors in TVET according to financing (provider of funds) and services (provider of services) are displayed in the figure below.

Figure 1 Public-Private Provision of TVET and Financing

| Financing      | Provision of services |               |
|----------------|-----------------------|---------------|
|                | Private sector        | Public Sector |
| Private sector | Type 1                | Type 2        |
| Public sector  | Type 3                | Type 4        |

*Note: The basic style of the table is derived from JICA (2015)<sup>31</sup>*

Specific examples in each combination from Type 1 to Type 4 are shown below.

Type 1: Private sector (financing) and private sector (provision of services)

- Private vocational school
- Vocational training within the enterprise/in-house training

Beside the combination according to financing (provider of funds) and services (provider of services), certain styles of cooperation in PPP are seen under Type 1 as shown below.

(a) Joint Management

- The joint management of private schools by both public and private sectors.

(b) Provision of guidance or assistance from the public sector

- Provision of guidance or assistance from the public sector for private training institutes/schools (see type 3 in the case of financial assistance)

Type 2: Private sector (financing) and public sector (provision of services)

- In-service training for current workers/by user fees
- Financial support by the private sector for public vocational training institutes/schools
- Endowed chairs

Type 3: Public sector (financing) and private sector (provision of services)

- Training voucher program
- Contracting out to private training institutes/schools
- Subsidies for the establishment of private vocational institutes/schools

#### Type 4: Public sector (financing) and public sector (provision of services)

- Public vocational institutes/schools

Besides the combinations according to financing (provider of funds) and services (provider of services), other styles of cooperation in PPP are seen in the type 4, as shown as below. They may be example of paradigm shift the “supply-driven” to the “supply and demand driven” structure, discusses in UNESCO 2006.

##### (a) Joint planning in curricula development

- Development of training curricula based on the needs survey of the private sector and comments from representative members of the private sector who are on curricula committees
- Creation of a system for prompt revision of training courses

##### (b) Joint implementation of training

- Introduction of internship/training in factories/apprenticeships I
- Job placement support J
- Production activities in vocational institutes/schools P
- Entrepreneurship training E

##### (c) Joint evaluation and feedback system

- Evaluation and feedback system of training curricula and programs

Malaysia can emerge as a high-tech country, with people who are skilled and preserving the quality of life that is based on the mind-set of the first class by 2020, as outlined in Vision 2020. Malaysia also fully capable of becoming an industrialized country if students today are taking advantage of the education plan countries that have been drawn neatly by the government.

Through the 10th Malaysia Plan (10MP), the government has given emphasis on technical and vocational education (TVET) to produce students who are skilled in the period 2011-2015. During the 10MP, the government intends to implement a holistic skills education for lower secondary school leavers, upper secondary schools, institutions of higher learning to the job market. During this period also, there have been several changes, especially with regard to technical and vocational education. Among them is the rebranding of secondary vocational schools to vocational colleges.

Changes through re-branding have opened huge opportunities to technical students to take advantage of it. Although technical and vocational education in Malaysia has started since the early 1980s, the focus in the early stages only to students who drop out of the academic mainstream. As a second option, students are given the opportunity to attend school-based TVET.

However, after the government saw the need and importance of TVET in the process of formation of the developed world, then this aspect strengthened TVET as a premier education stream. TVET education is an important way for countries like India to produce highly skilled human capital, knowledge, innovation, and able to face the competition on the global and regional levels and always relevant to current needs.

TVET emphasis on the concept of lifelong education, namely continuing education without learning certain age limit. As a teenager, chances of pursuing related to TVET able to form specific skills that are appropriate to the current needs of the job market. TVET-based education is not only intends to produce the number of skilled workers are trained, but are able to create their own job leveraging the skills acquired. This would reduce dependence on salaried employment.

Malaysia Education Blueprint 2015-2025 (Higher Education) (MEB-PT), which the government has a special focus on the development of TVET education. Focus on TVET in

line with the intention stated in Vision 2020, which makes Malaysia as the creator of the technology, not only as a major consumer of technology. This feature is the basis of the formation of a fully developed nation, the number of skilled and semi-skilled enough in the job market.

At the level of public higher education, the government has provided four public universities with the status of technical universities in Malaysia, Universiti Teknikal Malaysia Melaka (UTeM), Universiti Malaysia Perlis (UniMAP), Universiti Malaysia Pahang (UMP) and Universiti Tun Hussien Onn (UTHM), Technical public university aims to provide a space dedicated to technical graduate student in secondary school to further their education at the tertiary level. This learning path provides the option to students and young people to engage in technical fields with a structured educational path.

### **Technical Education and Vocational Training as a Priority Agenda in Malaysia**

The Government seeks collaboration with the corporate sector in addressing socio-economic challenges through education, as there are links between education and economic advancement. The rapid changes in technology, work and social environment must be addressed to keep up with local and global demands. In order to meet global market demands, the Ministry of Education (MOE) launched the Preliminary Report of the Malaysia Education Blueprint (the Blueprint) on the 12th September 2012 echoing the Government's plan to transform the national education system to prepare children in Malaysia to meet global standards.

Under the Tenth Malaysian Plan (10MP), the Department of Skills Development (DSD) under the Ministry of Human Resources, has been given the responsibility to mainstream skills training through TEVT.<sup>i</sup> The DSD has taken proactive measures by establishing the Skills Malaysia Partnership (SMP) Unit to reinforce strategic relationships and cooperate with the private sector.

Under the National Economic Model (NEM), the Strategic Reform Initiatives (SRI) is intended to develop a quality and skilled workforce through a targeted and holistic

education system. It also seeks to nurture skilled and inquisitive minds to generate innovative workers. These efforts will continue to drive productivity forward.<sup>ii</sup>

Entry Point Projects (EPP) 5, under the National Key Economic Areas (NKEA), lay down projects that aim to scale up private skill training provisions, which could increase the number of skilled workers to 50% by 2020.<sup>iii</sup> These projects include providing past Sijil Pelajaran Malaysia (SPM) students or school drop-outs with greater opportunities to continue pursuing alternative education in the form of TEVT.

The Government is undertaking many measures to encourage the corporate sectors' involvement in the development of highly skilled workers. These include providing and matching training grants to assist employers of small and medium industries, financial assistance in the form of loans for training, joint fund financing with employers for

PhD studies in a related industry, expansion of the National Dual Training System (NDTS) which covers SPM school leavers and those unable to complete full secondary or 11 years of education and awarding Malaysian Skills Certificates and to encourage various PPP.

### **General Roles of the PPP in the TVET sector**

The general roles of PPP in TVET sector are discussed in this section, based on the combination types shown in the preceding section. Table 1 shows strengths and weaknesses by the type of both public and private training providers. PPPs are able to compensate for the weaknesses by the type of public and private training providers. PPPs are able to compensate for the weaknesses and to complement the activities of both sectors.

For example, the weakness of government-owned training institutions, such as “continuing to offer courses regardless of employment demand,” “tendency to obsolescence” “lack of cost-consciousness resulting in inefficiencies” may be improved by the effective introduction of PPP.

Also, the weakness of non-government providers such as “wide variation in quality,” “tends to focus on skills with low investment requirements” and “fees tend to exclude marginalized groups” may be improved through the effective introduction of the combination types shown in 3. This is because financial support from the public sector will help improve the quality of training and expand investment.

For its part, the private sector can help the public sector overcome financial constraints. Namely, a partnership can reduce the financial burden on the public sector through the effective introduction of the combination types 1 and 2.

Table 1 strength and Weaknesses by Type of Training Provider

| Type                                            | Strength                                                                                                                                                                                                                                                                                           | Weaknesses                                                                                                                                                                                                                                                                                                                        |
|-------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Government-owned training institution           | <ul style="list-style-type: none"> <li>- Often wide geographical coverage</li> <li>- Willingness to invest in capital-intensive skills</li> <li>- Often addresses strategic skills needs for national strategies</li> <li>- Possible support of training for socially vulnerable people</li> </ul> | <ul style="list-style-type: none"> <li>- Often insulated and unresponsive to market forces, continuing to offer courses regardless of employment demand</li> <li>- Tendency to obsolescence</li> <li>- Lack of cost-consciousness resulting in inefficiencies</li> <li>- Quality suffers when the public budget is cut</li> </ul> |
| Non-government providers (Profit providers)     | <ul style="list-style-type: none"> <li>- Major source of in-service training in many countries</li> <li>- Eliminate the need public outlays that would otherwise have to be made</li> <li>- Usually cost-conscious and attentive to market developments and graduate placement</li> </ul>          | <ul style="list-style-type: none"> <li>- Wide variation in quality</li> <li>- Tends to focus on skills with low investment requirements</li> <li>- Training is often concentrated in urban areas</li> <li>- Fees tend to exclude marginalized groups</li> </ul>                                                                   |
| Non-government providers (Non-profit providers) | <ul style="list-style-type: none"> <li>- Major source of in-service training in many countries</li> <li>- Eliminates the need for public outlays that would</li> </ul>                                                                                                                             | <ul style="list-style-type: none"> <li>- Wide variation in quality</li> <li>- Tends to focus on skills with low investment requirements</li> </ul>                                                                                                                                                                                |

|                            |                                                                                                                                                                                                                                        |                                                                                                                                                                                                                |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | otherwise have to be made<br>- Often serves vulnerable and disadvantaged groups<br>- High proportion of female enrollments                                                                                                             | - Insufficient business discipline                                                                                                                                                                             |
| Enterprise-formal sector   | - Self-financing and self-regulating<br>- Based on actual occupational tasks performed in employment<br>- Matched closely with existing production technology                                                                          | - Training is selective, most notably in larger firms, for higher skilled occupations and better educated workers<br>- Training is short-sighted in some cases<br>- Small enterprises are less likely to train |
| Traditional apprenticeship | - Pervasive sources of skills for informal economy<br>- Based on actual occupational tasks performed in employment<br>- Serves poorer segments of the population<br>- Self-financing and self-regulating<br>- Generally cost effective | - Perpetuates existing technologies<br>- Training delivery is often poor<br>- Lack of standards and quality assurance<br>- Skills obtained are often incomplete                                                |

Source: World Bank (2004).

As table 1 show, it is worth nothing that government-owned training institutions can focus on strengthen strategies skills according to national development policies without regards for direct cost-recovery and can deliver services to the whole country. Additionally, public training institutions are able (i) to assist socially vulnerable people, (ii) to assure training quality through the development of an accreditation system and (iii) to train current workers/employees in order to keep pace with technological advance.

**Problem statement.**

Due to the advancement of skills and technology in the Twenty-First Century, the demand for developing and training of a high-quality workforce is the most important task for most countries. Therefore, TVET continues to play a role in supporting economic development, labour and human resources needs. However, TVET will not be successful without support and motivation from its main key players which include government, university and industry that can subsequently influence the economy of a country. Furthermore the lack of accountability and risk-sharing among public, private and academic sectors in providing Public Private Partnership (PPP) services can lead to major complications for TVET actors in sustaining TVET development.

**Research Objective**

The purpose of this study is to determine a relevant type of Public Private Partnership (PPP) model suitable to be incorporated in determining long-term contractual arrangements in terms of socio-economic impacts, investments and prospects, task efficiency and service enrichment to develop a feasible TVET hub in ASEAN (+3) countries that involved TVET actors as well as promoting “maintenance culture” among government private and academic sectors in the respective region.

- I. To explore numbers of existing programs/projects of TVET PPP among government, university and industry within TVET of your country based on relevant PPP model.
- II. To determine the extent of private participation in different types of PPP arrangements/agreements within of your country based on relevant PPP model.
- III. To compare between numbers of PPP programs with types of PPP arrangements/agreements within TVET of your country.

- IV. To explore the influences of socio-economic impacts, investments and prospects, task efficiency and service enrichment in determining the prospects and pitfalls of TVET PPP programs/projects of developing TVET hub in your country.
- V. To formulate and propose a cohesive new PPP model involving government, university and industry in accordance TVET hub development in of your country.
- VI. To recognize the major policy context regarding public-private partnership in TVET sector in your country.
- VII. To examine the current situation of public-private partnership that exists in the TVET system in your country.
- VIII. To identify strategies to strengthen PPP.

All of these objectives follow the criteria of Quality / Accuracy / Objectivity, Credibility, Relevance, Practicalities!

## **2.5**

### **Research Questions**

- i. How is PPP organized in partner countries, what kind of programs exist and are implemented?
- ii. Which economic and institutional elements are crucial to the successful implementation of PPP in VET in reality?
- iii. What are the relationship and interactions among them?
- iv. How do firms get involved in PPP?
- v. What benefits and costs do they expect to have and actually have?
- vi. How are power distributed among the participating stakeholders in VET PPP?
- vii. How are they defined and regulated in the process of program design?
- viii. What are the government's expectations and worries in VET PPP?
- ix. Which functions does and shall government take during the development and implementation stage?
- x. What are the most important policy implications?

3.0:

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## RESEARCH METHODOLOGY

### 3.2

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#### **Research Method**

The research project will utilize Exploratory Sequential Mixed Method that requires qualitative and quantitative approaches. For qualitative phase, the following methods content analysis, interviews, surveys, intellectual discussion and studies has been undertaken in this study.

Meanwhile, quantitative phase has been utilized secondary data from annual reports, online database and other published statistics on TVET movement in Malaysia specifically on Private Public Partnership Arrangements/Agreements. Multiple regression analysis and statistical modelling are among the techniques has been used in the analysis. Sample of this study including 20 members from Ministry of Education, Ministry of Higher Education, Ministry of Human Resources and Ministry of Rural Development. There were also members from various industries players involved in the interview session.

1. Literature review, data analysis.
2. Identification objects relevant for the survey.
3. Planning of the survey.
4. Document research review method to collect, systemize and summarize all available policy documents and theories facilitating the Public-Private cooperation in vocational training.
5. Investigation/Questionnaire Survey method is to identify the current cooperation status between TVET institutions and companies; requirements and responsibilities of each of the constituents.
6. Interview method applied to organizations/individuals related to organizing and managing Public-Private cooperation relationship (education institutions and companies).

In preparing the national report, these steps were taken:

- i. Study and evaluate the current practice related to PPP model including its governance, business, training models and type of collaboration in context of Malaysia practice.
- ii. Do a detailed process analysis to understand how PPP models currently conducts its business and training processes in Malaysia?
- iii. Understand PPP Models current practice and system of resource allocations including physical, financial and human.
- iv. Analyse the limits of the current PPP models system including legal and resource limitations and make recommendations for regional PPP models improvements.
- v. PPP models that serve as the basis for the creation of a common practice with the following characteristics: responsiveness, relevance, cost-effectiveness, efficiency, accountability and sustainability

Suggestions model for Regional Public Private Partnership framework models (ASEAN) in terms of requirements (physical, financial and human) common needs for RCP members and individual members including operational guidelines, policies, procedures, processes, structures and mechanisms to be able to achieve the characteristics as identified above.

## 4.0

### DOCUMENT ANALYSIS & FINDINGS

- i. **How is PPP organized in your country, what kind of programs exist and are implemented?**

In most countries the state alone cannot provide sufficient access to high-quality training. Private provision, by employers and private training organizations, often fills the gap. Private sector involvement, whether at the strategic level or at the level of training delivery, can greatly enhance what is offered by the state, but this needs to be done in partnership with the state, with clearly delineated responsibilities which recognize each

other's strengths, rather than state and private provision working independently of each other.

### **PPP in Malaysia Model**

The Public Private Partnership (PPP) programme in Malaysia is an important component of the Malaysia Incorporated concept – a development approach introduced in 1983. PPP in Malaysia is defined broadly as an arrangement where the private sector provides services and invests in infrastructure assets, which would traditionally have been undertaken by the government. At the crux of this arrangement there is an optimal risk sharing among the parties involved, mutually pre-agreed performance parameters that govern the conduct of the business, and a definite duration for the service concession. Another important characteristic is the continuing interest of the government, directly in the form of an equity holding or indirectly in the form of operational oversight in the projects. These features differentiate PPP projects from the privatization model, whereby the government no longer has control or interest in the entity. To date the PPP model has been applied in a wide range of public projects, such as the development of administration complexes, university campuses (including student residential buildings), hospitals, highways and bridges, integrated transport terminals, port facilities, medical equipment and supplies, solid waste treatment and public cleaning, power generation, and a 'guest worker' monitoring system.

In the Malaysian context, apart from budgetary considerations, PPP is seen as an avenue to benefit from private sector innovation and efficiency. It is also a way to promote shared responsibility and accountability in the provision of public services, as well as to bring about optimal utilization of the nation's resources. In 2009, the Public Private Partnership Unit (PPP)<sup>32</sup> was established via administrative arrangement. It is accountable to the prime minister. This re-affirms its position as a central agency within Malaysia's administrative framework and reflects a strong political commitment to the PPP programme by the country's top leadership.

When the PPP programme was first introduced, there was no clear distinction between PPP and privatization. In order to facilitate its implementation, the government

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32. PPP is also known as Unit Kerjasama Awan Swasta (UKAS).

published Guidelines on Privatisation in 1985. These guidelines were subsequently superseded by the Privatisation Master Plan in 1991. The Master Plan contains an overall policy framework for privatization: its objectives, models, guidelines on asset and equity valuation, staffing and ownership structure, as well as changes to relevant laws and regulations. In the light of further refinement to the partnership concept, the government introduced a new guideline in 2009 entitled PPP Guideline. This guideline complements the Privatisation Master Plan, particularly for projects where a government entity is the paying party. It also provides greater clarity as to the types of project suitable for the PPP approach, procedures to follow when making proposals, qualifying criteria for bidders of projects, operating models, payment mechanisms, and process flow for project approvals.<sup>33</sup>

### **Principles in Adopting PPP Approach in Malaysia**

A PPP proposal will only be considered if there is a need on the part of the Government for the project after taking into account the benefits/probity as whole in term of, inter-alia:<sup>34</sup>

- i. Socio-economic impacts
- ii. Value for money and cost savings to the Government
- iii. Quick delivery of the project and service enhancement
- iv. Increased level of accountability, efficiency and effectiveness

### **ii. Which economic and institutional elements are crucial to the successful implementation of PPP in VET in reality?**

In Malaysia, only 10 per cent of students enrol in upper secondary technical and vocational streams. In addition, more than 100,000 school-leavers join the labour market annually, after 11 years of formal schooling without pursuing further education or training. Consequently, there is a huge opportunity for TVET providers to attract school-leavers to take up TVET. During the Plan period of 2011-2015, the focus is to improve the value proposition and attractiveness of TVET to prospective students, providers and

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33. PPP Country Profile – Malaysia

34. PPP Guidelines-Public –Private Partnership Unit, Prime Minister Department, Putrajaya

industry. A national media campaign is being rolled-out to improve public awareness and perception of TVET as well as to re-brand TVET as an attractive career option.

The PSDC (Penang Skills Development Centre) was established in 1989 and is the first tripartite, industry-led skills training and education centre in Malaysia. Since its inception, the PSDC has grown phenomenally to become the premier learning institution in the country, dedicated to meet the immediate human resource needs of the business community and to support and strengthen business requirements. It has attained both national and international recognition as a truly successful example of shared learning and a model institution for human resource development to be emulated within and beyond Malaysia.

Over a period of 20 years, the Centre has trained over 150,000 participants through more than 7,000 courses; pioneered local industry development initiatives; assisted in the input and formulation of national policies pertaining to human capital development and contributed directly to the Malaysian workforce transformation initiatives.

In line with its commitment to support the growth and development of local industries, the PSDC remains dedicated in its aim to provide quality training programs and services to SMEs. In 2010, it executed PSDC 3.0, a strategy that supports the onset of Industry 3.0, the advent of High Technology Research and Design & Development activities in the field of manufacturing and its related services. With its unique approach incorporating both the New Economic Model and the 1Malaysia: People First, Performance Now concepts, the PSDC continues to supply high-end Shared Services facilities and promote fundamental Design and Development activities to meet the current needs and demands of the industry.

iii.

**What are the relationship and interactions among them? How do firms get involved in PPP?**

- **Implementation of NDTs in Malaysia**
- **Penang Skills Development Centre (PSDC)**

The PSDC (Penang Skills Development Centre) was established in 1989 and is the first tripartite, industry-led skills training and education centre in Malaysia. Since its inception, the PSDC has grown phenomenally to become the premier learning institution in the country, dedicated to meet the immediate human resource needs of the business community and to support and strengthen business requirements. It has attained both national and international recognition as a truly successful example of shared learning and a model institution for human resource development to be emulated within and beyond Malaysia. Over a period of 20 years, the Centre has trained over 150,000 participants through more than 7,000 courses; pioneered local industry development initiatives; assisted in the input and formulation of national policies pertaining to human capital development and contributed directly to the Malaysian workforce transformation initiatives. In line with its commitment to support the growth and development of local industries, the PSDC remains dedicated in its aim to provide quality training programs and services to SMEs. In 2010, it executed PSDC 3.0, a strategy that supports the onset of Industry 3.0, the advent of High Technology Research and Design & Development activities in the field of manufacturing and its related services. With its unique approach incorporating both the New Economic Model and the 1Malaysia: People First, Performance Now concepts, the PSDC continues to supply high-end Shared Services facilities and promote fundamental Design and Development activities to meet the current needs and demands of the industry.

#### 4.3.1 Government funded program

| <b>Government Funded Program</b> |  |  |  |
|----------------------------------|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| Program Name                     | Industrial Skills Enhancement Program (INSEP)                                       | Upskilling Program (For the Telecommunication sector)                                | Upskilling Program (For the Electrical and Electronics sector)                        |
| Government Sponsor               | Perbadanan Tabung Pembangunan Kemahiran (PTPK)                                      | Talent Corporation                                                                   | Talent Corporation                                                                    |
| Program Structure                | Train and Place                                                                     | Place and Train                                                                      | Place and Train                                                                       |

| Program Duration   | 6 months                                           | 6 months                                                                                                                | 6 months                                                                                                                |
|--------------------|----------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Duration Breakdown | 3 months Training + 3 months Industrial Attachment | 30 days Training + Remaining days On-Job-Training (OJT)                                                                 | 30 days Training + Remaining days On-Job-Training (OJT)                                                                 |
| Objective          | Increase Employability                             | Produce industry ready Engineers to support industry 3.0, the advent of high technology design & development activities | Produce industry ready Engineers to support industry 3.0, the advent of high technology design & development activities |

Table 2: Government funded program

#### I. INSEP (Industrial Skills Enhancement Program)



The PSDC has developed a list of programs based on the skills required by the industries. Qualified candidates will receive monthly cash allowance of RM500.00 and may select from the following courses:

- Manufacturing Process
- Enterprise Resource Planning (ERP-SAP)
- Financial Accounting SAP

In order to inculcate a sense of responsibility and self-discipline, full attendance is expected and class performances will be strictly monitored by qualified trainers. The total duration of the INSEP program varies between 6 months with both training and industrial attachment. Graduates will be placed with world-class organizations and reputable local companies which include AMD, Prodelcon, LBSB and many more. Such an arrangement will create a win-win situation where companies can increase their productivity while graduates gain more working experience preparing them for more employment opportunities.

## **II. Upskilling Program (For the Telecommunication sector)**

A 12-month Apprenticeship Program specially designed for University Engineering Graduates with a CGPA of 3.0 and above, Upskilling program allows apprentices to undergo formal classroom and lab training, and experience a complete industrial immersion through Host Companies. The program not only incorporates a monthly allowance based on market entry level salary, it also gives the apprentices an invaluable opportunity to learn from the best in the industry.

### **Program Objectives**

- Increase the productivity and employability of fresh graduates in the Telecommunication Cluster
- Enable Apprentices to demonstrate relevant knowledge and understanding of modules, software and techniques used in the current working environment
- Hone Apprentices' technical skills to prepare them for their future careers
- Provide industrial networks and industry partners within the Telecommunication Cluster

### **Program Structure**

The PSDC Upskilling Program consists of both classroom/lab training at the PSDC and On-Job-Training at the respective Host Companies. Classroom training includes technical modules.

#### **PSDC Upskilling Program**

| <b>Classroom/Lab Training</b> |                  | <b>On-Job-Training</b>        |
|-------------------------------|------------------|-------------------------------|
| <b>General</b>                | <b>Technical</b> | Proprietary Technical Modules |

|                |  |
|----------------|--|
| <b>Modules</b> |  |
|----------------|--|

Figure 2: Program Structure

#### 4.3.2 German Dual Vocational Training

##### I. About the program

The German Dual Vocational Training [GDVT] Program in Mechatronics is designed to upskill the existing technical workforce and school leavers with international-level skills and competencies. Apprentices are trained through a two-pronged approach, where training is conducted at both the workplace and training institutions in actual work conditions under the guidance of competent coaches and classroom trainers.

##### II. Program objectives

- to enable employees/fresh school leavers to obtain a recognised Malaysian Skills
- Diploma and/or Advanced Diploma with a German Chamber (AHK) accreditation.
- To ensure consistent supply of outstanding, well-trained, and technically competent employees as the talent pipeline for future business needs.

##### III. Program structure

The GDVT Program consists of both Theoretical/Classroom Training (30%) at the PSDC and Practical Industry Training (70%) at the workplace.

| PRACTICAL TRAINING (INDUSTRY DEMAND)                                                                                                                                                                                   | CLASSROOM TRAINING (MAPPED TO INDUSTRY DEMAND)                                                                                                                                                                                             |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Cleaning Process</li> <li>• Censoring System</li> <li>• Cutting (Electro-Fission/Blade)</li> <li>• Drawing</li> <li>• Forming/Punching/Bending</li> <li>• Grinding</li> </ul> | Competency Unit (In Line with JPK Requirements) <ul style="list-style-type: none"> <li>• Technical Drawing</li> <li>• Quality Control Coordination</li> <li>• Fundamental of E&amp;E</li> <li>• Fundamental of Material Science</li> </ul> |

|                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• Heat Treatment (Hardening &amp; Annealing)</li> <li>• Hydraulic (Pump)</li> <li>• Leak Testing</li> <li>• Molding</li> <li>• Packing &amp; Labeling</li> <li>• Pneumatic System</li> <li>• Polishing</li> <li>• Programmable Logic Control (PLC)</li> <li>• Robotic Arm System (Electric/Servo/Air/Positioning)</li> <li>• Supervisory</li> <li>• Technical Drawing</li> </ul> | <ul style="list-style-type: none"> <li>• CNC Machining Operation</li> <li>• Control Systems</li> <li>• Engineering Design</li> <li>• Project Management</li> <li>• Final Year Project</li> </ul> |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

Figure 3: Program Structure

#### IV. Program certification

The GDVT program is accredited by both Malaysian and German education systems. Upon successful completion of the program, graduates will receive certificates from both Skills Development Department (NOSS certification) and MGCC (AHK certification).

| Program                      | Skills Level       | Duration         | Investment Cost     |
|------------------------------|--------------------|------------------|---------------------|
| GDVT Skills Diploma          | Level 2 to Level 4 | 28 months        | RM 18,550.00        |
| GDVT Advanced Skills Diploma | Level 5            | 12 months        | RM 6,500.00         |
| <b>Total</b>                 |                    | <b>40 months</b> | <b>RM 25,050.00</b> |

Figure 4: Program Schedule

#### V. Program schedule

Apprentices will undergo their Practical Industry Training on weekdays at their workplace. Theoretical/Classroom Training will be held on weekends at the PSDC.

#### VI. Program benefits

The GDVT program is an industry-oriented training and is conducted at the workplace in actual work conditions under the guidance of competent coaches/trainers. Operators and/or fresh recruits can be skilled and certified while working. With

opportunities for career advancement available, this will potentially encourage employee retention and workplace loyalty. Employers will be able to build a team of skilled mechatronic technicians who are highly specialised and well-versed in their company's technologies. This will not only lead to higher efficiency and productivity, but also lessen companies' dependence on foreign experts and workers in the long run.

**How is PPP organized in your country, what kind of programs exist and are implemented?**

In most countries the state alone cannot provide sufficient access to high-quality training. Private provision, by employers and private training organizations, often fills the gap. Private sector involvement, whether at the strategic level or at the level of training delivery, can greatly enhance what is offered by the state, but this needs to be done in partnership with the state, with clearly delineated responsibilities which recognize each other's strengths, rather than state and private provision working independently of each other.

In Malaysia we have 5 types of models that are implemented in connection with PPP. It is **transforming, buying places/buying places, National Dual Training System (NDTS), and Apprenticeship scheme to reskill/up skill workers and last but not list is work based learning program**. The example of buying seat is Ministry of Education buy seats in private and public TVET institutions. For transformation program is collaboration between Kolej Komuniti Langkawi and Taylor's University, Successful PPP (1st batch enrolled in July 2013). For apprenticeship scheme, the training is a combination of theory and practical at approved training centres with emphasis on practical and structured "on-the-job" training at the premises of sponsoring employers. For NDTS model, new apprenticeship program is intended to train skilled workers through sharing of resources, between public training institutions and private sector.

**Which economic and institutional elements are crucial to the successful implementation of PPP in VET in reality?**

Malaysia aspires to move up the value chain to become a high income economy. A skilled workforce is critical to achieving this goal. Consequently, it is important to increase the enrolment in TVET and raise the overall quality. Tenth Malaysia Plan (10MP) for the period 2011 to 2015 shows a significant change in the system of Technical and Vocational Education (Technical and Vocational Education Training -TVET / TEVT) in Malaysia. Cultivation ideas and strategies as well as an increase in performance-based countries such as Korea and Germany to become a high-income country into a model for Malaysia to continue to move forward and compete on the world stage. Worked with a more holistic approach in first class human capital formation a priority to one embodiment Malaysia a high-income country and respected.

(Tenth Malaysian Plan, 2010:195)

....since education is considered the key to effective development strategies, technical and vocational education and training (TVET) must be the master key that can alleviate poverty, promote peace, conserve the environment, improve the quality of life for all and help achieve sustainable development.....

(Bonn Declaration, 25 to 28 October

2004)

System Technical and Vocational Education (TVET) was offered a reform of meet the requirements in order to achieve the national aspiration. Improve people's skills Malaysia to expand the marketability should be a basic priority. Post-secondary and tertiary education will be a catalyst for a change in where the need for skilled and semi-skilled workers needed by industry can be seen generate sustainable economic growth.

**What are the relationship and interactions among them? How do firms get involved in PPP?**

Development of world-class human capital in Malaysia requires effort comprehensive and integrated from both the public and private sectors and the community. In connection, this collaboration between the various ministries and the private sector should be strengthened to increase the effectiveness of human capital development and take

advantage of all the layers community. A holistic approach will meet the needs of all Malaysians in stage of their lives.

**What benefits and costs do they expect to have and actually have?**

The example is National Dual Training System (NDTS) plan, the Malaysian government hopes the private sectors can collaborate with the public sector through sharing resources in accordance with the NDTS approach, each skills training is to be done at the institute and company workplace. NDTS, the new apprenticeship program, is intended to train skilled workers through sharing of resources, between public training institutions and the private sector. In this collaboration, industry must be willing to support students to learn work process knowledge, provide a pocket allowance of RM350 – 500 per month and provide other facilities to the apprentice.

**How are power distributed among the participating stakeholders in VET PPP?**

Industry needs to provide qualified trainers or supervisors from among technical staff to act as supervisors, coaches' or facilitators. Therefore, the companies need to recognise that changes in the production system need to take place to match training needs and resources, including continuous financial commitment ones need to be made available in the name of the dual training system.

**How are they defined and regulated in the process of program design?**

The Department of Skills Development (DSD), a department under the Ministry of Human Resources Malaysia, has been appointed as the agency responsible for administering, supervising, evaluating and ensuring the quality of the dual training approach. It is also monitors, evaluates and conducts research on the implementation of NDTS. Consequently, it plays a prominent role in promoting NDTS to the training institutes and private industry.

At the training institution, most of the trainings are concerned with running certificated full-time courses at management discretion that are decided and chosen at each institute's level. At the ends the semester, students are required to undertake workplace practical training for 3-6 months depending on the type of courses. A

certificate may be awarded after they complete the training requirement and pass the entire exams. Private industry employers claimed that those graduates were proven to be a 'mismatch' when they could not meet the industry's workplace skills demands.

### **What are the government's expectations and worries in VET PPP?**

The main problem between the industry and training institutions is lack of understanding about cooperation requirements, especially regarding the roles of instructors and trainers. Private industry is criticizing public training institutions for not being up to date in relevant technical and work technology processes demanded by the industries. The training institutions are complaining that the industries are not providing enough information and assistance to the training institution especially in preparing an appropriate curriculum. The training institutions are late in picking up the requirements of the industries. There is definitely a gap between the existing requirements of private industry and the day to day training taking place at the institutions. In summary, there exist a poor collaboration between public training centres and private industry in vocational training sphere.

DSD also has problem of its own. The issues, discussed by experts blamed on the quality of DSD's dual system experts (DSE). DSE's task is to convince the CEO or the managers of private industry to join NDTs. By introducing NDTs plan, the Malaysian government hopes the private sector can collaborate with the public sector through sharing resources. In accordance with the NDTs approach, each skills training is to be done at the institute and company workplace.

### **Which functions does and shall government take during the development and implementation stage?**

Government shall convince the industry to join NDTs. They have to ensure that the training institutes and industry have an agreed framework to carry out training under the rules of NDTs. They help both parties to work together, and to carry out training in accordance with the requirements of NDTs. By introducing NDTs plan, the Malaysia government hopes the private sector can collaborate with the public sector through

sharing resources. In accordance with the NDTs approach, each skills training is to be done at the institute and company workplace.

### **What are the most important policy implications?**

The most important policy implication under TVET are may reduce cost; provide suitable professional and skilled employees to the industries.

- iv. What benefits and costs do they expect to have and actually have?
- v. How are power distributed among the participating stakeholders in VET PPP?
- vi. How are they defined and regulated in the process of program design?
- vii. What are the government's expectations and worries in VET PPP?
- viii. Which functions does and shall government take during the development and implementation stage?
- ix. What are the most important policy implications?
- x. Please identify your research with this 6 characteristics responsiveness, relevance, cost-effectiveness, efficiency, accountability and sustainability.

5.0:

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### **OCIO - ECONOMIC FRAMEWORK IN THE COUNTRY**

In pursuit of globalization, the transformation towards knowledge-based economy (k-economy) requires a comprehensive development plan, particularly in the context of higher education institutions and research and development institutions. Investment in tertiary education and wider availability of higher education opportunities has become one of the key policies in economic development for most countries including Malaysia. An educational institution plays an important role in producing a highly educated community and is needed in today's global economy. Physical capital and labour inputs are important factors contributing to the economic growth recorded by many countries. However, a mere dependence on these basic factors of production will not guarantee

sustainable economic growth. Conversely, an increase in productivity through human resource development and technological advancement is also crucial to sustain the growth.

Malaysia's skilled workforce is still low at only 28 percent compared to other countries such as Singapore, Taiwan and South Korea. The government is committed to ensuring that talent upgraded to achieve the target of 50 per cent by 2020. TVET qualifications based career of choice community-based career as an academic qualification. Malaysia in planning direct a high income developed nation see either strategy effort that need to be carried out is through educational practice. Malaysian governments spend large budget especially in the development of technical and vocational education. Various strategy has been arranged to realise that dream. Country's education system reformation overall reflect country seriousness to move ahead to that competitive trend with world class human shaping, ensure early education is given to the people, educational institution and teacher effectiveness become a major factor that in give emphasis. TVET education system also has given a new way of the development, such as development of TVET education and increasing the graduate competencies learning so that worth marketability.

"Under the Tenth Malaysia Plan (RMK-10), from 2011 to 2015, he worked for mainstreaming and expanding access to TVET. Given the negative public perception still exists in this field, it is committed to strengthening TVET under RMK-11 for the period 2016 to 2020,"

*Tan Sri Mohamad Zabidi Zainal*

Value for money (VFM) in public-private partnership (PPP) projects involved TVET Institution, Industries and Government is gained through the engagement of private sector efficiency, effectiveness, and economy and through the appropriate allocation of risks in the project. The assessment of the potential activities and program successful to secure VFM is a key element of the PPP assessment process. The conclusions on VFM potential will inform TVET institution and governments in developing collaboration member on whether to proceed with a PPP procurement, and, if so, the form of PPP that could be used. A key factor in determining how VFM is to be used and applied is shaped by who takes the (fundamental) demand risk of the project. Since PPP in TVET has been

introduced to industries these projects are based on market demand, the end-users determine whether it is worth paying for the asset created and service delivered. In such projects, taxpayer money is rarely directly contributed to enhance project cash flows. Therefore, for many of these projects, value testing has not been undertaken. Moreover, due to lack of resources, many governments rely on the private sector to build these assets, for if a privately financed asset is not available, very little infrastructure may need to be financed and built.

6.0:

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#### POLICY FRAMEWORK FOR PPP

Public private partnership (PPP) is a globally accepted public sector procurement mechanism whereby the government engages commitment from the private sector and transfers a certain level of responsibilities to the private sector in providing public facilities or services. The fundamental justifications for adopting PPP would significantly reduce the upfront costs for the government in providing and maintaining public facilities and that it allows for improvement in the public facilities and services because PPP encourages innovation by the private sector (Heald and Geaughan, 1997; Gaffney, Pollock and Shaoul, 1999; Glaister, 1999). In Malaysia, PPP projects have grown at an accelerated pace since the 1980s because of a few enforcing factors, including the government agenda to foster greater private sector involvement in the country's development projects by offering attractive incentives and the rapid growth of construction projects as part of the country's development plan (Endut, Akintoye and Kelly, 2006; Ismail, 2012). In particular, the evolution of PPP in Malaysia started with the Malaysia Incorporated programme (Economic Planning Unit, 1981) and was followed by the privatisation programme (Economic Planning Unit, 1985). Under the Economic Planning Unit, the government's goal to encourage greater participation of the private sector in government projects was accomplished when the Private Finance Initiative programme was officially unveiled (Economic Planning Unit, 2006). More recently, in the Tenth Malaysia Plan, the continuous effort of the Malaysian government in promoting private sector involvement was revealed with the announcement of more development projects to be implemented

using the PPP scheme (Economic Planning Unit, 2010). It is vital to put forward the differences of opinion of the two parties because each party plays a different role in a PPP contract. The remainder of this paper is structured as follows. The next section reviews relevant literature concerning the attractive factors in adopting PPP. This is followed by a methodology section, which describes the instrument used, sample and data collection and analysis procedures. The results are discussed in the subsequent section, followed by the implications, limitations, suggestions for future research and the conclusion in the final section.

The World Economic Forum (World Economic Forum) has recognized Malaysia as a country with a level of competition that is better than 142 countries around the world and based on the latest report, Malaysia was ranked 21<sup>st</sup> in 2010 than in the 26<sup>th</sup>. According to the report, the level of global competition in 2011/2012, the better position is due to the intensification of Malaysia to improve its position in line with the changes that are needed to enable the level of developed countries in 2020, and subsequently removed from the situation of middle-income economy high to high income countries.

Greater emphasis on the development of the education sector for example also makes Malaysia is ranked 14<sup>th</sup> overall and second after Singapore for Southeast Asia. This position also makes the Malaysian education system is better than the United States, United Kingdom and Germany.

The actual achievement reflects the government's determination to ensure that all citizens receive quality education and are not left out of the school system, because Malaysia is confident that through the development of human capital will boost the performance as a developed country by 2020. The Ministry of Education (MOE) is the agency responsible for establishing and setting in place a comprehensive schooling system from pre-school to secondary education. The Education Act 1996 is the education legislation that provides for pre-school education, primary school education, secondary school education, post-secondary education, teacher education, special education, religious teaching, private education, and technical education. TVET programmes at the secondary school level have taken a broad-based and non-terminal approach. The delivery system allows the opportunity for students to progress to tertiary education level and acquire a Certificate, Diploma or a Bachelor's degree qualification.

Rapid changes in technology and markets have created new demands for vocational education and training organizations to provide graduates who are globally competitive. Debates about the most appropriate forms of training to meet these demands are concerned not only with curricula and resources within (technical and vocational education training) TVET organizations, but also with the most effective strategies for improving collaboration with industry.

Tenth Malaysia Plan (10MP) for the period 2011 to 2015 show a significant change in the system of Technical and Vocational Education (Technical and Vocational Education Training -TVET / TEVT) in Malaysia. Cultivation of ideas and strategies, based on the achievement and increase foreign countries like Korea and German into a high-income country into a model for Malaysia to continue to uncoil step and be competitive on the world stage. To work with a more holistic approach in first class human capital formation will be the first one embodiment Malaysia a high-income country and respected. World-class human capital development in Malaysia requires business comprehensive and integrated from both the public and private sectors and the community. Collaboration between various ministries and the private sector should be strengthened to increase the effectiveness of human capital development and take advantage of all the layers society. A holistic approach will meet the needs of all Malaysians in the stages of life (Tenth Malaysia Plan, 2010: 195)

The Private Finance Initiatives (PFI) Programme was announced in the Ninth Malaysia Plan in March 2006, aimed at facilitating greater participation of the private sector to improve the delivery of infrastructure facilities and public service. It sets out many of the key principles on how some of the public sector infrastructure projects will be procured and implemented. PFI will be undertaken as part of the new modes of procurement under the Public Private Partnerships (PPP) to further enhance private sector participation in economic development. The terms PPP and PFI have often been used inter-changeably throughout the world though there are subtle differences between them. However, for Malaysia, the PFI principles as announced in the Ninth Malaysia Plan form a subset of the umbrella PPP principles. For consistency purpose, the general term PPP will be used throughout this document.

PPP involves the transfer to the private sector the responsibility to finance and manage a package of capital investment and services including the construction, management, maintenance, refurbishment and replacement of public sector assets such as buildings, infrastructure, equipment and other facilities, which creates a standalone business. In these PPP projects, there is a contract for the private party to deliver public infrastructure-based services over a long period of time. The private party will raise its own funds to finance the whole or part of the assets that will deliver the services based on agreed performances. The public sector, in turn, will compensate the private party for these services. In some PPP projects, part of the payments may flow from the public users directly. Though ownership of assets plays a less important role in PPPs, nevertheless many of the modalities see a transfer of the assets to the public sector (revertible) as a matter of course. There are some PPP projects where the assets are not transferred to the public sector at the end of the concession period. These usually relate to facilities or projects that have little value at the end of the period due to their technological obsolescence.

A PPP proposal will only be considered if there is a need on the part of the Government for the project after taking into account the benefits/probity as a whole in terms of, inter-alia:

- i. Socio-economic impacts
- ii. Value for money and cost savings to the Government
- iii. Quick delivery of the project and service enhancement
- iv. Increased level of accountability, efficiency and effectiveness

### **Key Features/Characteristics**

PPP is a public procurement model in which the value for money as shown in Box 1 is optimised through efficient allocation of risks, whole life service approach, private sector innovation and management skills as well as synergies from inter-linking the design, finance, construction and operations. Some of the key features/characteristics of PPP projects are as follows:

- i. Relationship between public and private sectors is based on partnership;
- ii. Public sector procures specified outputs or outcomes of a service for a concession period;
- iii. Private sector determines the required inputs to achieve the specified output and the private sector is given latitude to introduce innovation into their designs and development to reduce overall costs;
- iv. Payment for services is based on pre-determined standards and performance;
- v. Promotes 'maintenance culture' where the concessionaires will be responsible for the long term maintenance of the assets throughout the operational tenure agreed upon;
- vi. Integration of design, construction, finance, maintenance and operation – total package;
- vii. Transfer of assets at the end of the concession period becomes an option to the Government; viii. Optimal sharing of risks whereby risk is allocated to the party who is best able to manage it; and
- viii. Whole Life Cycle Costing ('WLCC') whereby PPP projects are usually awarded based on lowest total cost over the concession period compared to lowest construction costs under the traditional procurement method-a paradigm shift in the form of procurement objective

7.0:

S

## ELECTED PPP MODELS

In most countries the state alone cannot provide sufficient access to high-quality training. Private provision, by employers and private training organizations, often fills the gap. Private sector involvement, whether at the strategic level or at the level of training delivery, can greatly enhance what is offered by the state, but this needs to be done in partnership with the state, with clearly delineated responsibilities which recognize each other's strengths, rather than state and private provision working independently of each other. In Malaysia, have four (4) major models for PPP. There are Buying Places or buying

seats, Transforming, National Dual Training System (NDTS) and Apprenticeship. All of 4 models have their own advantages and disadvantages. Here some explanation about these 4 models:

## 7.1

**B**

### Buying Places or Buying Seats

Ministry of Education buy seats in private and public TVET institutions.

- a) Malaysian Aviation Training Academy ( Aviation Maintenance ) - 200 students enrolled
- b) KRU Academy Sdn. Bhd. ( 3DAnimation & Visual Effects ) - 100 students
- c) Malaysian Institute of Technology Academy ( Mechatronic & Tool Maker ) - 172 students enrolled
- d) Marine Technology & Ship Engineering - 150 students

## 7.2 Transforming

Private University partners with a Public Skills Institute, Langkawi Community College.

Pilot Project:



- i. Certificate in Culinary Arts
- ii. Certificate in F&B Service
- iii. Certificate in Room Division

Objective:

To produce “fit-for-industry” graduates that addresses the talent shortages in Langkawi, while building capabilities of the local community college's staff and lecturers.

Collaboration between:

Kolej Komuniti Langkawi and Taylor's University, Successful PPP (1st batch enrolled in July 2013)

- Facilities Upgrade (Completed)
- Train-the-trainers (Completed)
- Curriculum Enhancement (Completed)
- Industry linkages with 5 & 4 Star Hotels (Completed)

### **7.3 National Dual Training System (NDTS)**

The National Dual Training System is an industry-oriented training program that combines workplace and institutional training. School leavers or existing workers who meet the criteria can be offered as apprentices by a sponsoring company to undergo training. A contract is signed between the company and the apprentices prior to the training. Apprentices are given certain amount of allowance throughout the training by the company and are obliged to work with the company upon completion if they are offered employment. The hands-on training is conducted continuously and the apprentice is expected to get through the assessment as well as the final test which will be conducted at the end of the training programme. Successful apprentices will be awarded with the national skills qualification by Department of Skills Development (DSD).

The Dual System (NDTS) is a combined learning environment with different charge entity policy, legal binding, and goal. Figure 6 shows the domains which from the "Dual System Training" characterized by institutions (learning at protected area and personalized leadership) and workplace (production, productivity and profitability) (Loose & Juri, 2008, P.100). Energetic and understanding partners are essential in this situation to narrow the gap between the two training sites so that parties can make strong plans to implement NDTS successfully. Implementing the dual system training will be drag without the "open mind and love" of the parties concerned. This view was echoed by Loose and Juri, :The

secret of success for dual system training following the experience-based appeal lies in the mobilizing the training potential of the private sectors and in identifying and sound operating mechanisms of interlinking “international” and “enterprise-based” learning and training activities. Again the perpetual challenge for the foundation of successful dual system training arrangements lies in the difference in the mind-set between the respective stakeholders behind the two domains of learning and training: Loose & Juri (2008,p.100).

NDTS dictates a plan to carry out training at workplace where apprentices undergo about 70% to 80% of the training duration. The remaining 20% to 30% is at the training institution (DSD, 2009, p7). The approach is to be worked out between the private industry and the public training institutions. Both parties need to consult each other whether the training is be delivered by day-released method or the block-released method.

At the end of training the apprentices sit for the final examination organized by both partners in the collaboration. Upon passing the different stages of the examination, apprentices are awarded MSC level 1 to level 3. Assessment of the apprentices is divided into 2 parts. One part is on theory which is consisting of the fundamental aspects of the trade. This is assessed by the training institutes. The other is on practice or work process which is assessed at the workplace by the private industry personnel.

(a) Person(s) involved in NDTs Implementation

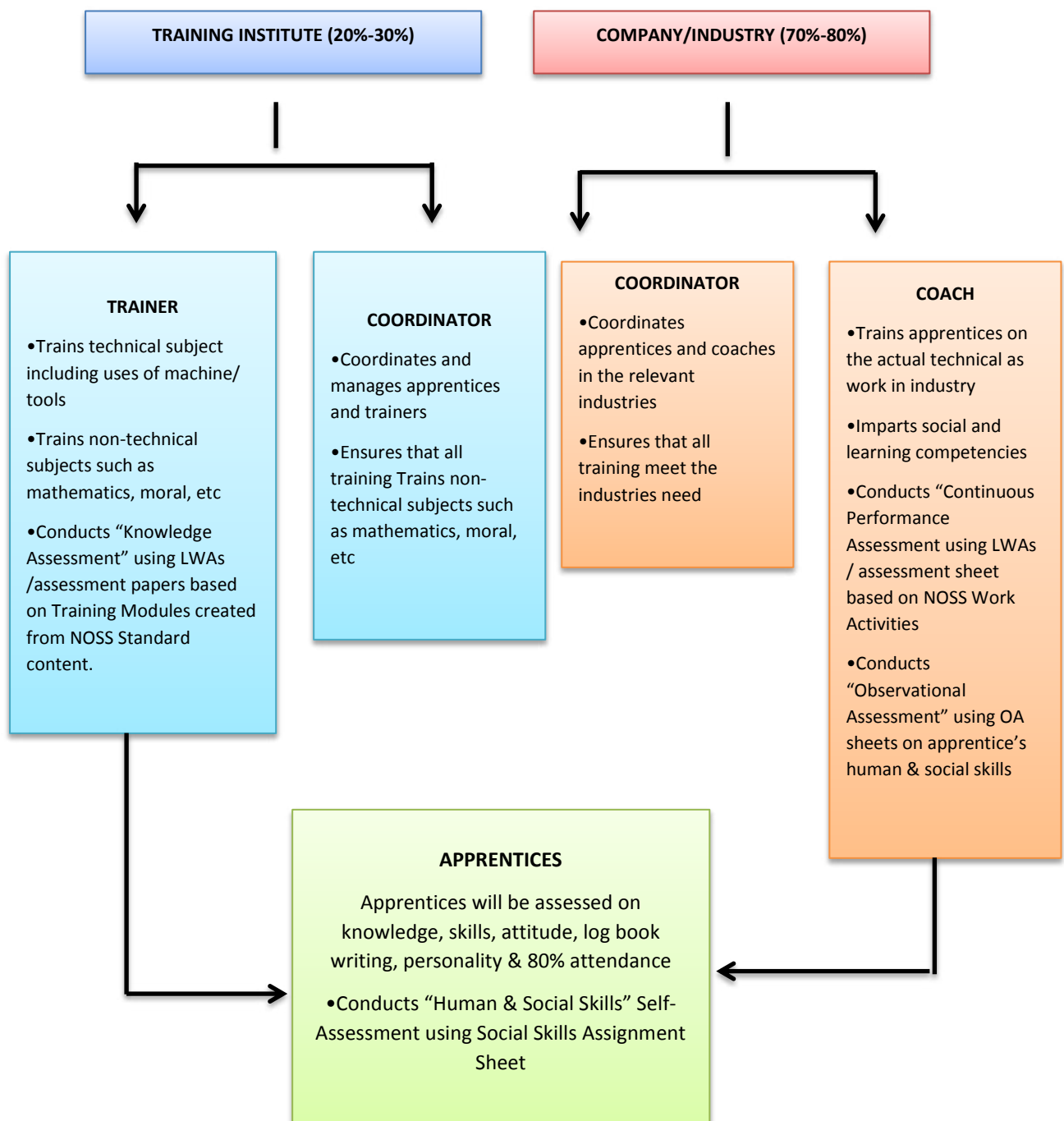


Figure 6 : Person(s) involved in NDTS Implementation

|                           |                                                                                |
|---------------------------|--------------------------------------------------------------------------------|
| Training Duration         | 2 years (4 semesters), depending on certification level.                       |
| Trainer-Apprentice Ratio  | 70-80% practical/hands-on (workplace) and 20-30% theory (training institution) |
| Trainer-Apprentice Ratio  | Trainers (theory) 1:20 apprentices                                             |
|                           | Coaches (practical) 1:3 apprentices                                            |
| Target Apprentices        | School leavers or existing workers                                             |
| Method of Delivery        | Day-release : 3-4 days at workplace and 1-2 days at institute                  |
|                           | Block-release : 3-4 months at workplace and 1-2 months at institute            |
|                           |                                                                                |
| Assessment                | Assignment and tests                                                           |
| Certification             | National Skills Certificate (SKM 3)                                            |
| Incentive for Apprentices | Allowance : RM350-500/months; (Employment opportunity)                         |
| Incentive for Companies   | Single tax deduction or HRDF reimbursement                                     |
| Duration of training      | 2 years (4 semesters)                                                          |

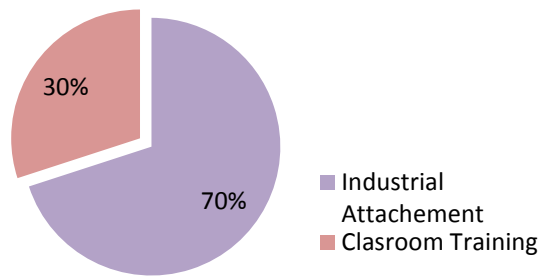
Figure 7: NDTS Structure in Malaysia (source: NVTC 2004, p.3)

**Pilot Project:**

**German Chamber of Commerce partners with a Private Skills Institute, GMI**

- National Dual Training System (NDTS) for Advanced Diploma in Transport and Logistics Management and Advanced Diploma in Industrial Management (Malaysian Skill Certificate Level 5)
- Launched on 29 Jan 2014

### NDTS Model



| PUBLIC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | PRIVATE                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <div> </div> <p><b>Dept of Skills Development,<br/>Ministry of Human Resources</b></p> <ul style="list-style-type: none"> <li>• Facilitate NOSS development</li> <li>• Quality control and certification</li> </ul> <div> </div> <ul style="list-style-type: none"> <li>• Classroom Trainings &amp; Exam</li> <li>• Provide seed funding</li> </ul> | <div> </div> <p><b>Malaysian-German Chamber of Commerce<br/>and Industry</b></p> <ul style="list-style-type: none"> <li>• Develop NOSS</li> <li>• Supported by 20 Industry players who will provide placement for industrial attachment <ul style="list-style-type: none"> <li>• Promotion</li> <li>• Students intake</li> <li>• Scheduled reporting</li> </ul> </li> </ul> |

#### 7.4 Apprenticeship scheme to reskill/up skill workers

In the quest to attain the status of a developed country by the year of 2020, greater emphasis must be given to the retraining and skills upgrading of the workforce. This is necessary not only to increase the knowledge and intensity of the workforce, but also to equip them with specialised and up-to-date skills as production techniques become increasingly automated and businesses becoming more competitive. Retraining and skills upgrading is also of paramount importance to enhance the quality of the workforce so that is versatile and adaptable to the changing technological and business environment.

#### Recognition Prior Learning Skills (RPL)

Introduced by the Pembangunan Sumber Manusia Berhad (PSMB) on 2 July 2009. Under this scheme, employers can apply and eligible for financial assistance in getting recognition for their employees' skills and experiences according to the competency level of the employee in enhancing the number of skilled workers in the national labour market. RPL Scheme was implemented by the Pembangunan Sumber Manusia Berhad (PSMB) is to enable workers to get recognition on their skills and competency according to the level determined by the Department of Skills Development (DSD). It is also to support the effort by the Ministry of Human Resources in implementing Malaysia Skills Certification (SKM) through RPL scheme. This scheme will also encourage workers with skills and experience to apply Malaysia Skills Certification (SKM), Malaysia Diploma Skills (DKM) or Malaysia Advanced Diploma Skills (DLKM) according to their competency levels.

Employers are required to submit their applications using form PSMB/PPT/1/09 together with one (1) copy of the form "Enrolment and On-site Job Analysis Form for Accreditation Prior Achievements" issued by DSD (PSA) prior the assessment by DSD. Employers are allowed to claim in multiple levels of certification according to the sequence of certification level determined by DSD.

### **I. Industrial Training Scheme**

This scheme enables employers to obtain financial assistance at the rate of 100% if the employer sponsor student from university, college or training institution for practical training at their premise. However, the financial assistance granted subjected to a maximum of 20% of total levy balance at the time of application. Employers must obtain prior approvals from PSMB before commencement of training programme. The objective of this scheme is to expose the student to work experiences as well as ethics at the workplace and also to provide employer with a skilful future workers.

### **Terms and Condition**

- Employers are required to submit their application prior to commencement of the training

- A trainee who has withdrawn during the first two weeks of the training programme can be replaced
- 'Allowable costs' that is eligible for training grant are Monthly allowances for trainees up to a maximum of RM500 per trainee, personal protective equipment (one set only) course fees if employers send trainees for skills enhancement training programmes and Insurance coverage (if any)
- The minimum duration of the industrial training programme should be at least 3 months and the maximum duration 8 months

## **II Apprenticeship**

### **Objective**

The purpose of this scheme is to increase the supply of skilled workers to the industry; jointly determined by PSMB and the industry concerned. The scheme also enables employers registered with PSMB to be actively involved.

### **Target Group**

The apprentices are selected from PMR or SPM school leavers and dropout students.

### **Selection of Apprentice**

Selection of apprentice will be through interview session conducted by the employer and PSMB.

### **Training Method**

The training is a combination of theory and practical at approved training centres with emphasis on practical and structured "on-the-job" training at the premises of sponsoring employers. The curriculums have been developed on modular basis. After the completion of a combination of modules at the training centres, apprentices will undergo on-the-job training at the premises of sponsoring employers to reinforce the theoretical concepts learnt.

### **Training Duration**

The duration of training ranges from 9 to 27 months, depending on the requirement of the industry.

### **Training Fee**

Training fees incurred will be fully paid by PSMB.

### **Monthly Allowance**

With effect from 1 April 2012, the allowance of apprentices under PSMB Apprenticeship Scheme has been increased to RM500.00 per month. This new rate is applicable during the off-the-job and on-the-job component for Level 1, Level 2 and Level 3 apprenticeship programmes conducted by PSMB. The allowance will be deducted from employers' levy accounts. The eligibility for full payment of the allowances depends on apprentice's attendance. Apprentice will be paid the full allowance of RM500.00 if their attendance is 80% and above. The allowance will be prorated based on the number of training days if the attendance is less than 80%.

### **Responsibilities Sponsoring Employers**

Apart from apprentice's monthly allowances, consumables material during on-the-job training, sponsoring employers are also responsible for insurance coverage of apprentices during the entire programme. Sponsoring employers are eligible to claim financial assistance at the rate of 100% of the allowable costs, (apprentices' monthly allowances, insurance coverage and consumables, if applicable).

### **Certification**

Upon successful completion of training, apprentices will be awarded the Malaysian Skills Certificate Level 1, Level 2 and Level 3( based on programme) by the Department of Skills Development and Apprenticeship Certificates issued by PSMB.

### **Programme Offered**

1. Mechatronics
2. Hotel Industry Wood Based (Furniture)

3. Plastics Injection Moulding
4. Tool & Die (Mould)
5. Tool & Die (Press Tool)
6. Industrial Sewing Machine Technician
7. Multimodal Transport Operator

## **II. SME Training Partners (SMETAP) Scheme**

Special Training Programmes with 100% financial assistance are organised by PSMB in collaboration with training providers such as Industrial Training Institutes (ILP), Centre for Instructor and Advanced Skills Training (CIASST), Advanced Technology Training Centre (ADTEC) and National Institute of Occupational Safety and Health (NIOSH). These programmes are mostly technical base which will improve workers skills level at the same time increase company productivity.

Training programmes offered are:-

- a) Business Finance for SME Entrepreneurs & Managers
- b) Certificate in Industrial Relations
- c) Coaching & Mentoring For Performance Improvement
- d) Customer Relationship Skills
- e) Effective Sales Strategies Programme
- f) Evaluation on Effectiveness Of Training
- g) Expanding Your Market Programme
- h) IT Security Management
- i) IT Security Practices
- j) Problem Solving & Creativity
- k) Train the Trainer
- l) Web Designing

In light of the above literature, the factors attracting both parties' (i.e., the government and private sectors) involvement in PPP can be summarised as follows: solve the problem

of public sector restraint, provide integrated solutions, reduce public money tied up in capital investment, facilitate creative and innovative approaches, reduce the total project cost, save time in delivering the project, transfer risks to the private sector, reduce public sector administrative costs, benefit local economic development, improve buildability, improve maintainability, non-recourse or limited recourse to public funding and accelerate project development. More importantly, based on earlier studies, particularly by Li et al. (2005) and Cheung (2009), the results show that the attractive factors perceived by the respondents in the UK are different from the factors perceived by the respondents in Hong Kong and Australia. This finding implies that the unique characteristics of PPP in each country influence the PPP attractiveness in the country. Consequently and because there is no similar evidence in the Malaysian context, this study investigates the attractive factors for PPP implementation in Malaysia.

## **7.5**

### **Work Based Learning**

#### **Work-Based Learning (WBL)**

Rapid changes in technology and markets have created new demands for vocational education and training organizations to provide graduates who are globally competitive. Debates about the most appropriate forms of training to meet these demands are concerned not only with curricula and resources within [technical and vocational education] TVE organizations, but also with the most effective strategies for improving collaboration with industry.

#### **Definition of Work-based learning**

There are various definitions of Work-based learning (WBL) from a numbers of scholars. Gray (2001) claims the WBL is a “different approach than the traditional teaching and learning method in the classroom - the learning process involved direct to the workplace learning environment”. Boud and Solomon (2001:4) stated that the WBL “as a class of university programmes that bring together universities and work organizations to create new learning opportunities in workplaces”. In the context of nursing education,

Flanagan, Baldwin and Clarke (2000) however, see WBL to include three important variables: workplace organisation, colleges/university and the individual practitioner. They continue to say that the 'learning outcomes and competence are highly significant concept' (p.360). In short, the WBL program creates direct focus on the needs of the workplace in which the courses are conducted and delivered in the workplace itself. Therefore, the learning experience acquired from WBL gives added advantages when applying for jobs in the real world.

As a workplace learning environment, the application of the WBL program genuinely involves real work experiences when it transforms theory into practice in the workplace context. In fact, the connection of the learning process in WBL program is directly 'link between theory and practice' (Tajul Ariffin, 2009:3). Similarly Garnett (2001) has also stated that one of the fundamentals of a WBL program is the shared use of workplace as 'learning recourses'. Further, WBL offers 'added value to both partners through the development of joint provision' in terms of partnership and intellectual capital (Garnett, 2001:81). For example, the industries receive free labour in the form of apprenticeship. On the other hand, the colleges benefited from access to current facilities in industry. The industries that have made the partnership through the WBL program will have the advantage of employing the graduates that have work-ready skills (Tajul Arrifin, 2009). The WBL program is relatively applicable and transferable to any industry context. The underpinned knowledge and skills of the working world must be the focus in developing highly skilled workers. As a partnership program, the WBL program has to be designed to support producing the highly technical skills in the workplace; therefore, the educational program must be adaptable, flexible and relevant to workplace learning.

### **Background of Work-based Learning program in Malaysia**

The Malaysian Economic Planning Unit (EPU) (2006) states that Malaysia needs to improve on the quality of the labour force by increasing educated and skilled human capital. As such, Malaysia has implemented several training and retraining programmes

to reduce skills mismatching amongst graduates. In fostering the development of human capital, the focus is given to 'holistic development encompassing knowledge and skills, progressive attitude as well as strong moral and ethical values' (EPU, 2006:261).

The Ninth Malaysia Plan, states that the development of human capital will be the major concern in Malaysia to sustain economic development. Therefore, emphasis is not only in 'economic resilience and growth', but it is also on the need of knowledge based economy to encourage a community with a good value system (EPU, 2006). This will be realised by the collaboration between the government, the firms and the community. Thus, the following human capital policy development thrusts are documented in Ninth Malaysia Plan (EPU, 2006:249):

- i. undertaking comprehensive improvement of the education and training delivery systems;
- ii. strengthening national schools to become the school of choice for all Malaysians to enhance national unity;
- iii. implementing measures to bridge the performance gap between rural and urban schools;
- iv. creating universities of international standing and ensuring that tertiary institutions meet the needs of employers;
- v. providing more opportunities and access to quality education, training and lifelong learning at all levels;
- vi. nurturing an innovative society with strong S&T capabilities and the ability to acquire and apply knowledge;
- vii. strengthening national unity and developing a society with a progressive outlook, exemplary value system and high performance culture as well as with an appreciation for tradition and heritage; and enhancing the forum of engagement and consultation between the Government, private sector, parents and community in human capital development.

(Economic Planning Unit, 2006:249).

In reviewing and improving the education and training systems, we need to be able to accept new concept and changes. The Economic Planning Unit (2001) also acknowledged almost a decade ago that changes should be made. It stated that 'facing the challenge of the global competition', would require an approach that embraced creativity and innovation. Gardner (2006) asserts that 'we need to remain open to changing our minds and to having them charged by outside influences'. Clearly by opening our way of thinking, education and industries can help shape the future human capital in Malaysia. The policies and strategies of education-industries should set out to align to these national targets.

The importance of the education and training has been emphasis by Malaysian Employers Federation (MEF). The Director Executive of Malaysian Employers Federation (MEF) Tuan Haji Samsuddin Bardan (2008) point out:

*"Education institutions should prepare students who meet job market requirements in terms of hand-on knowledge and relevant skills as companies are not keen to train new employee. The graduates need to be able to start to contribute immediately as at present it takes two years before fresh graduates can start to contribute to the organization. The Ministry of Higher Education and Ministry of Education can work together with the industry on career guidance and training to preparing students for the job market" (p.5).*

In a survey by Malaysian Employer Federation (MEF) it indicated that industries require graduates to have soft skills: i.e. problem solving, communication skills and work ethics. Therefore, the education and training systems play a significant role in the development of theses soft skills. Idris (2008) claims that to meet the needs of the industries, they must take a significant role in planning as well as implementing any new curriculum. As a result, collaboration between industries and learning institutions were constructed in 2007 and referred to as the WBL program. Currently, Malaysia has established 42 community colleges that boast 17,279 full-time students and 2900 staff. Since the collaboration with the industries in 2007 commenced, the colleges offer 11 work-based learning (WBL) program at the diploma level (Idris, 2008).

In this context, Work-based learning (WBL) is basically introduced to support the education and training systems in Malaysian vocational institutions. In fact, the Ninth Malaysian Plan has highlighted the cooperation in the areas of education and training to promote industries participation. Yusuff and Razali (2007) stated that the pioneer

collaboration was between Proton (automotive manufacture) and the Ministry of Higher Education in 2007. As a national car manufacturer, Proton and its dealers are responsible to support the government mission (Yusuff and Razali, 2007).

The participation of Proton in the program started in the early stages of the developing the WBL curriculum. Therefore, the collaboration between Proton and community colleges has developed with relatively equal input from both sides. According to Tajul Arrifin (2009) in the industry-institutions collaboration; both sides accessed opportunities as a - 'win-win' situation where both sides obtained benefits from the WBL program.

The collaboration is enhancing the relationship between the community colleges and the automotive industry (in this case Proton exclusively). For example, as a training partner in the WBL program, Proton has taken things a step further in setting up new engines, tools and equipment's at the community colleges. In fact, the equipment's are purposely built for Proton's pit-stop or one stop-centre to educate Proton's sales and technicians in Proton service centre all over Malaysia. This means that the facilities at the community colleges are upgraded to meet the Proton's needs in particular distribute new technologies to the technicians' Proton service centre. The obvious limitation to this model is that it sets up a systems and technology base that is exclusively developed for Proton technologies protocols: making it manufacturer specific rather than more broadly, industry-based.

The Polytechnics and Community College education tagline is 'engaging industries empowering communities' that features a balance between broad-based curriculum with specialization, applied and practice oriented, with an industry focuses and caters for life-long learning (Idris, 2008). The direct involvement of the industries in the education program, in particular workplace learning may change the scenario of technical and vocational education and training (TVET) in future. It may reduce the cost of providing certain equipment's to the training centre especially those that incur large amount of capital funds. Through this collaboration, it may also enhance students' practical skills in the real workplace environment. Therefore, it is the argued that the industry-education collaboration is equally beneficial to both parties. In addition, the collaboration is vital in

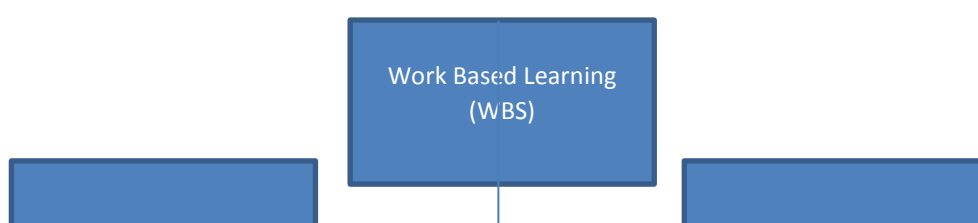
preparing and providing highly skilled workforce in the development of human capital in Malaysia.

Through this initiative, the Industry Advisory Committee was formed to establish a feedback system to further strengthen the establishment and implementation of the existing program (Nordin, 2008). As a result, the industry-education collaborations could increase the number of highly skilled graduates and hence their employability. Further, positive feedback from employers (and industry as a whole) will create more opportunities in building customized program for other fields.

It is evident that the education system is the major player in transforming economic development in Malaysia. In practice, the successful development of quality human capital is linked to the labour market's demand. Gray and Paryono (2004) state that the 'civilian labour forces matches the labour market'. For example in Lisbon, Portugal they have to provide people with the competence and qualifications in vocational education and training to meet the needs of the modern labour market (Council of European Union, 2004). Therefore, rigorous action in technical and vocational education has to effect 'rebranding' to promote participation in the trades and industry. The emphasising of technical and vocational education may increase the number of skilled people, hence the economic growth. Pang at.al. (2010) claim that to equip all individual with the competencies required in the current industry, the education and training system in Malaysia must constantly improve in terms of its quality.

### **The model of Work-based Learning Program in Malaysia**

Figure 1: Course Framework Work-Based Learning for Diploma in Automotive



Source: Diploma in Automotive: Collaboration between Community College and Proton, Yusuff and Razali (2007:5).

The WBL course structure includes both guided lesson at the Proton Training Centre (PTC) and on-the-job training at Proton Edar Service Centres (PESC). According to Tajul Ariffin (2009) the WBL program should have elements of coordinated classroom and workplace learning, integration of occupational-technical and academic curriculum and also assessment system. This WBL approach is similar to Flanagan, Baldwin and Clarke (2000), Boud, Solomon and Symes (2000), Gary (2001), collaborative concept. The WBL program designed for the students at the community colleges is basically based on guided lessons that involved theory lessons in which they have to undergo continuous lessons for 5 days each month at PTC. It concentrates on recapitulating the basic/intermediate knowledge in automotive as well as lessons on the advance level in the Proton technology. Assessments are held at the end of each course syllabus. Following that, the students will be allocated at the PESC for 3 weeks before coming back to the PTC. On-the-job site, their work is based on the students' 'Job Record'. One mentor will be designated to one student and they will guide the student in executing the task. The skills competency of the student is monitored by the service head. Then, the lecturer and the trainer from PESC will assess the students on a regular basis.

**8.0:**

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## **IMPACT OF THE SELECTED MODELS**

The Malaysia Incorporated Policy was introduced in 1981 to encourage cooperation between the public and private sectors whereby both sectors act and operate within a "Malaysian Company". Through this policy both parties depend on each other; where the private sector upholds the commercial and economic activities, while the public sector

draws up major policies, identify the direction and provides the specialised supporting services which are conducive to the success of businesses. In line with the Government's new approach based on the new economic model in the Tenth Malaysia Plan, the Government intends to stimulate its effort in encouraging the private sector to invest in development projects. As such, the Government's allocation for development projects will be reduced and it can then shift its attention to projects that will be implemented and funded by the private sector whether through Privatisation and Public Private Partnerships (PPP), or through direct investment of the private sector in country's development programme. The Government has also set up a facilitation fund under the Tenth Malaysia Plan in order to support development projects implemented by the private sector as the Government's contribution through the cooperation of the public and private sectors. 3PU of the PMD is the core agency that has been given the responsibility to coordinate the Privatisation and the Public-Private Partnership (PPP) projects which have made an impact to the country's economy, and which can be given injection from the facilitation fund.

The Privatisation Policy was launched in 1983 to support the Malaysia Incorporated Policy towards increasing the private sector's role in the country's economic development. The main objective of this policy is to lessen the financial and administrative burden of the Government, improve skills and production, accelerate economic growth, reduce the size and involvement of the public sector in the economy, and to assist in reaching the country's economic policy's goal. In line with the implementation of the policy, a Privatisation Section (in the earlier days known as the Privatisation Special Task Force) was formed by the Government and was put under the Economic Planning Unit of the Prime Minister's Department (EPU, PMD) which acts as the secretariat to the Privatisation Committee, which in turn is made up of various agencies working towards finalising and confirming the proposals on privatization for the Ministers' Council's approval. In 1985 the Government produced a Guideline On Privatisation which detailed out the objective of the policy, method of privatization, as well as the implementation mechanism. And in 1991 the Government produced a Master Plan on Privatisation to explain the policy and strategy for privatization. Amongst the achievements in the implementation of the national privatization policy are:

- Provided infrastructure facilities of world class stature such as the North - South Highway, the development of the Light Rail Transit (LRT), the Tanjung Pelepas Port and the development of the Kuala Lumpur International Airport (KLIA) projects;
- Created local conglomerate companies which are successful and competitive such as the Tenaga Nasional Berhad (National Electricity Board) and Telekom Malaysia Berhad;
- Provided employment opportunities in the private sector apart from producing a professional work force, especially amongst the Bumiputra; and
- Energised the country's capital market through capital investments of the private sector in privatised Government projects.

Since the introduction of the privatization programme from 1983 to April 2009, about 500 privatised projects have been implemented throughout the country. The Government has benefited through savings in the form of capital expenditure amounting RM161 billion and annual management expenditure (operations) amounting to RM7.79 billion (or an estimated RM25 billion in a 25 year period). The burden of the Government's administrative expenditure was successfully reduced following the privatisation of 58 Government agencies which involved the transfer of 113,440 government employees to the private sector. This savings has enabled the Government to redistribute its limited development resource to more needy sectors such as the education, health and poverty eradication programme.

Under the Ninth Malaysia Plan (9th MP), the Private Finance Initiative (PFI) approach was introduced by the Government as an alternative procurement method for the public sector in the development and maintenance of infrastructures and other facilities, which in turn benefits the innovation and efficiency of the private sector management. Implementation of the PFI projects is also the Government's first step to ensure a more efficient Government's asset acquisition management based on the value for money towards the Government's expenditure programme. On 22nd April 2009, Y.Bhg. Tan Sri Mohd Sidek bin Haji Hassan, the Chief Secretary to the Government, announced the establishment of a new unit under the Prime Minister's Department known as Privatisation and Private Finance Initiative Unit - PFI (currently known as Public Private Partnership - UKAS) in line with the economic transformation effort towards being

more competitive. Y.Bhg. Dato' Sri Dr. Ali bin Hamsa was appointed as the first Director General of UKAS.

### **Outcomes of the model**

The collaboration with Proton industry helps improve facilities at the community colleges through material contributions. The impact of the WBL program includes updating community college facilities with the new technologies from an industry partner. It is likened to win-win situation' collaboration (Tajul Ariffin, 2009). Similar, Garnett (2001) has claims that WBL involves shared use of the 'learning resources' through the partnership with the industry. Typically, they shared workplace as a learning place in the Proton service centre to replace the workshop training at the community colleges. Van Nuland, et. al. (2010) stated that the 'difficulties may arise in the transfer theory to practice'. This occurs if the students face the different things between the training institute and the industry site, for example the facilities at the workshop are not current and out-dated. The majority of participants agree that the facilities at the Proton training centre can give them a lot of exposure to the real-world working environment: they are learning what they have supposed to face in the workplace environment.

- **Benefits to Students.** Work-based learning can help students improve academically. It helps them learn how the things they learn in the classroom are connected to the real world. It's also a great way to explore career options.
- **Benefits to Institution.** Work-based learning can improve student motivation, attendance, and graduation rates. It can also improve the school's relationship with the community. Preparing young people and students for the world of work through real work experience improves their employability. It can be a double asset in the transition from school to work and in competition for a job: on the one hand learners obtain certain skills and competences more effectively through WBL, and on the other they already have one foot in the labour market since employers tend to recruit the best candidates. Apprenticeships in particular are associated with very positive early employment outcomes in both developed and developing countries. In Australia, Germany, Netherlands, Belgium and France, for example, a high percentage of apprentices and

trainees find employment immediately after they complete their training: many remain in the company where they trained and others quickly find jobs elsewhere.

- **Benefits to Employers.** Work-based learning helps employers reduce their recruitment and training costs. It also helps them hire better-prepared employees who understand workplace expectations.

### **Economy Impacts**

WBL makes sound economic sense because the costs of achieving learning outcomes are transferred from publicly funded educational institutions to enterprises, thus reducing public expenditure and freeing up funds for other priorities. The results of studies that have compared the lifetime benefits of completing an apprenticeship in terms of employment and wages with the cost of the programmes point to significant surpluses of benefits over costs. Another economic rationale for WBL is the relationship between the technological upgrading of an economy, its potential for innovation and creativity, and the learning needed to foster both.

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## **ACTORS OF SUCCESS**

### **9.1**

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#### **actor of success**

- Ensuring students are well-matched with industries' WBL
- Ensuring a systematic approach for college-to-work linkages
- Can be carried out by college, industry and others participating in the WBL experiences
- Support Services such as Career Counselling; Staff Development; Technical Assistance and Job Placement
- Follow-up Evaluation of Graduates and Activities to determine – intended outcomes have been attained and positive workplace learning experiences are achieved

To ensure that the implementation of PPP programmes for the education, energy and utilities sector is effective and fulfils the Government's objectives as follows:

- i. achieving high economic growth through increased investments and smart partnership between the public and private sectors;
- ii. attaining Value for Money through effective costs and optimum risk distribution;
- iii. increasing efficiency and productivity;
- iv. optimising national financial resources and public and private sector expertise; and
- v. identifying new and innovative business models for the implementation of PPP projects in order to foster closer cooperation between the public and private sectors.

## **9.2 Functions**

Planning, evaluating, coordinating, negotiating and monitoring the implementation of public private partnership projects in the education, energy and utilities sector through the following activities:

- processing and examining initial proposals and need statements projects
- coordinating the preparation of project tender documents evaluating the financial proposal for a project in order to fulfill the value for money concept
- negotiating terms and conditions for concession agreements with the cooperation of the Attorney General's Chambers and relevant agencies
- preparing concession agreement drafts
- preparing Cabinet Papers to validate the finalised terms and conditions of an agreement

- handling implementation issues for privatised projects and evaluating the need to either continue them as privatisation projects or otherwise

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## UGGESTIONS

### **STRATEGIC OBJECTIVE 1: STRENGTHENING THE CAPABILITIES POTENTIAL AND ORGANIZATIONAL CAPACITY TO ENHANCE THE PUBLIC AND PRIVATE STRATEGIC COOPERATION THE COOPERATION OF PUBLIC PRIVATE STRATEGIC COOPERATION STRATEGIES**

#### **STRATEGY:**

- Strengthening the Management and Human Resource Development
- Enhancement of Systems and Procedures
- Governance Empowerment
- Acculturation of Noble Values Towards Organizational Excellence
- Strengthening the ICT Infrastructure and Acculturation
- Creation of a Conducive Working Environment

### **STRATEGIC OBJECTIVE 2: STRENGTHENING THE PLANNING AND IMPLEMENTATION OF PPP PROGRAMME; AND SOLIDIFICATION OF ASSESSMENT MECHANISMS AND MONITORING OF VALUE FOR MONEY TOWARDS ACHIEVING NATIONAL ECONOMIC TRANSFORMATION STRATEGIES**

#### **STRATEGY:**

- Strengthening the framework for the analysis of PPP projects using effective methods
- Strengthening the benchmark in line with the best practices and standards of international businesses
- Strengthening the regulatory mechanism and more effective evaluation of PPP projects' implementations.

### **STRATEGIC OBJECTIVE 3: STRENGTHENING THE STRATEGIC COOPERATION AT THE NATIONAL AND INTERNATIONAL (GLOBAL) LEVEL TO ENHANCE THE IMPLEMENTATION**

## **OF PUBLIC AND PRIVATE PARTNERSHIP PROGRAMME FOR PEOPLE'S PROSPERITY STRATEGIES**

### **STRATEGY:**

- i. Strengthening the cooperation between UKAS, JPM with government agencies, private sector and mass media
- ii. Increasing cooperation with international institutions (such as the IDB and the Commonwealth Secretariat)
- iii. Intensify the promotion and publicity activities
  - Clear objectives
  - Measurable outcomes Top management involvement & commitment
  - Open dialogue & strategic discussions
  - Effective sharing of resources
  - Clarity of roles & mutual responsibilities
  - Sharing achievements & challenges

## CONCLUSIONS

To ensure the 'best fit' between knowledge and experience, a more flexible way of achieving the learning outcomes of a curriculum within an accreditation framework could be explored, using workplace methods of networking, peer learning and collaborative problem solving to co-investigate and interrogate relevant theories and ideas. Strategies for recognising existing learner strengths and needs and setting in place organisational and support frameworks may need more attention in preparing students for work based learning. Use of a reflective learning journal as a focus for critical analysis and dialogue between the student and an identified mentor or link worker in the workplace might help to bridge boundaries between academy and workplace.

To work in collaboration, the university and the workplace need to be flexible, adaptable and prepared to learn from each other. Both could benefit from collaborative and participative research and continuing professional development initiatives, including training for mentors and work-based learning program. Investigating ways of developing a 'ground-up', work based, rather than 'top-down', university imposed, curriculum might assist cultural cohesion between academy and workplace and help to promote active, reflective, creative support for learners.

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**End of Report**