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An Analysis on Quality and Relevance of Technical Vocational Colleges (TVC) in Lao PDR

（ラオスにおける職業訓練カレッジの質と妥当性の分析）

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Abstract

Presently, TVET is considered as one of the very important sectors to complete the goals of relevance and the accessibility of education quality for all (EFA). TVET is also one very significant characteristic in many countries as to enhancing sustainable economic development by provided more advantage for a persons, families, communities and society (Maclean et al., 2013). Anderson (2009) has been recognized that, TVET can be construct into two fundamental productivities such: 1) training; as for productivities and economic growth; 2) Skills; as for employability and work. As King and McGrath (2004) points out that TVET is able to equip youth with relevant skills which able student integrated in the workplace. Reddan and Harrison (2010) claim that TVET curricula yield strong outcome especially for knowledge and skills acquired which demanded by various industries. Knight and Yorke (2002) claim that the TVET curricula improves the employability and may also be useful for academic achievement in terms of generic skills, self-efficiency and critical reflective thinking. Dune (1999) states that many higher educational institutions have faced challenges and have gone under pressure to accommodate the educational styles for a quality outcome and employer's expectation.

The government of Laos acknowledges the importance of TVET in producing sufficient labor force for the labor market. It is therefore cooperating with other countries and collaborating with international organizations to establish regulations and institutions to enhance TVET in Laos. In addition, responding to the needs and coping with socio-economic development, including the industrialization and modernization of the nation, which is a huge challenges for TVET in Laos. It has been widely criticized and debate on the educational system, in particularly, its quality and relevance. Providing quality and relevance of TVET is an ongoing discussion.

Presently, TVET graduates remain unable to utilize their TVET certification degree for development. According to Asian Development Bank (ADB), employers and trade association, TVET in Laos have very strongly negative image, in addition, TVET graduates at all level could not utilize their skills acquired, Most of graduates have to re-trained by economic sectors. Since , TVET institution has provided more theoretical than practice. Many teachers are lack of working experiences (real practice), some of teachers are graduates student from TVET. (Bohlmann 2010). Bohlmann (2010) also finds that of the 1752 higher diploma graduates of Lao German Vocational School, 68 percent of them were employed after graduation, 15 percent were unemployment and 17 percent continued further study. He also finds that 85 percent of graduates at the certificate level received employment after graduation such as electricity, engineering, mechanic, welding and car repair. However, of that group, only 25 percent of employed graduates have received jobs in private companies, while 63 percent have received jobs in government institutions. This circumstance showed that current TVET program limit jobs opportunity in the private sector and irrelevance to labor market demand (DVV 2011; cited in UNESCO 2013).

Although there is a small percentage of private companies that employed worker directly from TVET , There are very small number of company communicated with TVET institutions. ADB (2010) confirm that some of subjects of study in TVET such as furniture, construction, construction sub-trade (masonry, carpentry, electricity, plumbing), tourist and hospitality, mechanic and car repair. The numbers of enrollment of those subject of study were decreased.

This study focuses mainly on Technical Vocational Colleges (TVC) in Lao PDR, which is supervised by the TVET Department in the Ministry of Education and Sports (MoES). The study focuses of fulfilling the gaps into the previous literature with focus in Laos by investigated into three research questios. First, How does the training quality of skills acquired of TVC graduates impact on employment status and daily life

work? Second, what are the differences of success and skills mismatch of TVC graduates by different majors? Third, what are the perspective of employers to the graduates in current employment and the development of TVC curriculum?

Objectives of this study are investigated into the three main point which responses to the research questions . First, to analyze the quality and skills impact of the TVC graduates' employment in Lao PDR. Under this objective, the study explores whether the skills acquired from TVC institutions impact on the graduates' employment status, actual working situation, and employability. Second, the study investigates the issues related to skills mismatch of TVC graduates by different majors. Under this objective, the study further explores differences in elements of success on employability among TVC graduates in different subjects of study. It also investigates the differences in elements of success on employability among TVC graduates in different groups and investigates the skills mismatch of TVC graduates in different subjects of study. Finally, this investigates issue related to the perspective of employers to the graduates in current employment and the development of TVC curriculum. Under this objective, the study further the potential skills needed from graduates and employers on development of TVC curriculum.

Significance of the study is outlined as to fulfilling of the knowledge gaps in the literature. The study contributes in providing empirical evidence in understanding the role of TVCs in producing graduates to labor market, the relationship between the subjects of study of TVC graduates and workplace success. This study also reveals the impact of graduate's acquired skills and further improvement. Beddingfield (2005) notes that the mismatched expectations and lack of preparation for graduates are realities of the work place, it seems to be higher among graduate groups. The employers are mainly focused on transferable skills and personality (Branine 2008). Another research studies such as Robinson and Garton, 2007; Rasul, 2010, Idris and Rajuddin, 2012; Oresanya et al.,2014 conducted research in terms of entry level of employment

of Nigeria technical vocational education. This found that the technical vocational education could not fulfilling the employer requirement and graduates are not well prepare for the workplace. This study also focus on the impact of employment status by means of in-depth field research interviews.

The second significance is that this study investigates the relationship between the subjects of study of TVC graduates in term of relevance of skills mismatch and workplace success. Graduates' skills acquired become a serious issue and widely discussed, since skillful workers are highly demanded in labor market. There are number of research has been conducted in develop countries such as UK, USA, Australia, Canada, Japan and Hongkong as well in developing countries as Malaysia (Zaharim et al., 2009a; Zaharim et al., 2009b ; Dunne & Rowline, 2000; Crebert, 2004; Hewitt, 2005 and Common Wealth of Australia, 2002) the research found that core or hard skills are less important than the generic skills such as communication skills, problem solving skills and interpersonal skills. A research studies by ADB (2013) finds that the skill workforce in Lao PDR is mostly low. Bohlmann (2010) also finds that TVET teacher qualification has remained low and job opportunities is limited. This study focuses on the major (course subjects).

Third, this study reveals the changing situation of the current socio-economic development in adding to the literature. Previous studies have pointed out the issues which interlinked to the technical vocational education roles in economic development (Alam.G.M, 2007; Colin 1999; Zymeman 1976, Paschorpoulos 1987; Tilak 1998, Benell 1996 and Arriagada 1992). Fagerlin & Shah (1989) criticized the human capital theory; education and training equipped labor productivities, and lifetime income competency. While this study focusing on the quality and relevance of TVC . Thus, this study is meaningful.

This study uses the qualitative research method with document review, interview and survey, and classroom observation. The study sample is constituted of

TCV graduates of medium and high-level diploma and majored in electricity, construction and automotive technology in Vientiane Technical Vocational College (TVC) and Champasack Technical Vocational College (TVC). The study also conducted surveys with the employers (business owners), and administrators and teachers of the two TVCs.

This study finds that training quality through TVC of graduates working experience by comparing the satisfaction rate of employers in terms of the quality of practice. The quality of practical skills remains lower than theoretical. the TVC curriculum has provided sufficient practical hours following the national curriculum standard. However, TVC institutions could not provide students the actual practical training as much as possible, since the institution still lacks equipment, particularly hard skills subjects. Practical hours mostly did another activity such as playing sport. Although, TVC institution has received government budgets in annual years, but most of the budgets use for administration. There are very limited numbers for laboratory equipment, and machines, As well as, The TVC teaching methods or pedagogy provides extensive theoretical learning and TVC school facilities are not fulfilling for students and out of date. As a result, TVCs could not fulfill the role of providing or preparing students for better employment opportunities. Hold TVC certificated is at higher risk of unemployment because TVC certificates cannot provide a good opportunity or guarantee for employment since there are 172 graduates average 49 percent of TVCs graduates remained unemployed. Jobs available are in the public sector, 48 percent work with state enterprise and 31 percent work with government but limited in the private sector. In term of accessibility to TVCs, there is a wide difference between percentages of male and female graduating from TVCs about 21.7 percent were female and 78.3 percent were male, and there is a gap of students' access to TVCs between urban and rural areas about 52 percent were from urban, 34 percent were from

rural areas and 13.4 percent students from other provinces. Even though some obtained a job or employment, most spent quite a long time for finding their first job.

Regarding skills acquires impact on daily life work. TVC graduates acquired jobs with a mismatch of their professions or graduated subjects of study. Graduates cannot apply their knowledge and skills acquired from TVCs as effectively as possible; Since they mostly obtained work position as general staffs about 55.7 percent of total employed graduates. Currently, TVC graduates do not have various choices of job selection and are unsatisfied with their current job. This means that graduates in electricity, construction and automotive technology are limited. Most TVC graduates are required to continue for further study in higher education, however, they also preferred to study with new different subjects about 42.5 percent of graduates preferred to study accountancy and 26 percent were finance and banking. They believe that new subjects of the study would provide them more choices or opportunities for better jobs.

This study also finds that there are difference in success. The subject of study is mainly affected by the employment of graduates, as there are 30.9 percent, receive employment after graduation of TVC graduates immediately receiving employment after their graduation. To compare the three major subjects of study (construction, electricity and automotive technology), the highest risk for unemployment is automotive technology about 39.5 percent of total unemployed graduates and 36.6 percent for construction. Regarding income or monthly earning, graduates in electricity earn higher than construction and automotive technology. The employability of graduates are different among different groups. Graduates who come from urban areas receive a higher opportunity for employment about 52.2 percent were urban of total employed graduates, 34.2 percent were rural and 13.4 percent were others. This study also finds that there are difference mismatch of TVC graduates in different subjects of study with their duty. Even though, some of the graduates received job-related their graduated subject work-related TVC 34.4 percent of total employed graduates of

construction, 37.8 percent of electricity and 27 percent of automotive technology, however, their work duty are mismatch with skills acquired about 59.2 percent of construction, 65.1 percent of construction electricity and 41 percent of construction automotive technology.

Skills requirements and missing of TVC graduates' needs for actual work are: Practical training is highly needed particularly the extensive-practical training in both school and external fieldwork study with private sectors about 55.5 percent in school practice and 45.5 percent needs practical training with a company. Teacher qualification is low, and they lack actual experience, and also the providing of practical training for students remains low. Presently, there are 155 peoples in total numbers of teachers at Champasack TVC. In addition, there 51..0 percent were high diplomas, 26.0 percent were bachelor, 19.3 percent were master, 2.5 percent were medium level certificated and has only 1 person was holding a doctoral degree. To compare with Vientiane Province TVC, there are 160 peoples in total numbers of teachers. there 53.1% were bachelor, 24.3 percent were high diploma, 10.6 percent were master, 10.6 percent were volunteers teacher, 1.25 percent were medium level certificated. This illustrates that there is remaining higher percentage of high diploma level. Teachers who are holding master's degrees mostly not graduates in technical vocational areas. They are mostly graduated in general education and educational management; This situation is occurring in both technical vocational institutions. In addition, TVC schools do not organize fieldwork plans for students and limited communication between schools and employers.

This study finds that in terms of the further improvement of TVC curriculum, graduates' feedback or perception are needed to be considered. Currently, TVC curriculum does not match with job demand, in terms of theoretical and practical training of TVCs, graduates state that theoretical learning is rather good or higher than practical training. There is a need to improve TVCs textbooks, followed by laboratory

equipment or tool, library facility, factory intensive study and teacher qualifications and reputable training of TVC institutions remains low.

Regarding the employer's explanation about the employment situation, especially, the employer's views and satisfaction of work competencies and skills of graduates in actual work: for regular work, employers need a higher certificate level. Most employers indicate that the quality of training in school of TVC graduates acquired remains lower than theory. Graduates working quality were unsatisfied by employers. As well, the satisfaction of employers with TVC graduates works competencies and tactics or skills at solving problems they faced in actual work, rated as moderated by employers. Most employers rated that TVCs provide suitable and good skills in terms of communication skill, human relations skill, and information technology skills

In conclusion, this study undertook to analyses of quality and relevance of TVC in Lao PDR. Finding indicates a relationship between the curriculum, teaching standard, practical training, jobs advice and work experience. However, the lack of initiative of student and graduates is reflected in form of research finding. In addition, this study relates to the curriculum, teaching standard, practical training, jobs advice and work experience. However, the inadequate of preparation is leading to unemployability of graduates. The findings suggest that educational institutions can reduce this phenomenon as to engaging with society and other external sectors such as community and private sector.

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List of Abbreviations and Acronyms

ADB	Asian Development Bank
AEC	Asian Economic Cooperation
CLS	Child Labor Survey
DTVE	Department of Technical Vocational Education
DVV	Deutscher Volkshochschul-Verban (Institute for International Cooperation of The Germany Adult Education)
ESCWA	Economic and Social Commission for Western Asia
ESQAC	Educational Standard and Quality Assurance Center
WB	World Bank
GIZ	Deutsche Gesellschaft fur Internationale Zusammenarbeit (German Society for International Cooperation)
GDP	Gross Domestic Product
GOL	Government of Laos
ILO	International Labor Organization
IVET	Integrated Vocational Educational and Training
KOICA	Korea Organization International Agency
LDC	Less Development Country
LANITH	Lao National Institute of Tourism and Hospitality
LFS	Labor Force Survey
NEM	New Economic Mechanism
MoES	Ministry of Education and Sport
MoLSW	Ministry of Labor and Social Welfare
MoH	Ministry of Health
NBTS	National Baseline Tracer Study
NESRC	National Education System Reform Committee

NGO	Non-Government Organization
NSEDP	National Socio-Economic Development Plan
NTC	National Training Council
NSC	National Statistical Centre
OECD	Organization of Economic Co-operation and Development
PDR	People Democratic Republic
PMO	Prime Minister's Office
SSEDP	Seventh National Socio-Economic Development Plan
STVET	Strengthening Technical Vocational Education and Training
TE	Technical Education
TVC	Technical Vocational College
TVE	Technical Vocational Education
TVET	Technical Vocational Education and Training
TTC	Teacher Training College
TTEP	TVET Teacher Education Program
TVS	Technical Vocational School
TVED	Technical Vocational Education Development
TICA	Thailand International Cooperation Agency
UNESCO	United Nations Educational, Scientific and Culture Organization
UNDP	United Nation Development Program
UN	United Nation
VEDI	Vocational Education Development institute
VEDC	Vocational Education Development Centre
WBL	Work Based Learning
WTO	World Trade Organization

CHAPTER I

INTRODUCTION

1.1 Background

Over the decades, There are many countries, including Lao PDR, have used various terms to define technical vocational education and training (TVET). These consist of vocational and training education, industrial arts, technical education, and occupational education. Therefore, TVET is also one very significant characteristic in many countries as to enhancing sustainable economic development by providing more advantages for persons, families, communities, and society (Maclean et al., 2013). Anderson (2009) has been recognized that TVET can be constructed in two fundamental productivities such as 1) training; as for productivities and economic growth; 2) Skills; as for employability and works.

With the changes of the globalization, and the demand for economic network knowledge, the requirement for a skillful and fruitful workers, which can do the work that is framing economies all over the world. Therefore, to strengthen the opportunities as to provides and ensure the employability . there are demanded a flexible skillful workers which enable to dealing with the demand of economic development and a place where the individuals enable to apply knowledge skills, practice and beneficiary. Mouzakitis (2010) suggest that TVET has a positive influence on social-economic development when its curricular are appropriately designed for market needs. The vocational education training courses must be consider and equip the student with skillful. Provide more practical training with professional skills competency is become a key elementary for improving human capital development and overcome employment

generation(Oketch, 2007). Similarly, Atchoaren & Delluc (2002) state that TVET improves employment by preparing young people for technical jobs.

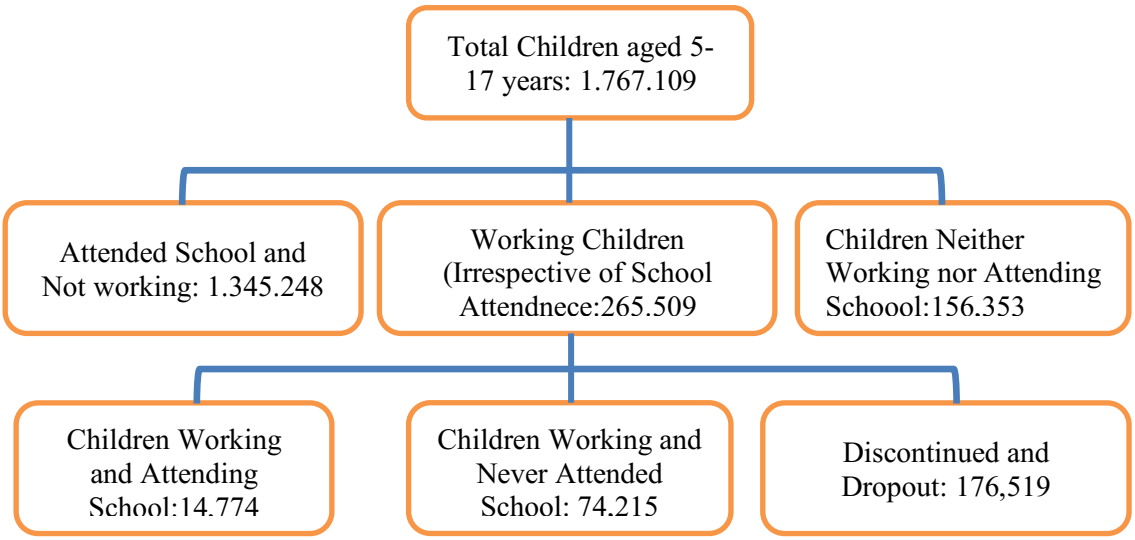
Green & McIntosh (2007) claim that whenever the graduates are educationally miss-matching, they may be unable to use or utilize their skills acquired through the learning, as well as they also may be unable to gain real output from education investment. Therefore, the educational experience helps students' develop their practical work, and enhance students perceive the procedure, performance and the demand of real-life (Awe, 2008). In terms of technical vocational education, it is a wide perspective as a type of education, which focuses on participating in acquired for the practical skills, comprehensive and knowhow, and necessary for specific job or trade group (Atchoarena & Dulluc, 2001). There are several authors discussing on workforce skill gap in the capitalist economies. The rapid changes and shifting of the relationship between globalization and industrial innovation requires for the different set of expectation for the workforce (Barret et al. 2005). Furthermore, Harvey (2001) defines five characteristics of employability such as 1) the job type, 2) the timing, 3) the attribution on recruitment 4) further learning and 5) employability skill.

The Lao government have focused on improving people's living conditions by promoting education networks in remote areas with the purpose of providing more opportunities for people in rural areas through achieving sufficient education. On strategy policy, therefore, it is to provide opportunities for low-income people who live in rural areas to study practical skills and capacities through Technical Vocational College or School as institutions that produce the personnel for the labor market. Moreover, it is estimated that over 80 percent of the population in Laos were living in rural and isolated area, with about 80 percent of them employed in agriculture both directly and indirectly. However, 60 percent out of this 80 percent used to rely on subsistence agriculture and did not produce for the labor market. Due to the large increase in the opportunities for direct employment in export and import of small-scale

retail trade, as part of growth rate of 7-8 percent during the year 2006-2010, employment increased on average 130,000 people per year (Ministry of Agriculture and Forestry, 2005), which provides opportunities for the population currently working as subsistence farmers.

According to the Labor Force Survey (LFS) and Child Labor Survey (CLS) conducted in 2010, Besides 1,767,109 of children aged 5-17 years old, there are a number of children which engaged in hazardous child labor about 265,500 people. Especially in manufacturing, trade and construction industries. Furthermore, over half of children have either discontinue their studies or never attended school, and almost all are from ethnic minority groups. See figure 1.1

Figure 1.1 Distribution of Child Population (5–17 years)



Source: Lao Labor Force Survey (LFS) (2010)

Because of this phenomenon, there are a lot of youths migrating to work in neighboring countries primarily to Thailand. Migrant worker issues are a significant issue in many countries, which are trying to reduce unemployment among their own population, particularly young people who are a very important human resource of each country. Therefore, when Lao people migrate to another country they face higher competition

for finding jobs, and many of them end up as unskilled laborers. However, others remain unemployed and eventually become a burden in the society as they tend to associate with theft, drugs, gambling….etc. These people are often the youths who have not received enough education, do not have the experience, and lack knowledge.

In 2004, the registration statistic showed that 181,000 Laotian migrants were registered for work in Thailand. By the year 2006, the official number of Lao labor been registered working in Thailand about 200,000 people. In addition, the total numbers estimated maybe higher than 300,000 people in reality. Most of worker came from rural area and ethnic minority which aged between 17 to 20 years old and 55 percent were women (NSC, 2006). At present, based on (DTVE, 2007) survey of TVET providers, there are 50 different educational curricular registered with various ministries in 27 areas covering 4 main fields: agriculture, business, industry, and handicraft; 47 public and private institutions and more than 50 training centers and NGOs provide short term course and on the job training, including workshops for both internal and external training.

However, there remain disparities in accessibilities and other challenges at all education levels. The Lao government is trying to promote TVET with the hope that TVET would overcome un-skilled labor and unemployment. There are many kind of researches that focused on TVET issues since it is a very significant sector that is able to equip human capital and enhancing economic development. In addition, TVET prepares young people with technical and vocational skills (World Bank, 2010 and UNESCO, 2011). However, Maclean and Wilson (2009) argue that TVET is able to equip training, however, it may not be certified for job employment. Similarly, ILO (2009) estimated global unemployment at 212 million in 2009.

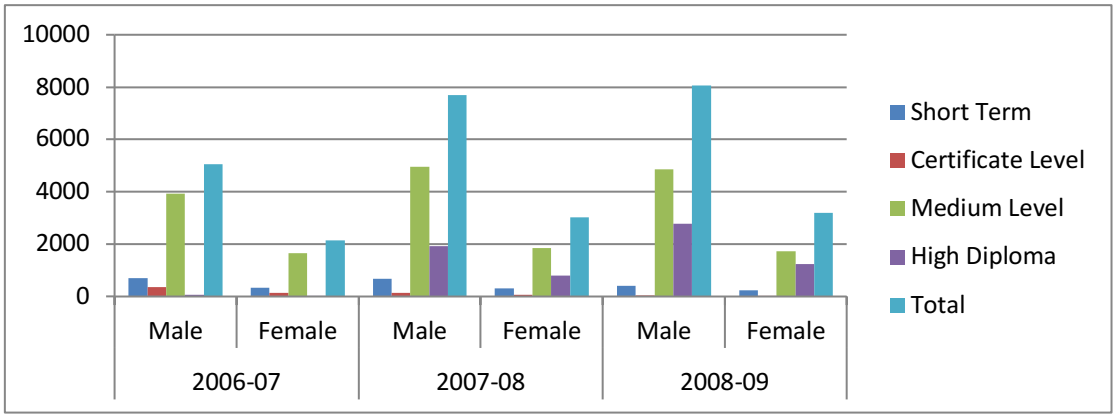
1.2 Problem Statement

As mentioned in the research background, TVET has been considered very an important sector to socioeconomic development, promoting sustainable development of countries. At presently, in many countries there has been perception of the requirement of building professional skills development and training policy in both primary and continues. The target is to receive the requirement and dealing with labor market demand as to enhanced economic growth. For instance, Mongolia, Bangladesh, Pakistan, and Tajikistan were developing their comprehension skills strategies. (ILO 2011).

The various recent researches have presented about TVET graduates. As King and McGrath (2004) point out that TVET must equip the youth, for being able to integrate into the working world. Reddan and Harrison (2010) claim that TVET curricula are strongly emphasized on the outcome of knowledge, skill and the industry demand. In addition, the TVET institutions need further restructure of the programs as for responding to the labor market demand. In addition, Knight and Yorke (2002) claim that curricula designed improve the employability and may also be useful for academic terms such as: for the additional subject can be addressed on particular skills and general subject as soft skills. Similarly, Dune (1999) states that there are many higher educational institutions that faced the challenges under the pressure to accommodate the educational styles as for the meeting of quality outcome and employers expectation.

In order to strengthen and respond to the policy, the government of Laos pays a lot of attention to technical vocational education with the hope that young people have greater skills for employment opportunities and overcome the unemployment issues. However, the actual provision of skilled workers to the labor market is low and cannot meet the social demand due to a decline in graduates in certificate level vocational courses. We can see the number of graduates by year in figure 1.2. The graph shows that, whereas the statistic for graduation from other types has great variation, certificate level graduates remained low with a gradual decline

Figure 1.2 Statistics of Graduates in each Year Divided by Types of Education Level in Lao PDR

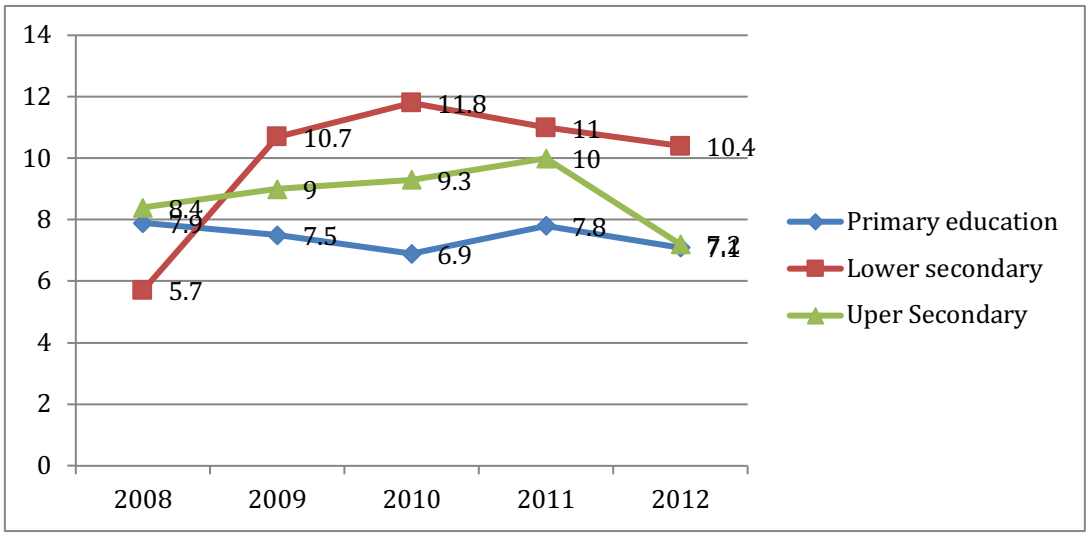


Source: MoES (2009)

The development of TVET in Laos has become the most challenging tasks and it is a very important educational sector since the number of young people as boys and girls who are leaving and dropping out from primary and secondary is increased. Moreover, the working population aged between 15-64 years has increased from 3.76 million people in 2011 up to 4.10 million in 2015 (SSEDP[1], 2011-215). We can see the percentage of student dropouts divided by years in figure 1.3. The graph shows that the dropout rate of other educational levels has decreased, whereas a lower secondary school level has remained high and consistently increased.

[1]SSEDP: Seventh National Socio-Economic Development Plan (2011-2015), page 12

Figure 1.3 Lao School Dropout Rate



Source: MoES (2012)

In the developing environment with a rapidly evolving and higher demand for knowledge, TVET, as the main sources of human capital in Laos, faced a challenge. Particularly, the capacity to achieve the demand of the country such as future labor market demand and job employment for graduates. Some of TVET graduates remain unable to utilize their TVET degrees for development. According to the Asian Development Bank (ADB), (ADB[2], 2010):

> Trade association interviews indicated a strong negative image of TVET. It was repeatedly stressed that TVET graduates at all level have to be trained again by economic units. The training currently being provided in TVET was considered to be exclusively theoretical, and delivered by teachers who do not have the necessary work experience or real skills (p 4).

[2] ADB (2010): Asian Development Bank: Report and Recommendation of the President to the Board of Directors; Proposed Grant Lao People's Democratic Republic: Strengthening Technical and Vocational Education and Training Project; June 2010, page 4-5

Although there is a small percentage of private companies that employed workers directly from TVET, there is a very small number of the company having a relationship with TVET institutions. ADB (2010) confirms that some of the subjects of the study in TVET such as furniture, construction, construction sub-trade (masonry, carpentry, electricity, plumbing), tourist and hospitality, mechanic and car repair. The numbers of enrollment of those subjects of study were decreased. (ADB, 2010, p.5).TVET in Lao PDR has a negative image due to their irrelevance to labor market needs and also mismatch among demand and supply, especially regarding the level of training field of training and an insufficient number of qualified vocational teachers (Bohlmann, 2010). In his study of 1.752 graduates of Lao German Vocational School, (Bohlmann 2010). Bohlmann (2010) also finds that of the 1752 higher diploma graduates of Lao German Vocational School, 68 percent of them were employed after graduation, 15 percent were unemployed and 17 percent continued further study. He also finds that 85 percent of graduates at the certificate level received employment after graduation in sectors such as electricity, engineering, mechanic, welding and car repair. However, of that group, only 25 percent of employed graduates have received jobs in private companies, while 63 percent have received jobs in government institutions. This circumstance showed that job opportunities were limited for TVET graduates and mismatched to labor market demand (DVV, 2011; cited in UNESCO. 2013)[3]

Maclean and Pavlova (2011) point out that 'the new vocationalization' education institution provide and focusses on preparation the individual on specific job. Ranasinghe & Lindsay(2002) confirm that, there remains a gap and miss-match on the employability of graduates and work requirements. In terms of educational quality, it's related to the management of curriculum development of the educational institutes. Knight and Yorke (2001) claim that curriculum with proper design improves the employability of graduates and beneficially for academic terms. Graduate ability needs

[3] Policy reviews of Technical Vocational Education and Training (TVET), UNSECO (2013)

complex information and communication (Knight and Yorke, 2000 cited in Lowden et al. & Lewin, 2011). Also, Aida, Norailis & Rozaini, (2015) note that the level of skills application not only need a specific subject, it also requires mixed skills and relevance to the employability. Archer and Davison (2008) acknowledge that there is a contrasting between educational institutions and employers' perspectives.

Furthermore, there many research studies has been found and given different result such as (Buchel, 2002, Chevalier, 2003; Verhaest and Omey, 2006 Green and Zhu, 2010) has been criticized in terms of qualification and skills mismatch, the research found that the qualified worker are less satisfied than match worker. Self-assessment of worker are mostly influence on skills mismatch (Allen and van der Velden, 2001; Green and McIntosh, 2007 and Quintini, 2011). In terms of employers perception Queck (2005) and Raybould & Sheedy (2005) has given the difference of employers' perception of employability of graduates. Some of the employers are mostly satisfied graduates skills in generic skills rather than core skills. While some of the employers has focuses on qualification and education level. This means that to reach the requirement of employers graduates must holding a flexible and adaptable skills, which do not only rely on specific skills. In addition, several studied as Belfield & Harris, 2002; Di Pietro & Urwin,2006; McGuines,2006; Allen and Weert (2007) described that impact of education, the mismatch is influenced to socio-economic cost in individual, firm and national level. There has been no previous studied focuses on quality and relevance.

Therefore, it must more discussed and debated on the educational system especially, for the quality and relevance. To provide quality and relevance is an essential theme; based on the particular argument that the education curriculum has to match the real needs of society by catering to different capacities. Thus, this study focuses on TVET graduates at the college level, which is called 'Technical Vocational Colleges (TVC). In this research, the relationship between quality and relevance in the

educational system will be investigated by applying an empirical analysis using the following three main research questions and nine sub-research questions.

1.3 Research Questions

1. How does the training quality of skills acquired of TVC graduates impact on employment status and daily life work?
   1.1. What impact do skills acquired through TVC institutions have on employment status?
   1.2. What impact do skills acquired through TVC institutions have on daily life work?
   1.3. How do the subjects of study affect the employability of TVC graduates?

2. What are the differences between the success and skills mismatch of TVC graduates by different majors?
   2.1. What are the differences in success on the employability of TVC graduates in different subjects of study?
   2.2. What are the differences in success on employability of TVC graduates in different groups?
   2.3. What are the missing skills of TVC graduates in different subjects of study?

3. What are the perspectives of employers to the graduates in current employment and the development of the TVC curriculum?

   3.1. What is the employers' perception of working quality of TVC graduates?
   3.2. What is the graduates' perception of training quality of the current TVC curriculum?

3.3. What are the potential skills needed from graduates and employers on the development of the TVC curriculum?

1.4 Objectives of the Study

Objective of the study are, first, to analyze the quality and skills impact of TVC graduates' employment in Lao PDR. Under this objective, the study explores whether the skills acquired from TVC institutions impact on the graduates' employment status, actual working situation, and employability. Second, the study investigates the issues related to the skills mismatch of TVC graduates by different majors. Under this objective, the study further explores differences in elements of success on employability among TVC graduates in different subjects of study. It also investigates the differences in elements of success on employability among TVC graduates in different groups and investigates the skills mismatch of TVC graduates in different subjects of study. Finally, this study investigates issues related to the perspectives of employers to the graduates in current employment and the development of the TVC curriculum. It also investigates the potential skills needed from graduates and employers on the development of the TVC curriculum.

1.5 Significance of the Study

This study provide, the originality and uniqueness by following the three reasons. Most of related research on employability of technical vocational education graduates and vocational education quality have been conducted such as Harvey and Contributors (2003) analyzes graduates' skills acquired matched to employers' expectation and their requirement become a dominant theme on employability literature of graduates. In addition, Beddingfield (2005) notes that the mismatched expectation and insufficient preparation for graduates in the actual working place, it seems to be a high rate among

graduate groups. Employers strongly focus on transferable skills and personality (Branine, 2008). Another research studies such as Robinson and Garton, 2007; Rasul, 2010, Idris and Rajuddin, 2012; Oresanya et al.,2014 conducted research in terms of entry level of employment of Nigeria technical vocational education. This found that the technical vocational education could not fulfilling the employer requirement and graduates are not well prepare for the workplace. This study is to analyzes the role of TVCs in producing graduates to the labor market and employment status . Focuses on the relationships between the relevance skills acquired through TVC education and currently employed, which is an impact on employment status by means of in-depth field research interviews.

The second significance is that this study investigates the relationship between the subjects of study of TVC graduates in terms the relevant to skills mismatch and workplace success and this study also revealed the impact of graduate's skills acquired and further improvement based on interviews. Graduates' skills acquired to become a serious issue and widely discussed since skillful workers are highly demanding in the labor market. There are number of research has been conducted in develop countries such as UK, USA, Australia, Canada, Japan and Hongkong as well in developing countries as Malaysia (Zaharim et al., 2009a; Zaharim et al., 2009b ; Dunne & Rowline, 2000; Crebert, 2004; Hewitt, 2005 and Common Wealth of Australia, 2002) the research found that core or hard skills are less important than the generic skills such as communication skills, problem solving skills and interpersonal skills. Clarke, (2008) has been studied in terms of personal skills by examining the adaptability and flexibility skills. These researchers found that it would help graduates find a job, but it is not convinced for the employment. As well, the most successful graduates are needed the transferable skills, identifying workplace skills, personal ability skills, and competence skills to apply to the workplace. A research by ADB (2013) has been conducted in Laos, it found that the skill base among the workforce in Laos is low, as well as Bohlmann

(2010) found that TVET teacher qualification is remaining low and job opportunities are limited in the private sector. NBTS[4] (2007) survey found that employers are eagerly looking for qualified persons to be engaged in professional work. However, this research focuses on a specific core subjects of study, which is attention to the fact and provided additional a detail picture on the impact of skill acquires of TVC graduates with empirical data. This analysis would enable the government to find out the real situation which is occurring in Laos.

The third significance of this study is that it analyzes and reveals the quality of TVC curricula and the concrete role of TVC for producing labors, reveals particularly, the three major subjects under TVET, i.e. construction, electricity, and automotive technology. Several studies have been criticized in terms of technical vocational education roles in economic development (Alam.G.M, 2007; Colin, 1999; Zymeman, 1976, Paschorpoulo, 1987; Tilak, 1998, Benell, 1996 and Arriagada, 1992). Moreover, Fagerlin & Shah (1989) criticize the human capital theory, which found that education and training enable to generated individual income generation and productivity. However, there is no any previous study focusing on the equality and relevance of TVC. Thus, this study is meaningful. The technical vocational institution curriculum needs a flexible and shift in each program rather than offer the technical skills to graduates (Evers, Rush & Berdrow, 1998; and Robinson and Garton, 2007). This study also investigating actual issues and needs of graduates, based on their working experience and the satisfaction of employers. providers i.e. employers, administrators, and teachers

Thus, this study contributes and provides empirical study to understand the role of TVCs in producing graduates to the labor market, the relationship between the subjects of study of TVC graduates and workplace success. This study also reveals the impact of graduates' skills acquired and further improvement. It also provides useful

[4] NBTS (2007): National baseline tracer study, Department of higher, technical and vocational education, Ministry of education and sport, Lao PDR. Supported by: Lao-German programs on human resource development for market economy

ideas, reflects and reveals possible ways to improve the appropriate/relevant curricular for developing the quality of TVC in Laos based on stakeholders' perspectives.

1.6 Organization of Dissertation

This research study compost of six chapters. Chapter1 is the introductory chapter which mainly highlight on the background, problem statement, research questions, objectives of the study, and significance of the study. Chapter 2 is to reviews of the previous study and educational system and TVET systems of Lao PDR. It's focusing on historical background, current situation and reality, general characteristics, strategies, policies, plans, and the main target and labor market characteristic. Chapter 3 reviews previous studies the relevant theories and problems that base on the debate on TVET especially for developing countries. In particularly, complicated views of TVE will be addressed and subsequently a consideration of TVET in economic development, global context, TVET curriculum development and skills and professional development that is interlinking with TVET graduates employment opportunity. Chapter 4 displays research area, data collection, methodological perspectives, conceptual framework, and hypothesizes. It also describes the detail of sample size and target groups, sampling frame and techniques, the formation of research tools and methods necessary for the process of data collection and analysis. Chapter 5 shows the analysis results. Chapter 6 presents research findings discusion, conclusions with mentioning the necessity of government of Laos especially for policymakers, all educational sectors continue to attempt to developing and addressing on quality and relevance of TVET issues and recommendations.

CHAPTER II

CURRENT SITUATION OF TVET IN LAO PDR

This chapter, I begin with display an overview of the previous and current situation regarding the Socio-economic condition, labor market system, and educational system and TVET in Lao PDR. There are important points that the research has been focused to reviews background of education systems, situation, strategy, policy, plans, principle and labor employment characteristic.

2.1 Socio-Economic Condition of Lao PDR

2.1.1 Country Overview

As we had known that Lao is a landlocked country and small country which located in South East Asia with population 5.8 million (2010). With an annual average population growth of 2.8 percent, and total land areas of 236,800 km^2 with 24.5 persons per square kilometers.an annual population growth. The country has bordered with five countries, China to the north, Myanmar and Thailand to the west, Vietnam to the east, and Cambodia to the south.

After a long period under French colonial rule, Lao become independent in 1075. The Lao government

Focused on recovering from the fight for independence and improve the living conditions of the people. The Lao government has been adopted New Econmic Machanism in 1986 which called ‘Chintatnakanmai’, this new policy aims to promote rural livelihoods by promoting economic activity away from the socialist development programs. The program approach was market-based and encouraged the private sector to collaborate in social economic development (PMO, 2006). Yokoyama, S. (2002)

interprets that program as mainly offering employment generation for farmers to improve their livelihoods and being implemented in rural areas. However, Lao is both ethnically diverse and rich in natural resources. Because of this heterogeneity, it is not easy to implement programs efficiently in order to meet the goals. In 2005, the UNDP reported that Lao PDR is ranked in the 177th position in the poverty index (Vongpaphan, 2007; NSC, 2005). The objectives of the Lao government for the Millennium Development Goals contains 8 significant points:

1). Eradicate extreme poverty and hunger;

2). Achieve universal primary education;

3). Promote gender equality and empower women;

4). Reduce children mortality;

5). Improve maternal health;

6). Combat HIV/AIDS, malaria and other diseases;

7). Ensure environmental sustainability; and

8). Develop a global partnership for development (UNDP, 2008)

Moreover, these objectives have burdened the government of Lao PDR (GOL) into difficulties; meanwhile, it is not only 70% total land areas are dominated by the mountainous areas in particular in northern provinces, however, also 82.9% of population are living in rural areas where some places here hardly any access in rainy season as they are spatial scattering located along the slopes. Again, 83% of the total population is relied on subsistence agriculture (UN, 2002,p.15). Meantime, Lao PDR is considered to be one of the poorest countries.

Therefore, there are several integrated rural development projects that supported by the Government of Lao and International Communities are conducted in rural areas. The main objective of the projects is aimed at national growth and poverty reduction strategy which accelerate freeing from the status of Less Development

Country (LDC) by 2020, this emphasized on the development of agriculture and forestry, education, health, infra-structure, environment, population and gender issue, information and culture, and social security as well as trade facilitation and market linkage (Lestrelin, 2007).

Human resource development is necessary in order to reach the poverty reduction goals. Education is very important factors for Lao government, particularly, the Government has tried to improve educational systems and also to expand the educational network around the country to meet the targets of the educational development plans. In addition, Lao government pay a lot of attention to education development with the hope education would equip and be a fundamental key to meet a country goal as to leaving the rank of less development country by 2020, move forward the country to industrialization and modernity. Both the 7th National Socio-economic Development Plan (NSEDP) and the Ninth Lao People's Revolutionary Party Congress emphasizes the role of education which enable to equip human resource development In the 7th National Socio-economic Development Plan has clearly stated that crucial pro-poor policy development have to be a priority and be focused on poverty reduction. Simultaneously, skillful worker are needed to support advancing to dealing with the industrialization and modernity.

Furthermore, The National Socio-economic Development Plan responses to the policy as priorities of the 7th NSEDP:

- Human resource development measures consistent with the demand for national development; emphasis on national education system reform, improve equitable approach to quality of education in all level and strands;
- Enlargement force on teacher development, teacher deployment, teacher incentives, and teacher societal responsibilities;

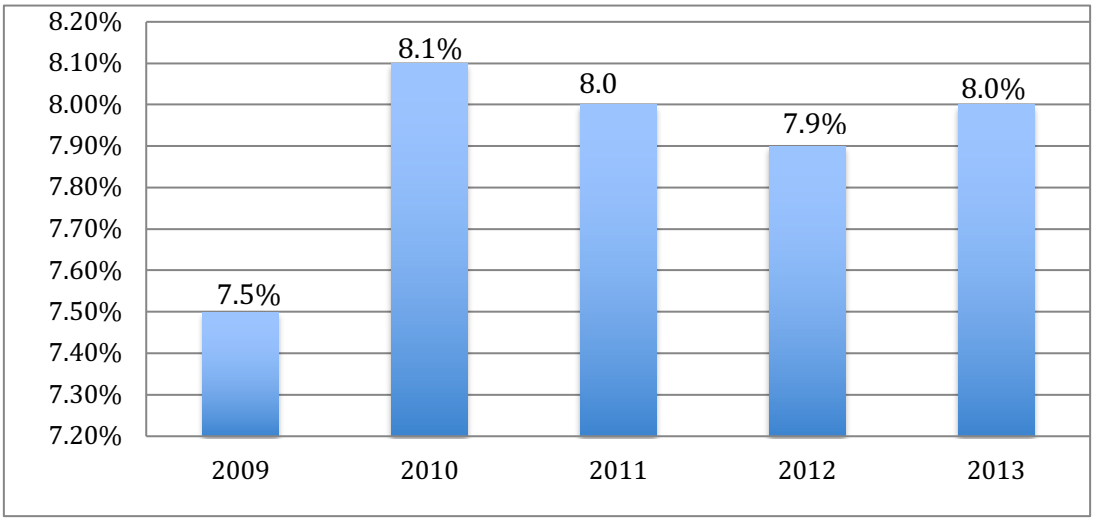
- Improved vocational education and training to respond to labor market demand;
- Improvement to organizational structure of education, education administration including enforcement of the new education law (Education Law, 2007);
- Strengthened inspection and monitoring of education system; and
- Increase effective use of development partner resources and enlarged cooperation between the development partners and government.

As to strengthen and developed nations, the government has tried to benefit from all sectors, including both a natural resource and human resources, with the hope that can be fulfilling the requirement of economic growing. Dominant of "development" has been growth following the principle of neo-liberalism, therefore, human resources is the main route to develop trough the training personnel in self-sufficiency, higher knowledge and ability for participating in the national socio-economic development.

2.1.2 Socio-Economic Development of Lao PDR

Since, the new policy was adopted in 1986 called New Economic Mechanism (NEM)The New Economic Mechanism (NEM), this policy is to transform the economic system decentralized market economy which provide more opportunity for individual to take a part of national socio-economic development. The NEM results become very prominent in enhancing the rate of economic growth significantly. Although, there are some crisis in some region of global economic,. The growth rate of Gross Domestic Product (GDP) in 1990-2005 averaged of 6-7 percent per years, and it was increased to average annual growth of 7.9 percent per year between 2005-2010. In the meantime, the industry and service sector is smoothly growth.

Figure 2.1 GDP Growths



Source: World Economic Outlook (WEO) database, October 2014

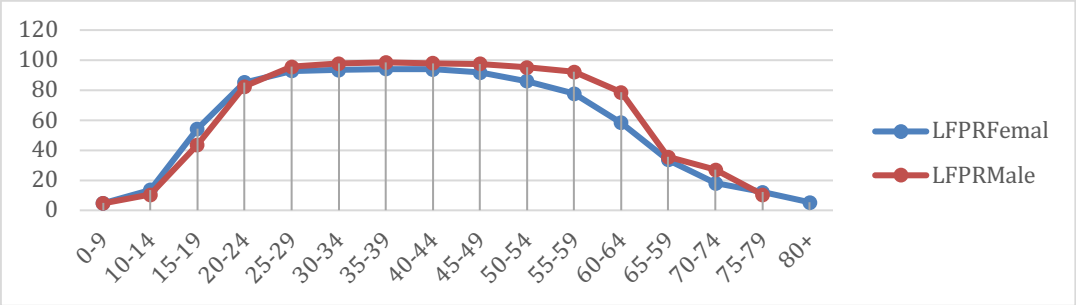
In 2010, the portion of the agricultural sector was decreased by30.4 percent, however, the industrial sector contributes 26.1 percent and the service sector was remaining 37.2 percent. In addition, the government of Lao PDR is not only strengthened and pays attention to the economy but also prioritized the development of society. As a result, the education and public health investments in the fiscal year 2000-2001 and 2002-2003 have been increased from 7 percent to 11.2 percent and 3.5 percent to 8.7 percent, respectively. For the Seventh Socio-Economic Development Plan, 35 percent of the national budget is devoted to the society. This evidence showed that the government does not just emphasis on economic development, but also investing in the social sector. Table 2.1 shows currently key development indicators as follows:

Table 2.1 Key Development Indicators

Indicators	Measure	Year
Human Development Index (UNDP)	0.524	2011
Human Development Index Ranking (UNDP)	138/187	2011
GNI per capita (US$) (World Bank)	$1,260	2012
GDP per capita (US$) (Lao Statistics Centre)	$1,408	2012
Population living below US$1 per day poverty line (%)	23%	2012
Life Expectancy at Birth (Male/Female) (MoH)	66.4/69.4	2011

Sources: Human Development report, 2012; World Bank Economic Monitor, 2012; Lao Statistics Centre, Lao Ministry of Health

Figure 2.2 Labor Force Participation Rate by Sex and Age Groups



Source: Labor Force Survey and Child Labor Survey (LFS& CLS), 2010

Presently, there is a shortage of research study on labor issues in Laos, as well as, the skill-base of labor in Laos is remaining low quality, due to the low quality of education and a higher dropout rate of basic education. Therefore, the entrepreneurs faced difficulty in the migration of skill workers from a neighboring countries. Laos's enterprise rarely provides a training opportunities for the staff, especially for small, non-export orientation and domestic owned companies (UNSECO, 2013, p. 9). As a result of the quality of labor is low, the unskilled labor is become a major constraint to the companies including medium and large size perceive more than a small private enterprise. This indicates that need necessary to improve all enter the education sector and training system, particularly in TVET system. As to equip a competency for workers as a require for a stability and resolving impact of employment generation. Table below shows currently trend of investment project in Laos.

Table 2.2 Investment Projects Summary by Sector

All Investment Projects Summary by Sector 2000 - 2013															
Sector	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total Unit
Agriculture	7	6	6	14	40	53	102	158	177	100	90	123	17	1	894
Banking					1	1		2	3	6	2	4		1	20
Construction		3	8	3	5	14	3	17	19	8	12	19		1	112
Consultancies	3	3	4	3	4	5	18	23	25	21	9	17			135
Education	1	2	6	4	4	9	8	13	9	9	6	3			74
Electricity Generation			1		2	1	4	2	1	2	6	3	15	3	40
Garment	3		4	1	2	3	5	13	6	3	2	4			46
Hotel & Restaurant	2	3	12	9	12	21	26	64	78	54	55	39	3	1	379
Industry & Handicraft	14	19	19	41	48	78	65	84	128	111	109	77	3	1	797
Mining	1		1	5	15	8	16	8	33	30	29	41	54	47	288
Public Health					1				2	3	3	3			12
Service	10	17	30	28	19	42	53	75	68	65	91	66	1	1	566
Telecom			2	2	2				2		2	1	1		12
Trading	2	9	21	15	13	17	28	25	24	22	34	33		1	244
Wood Industry	2	4	7	7	7	8	19	47	40	11	21	8	1		182
Total	45	66	121	132	175	260	347	531	615	445	471	441	95	57	3801

Source: Ministry of Investment and Planning (2013)

The table above, on the basis of expansion of foreign investment sectors such as agriculture, construction, hotel and restaurant, industry and handicraft, trading, wood industry, electricity and mining the investment projects have been growing rapidly. Although, the investment situation has been increasing following the target, however, As mention above, Lao PDR's economy is carried on dominant low productivity economic activities and low levels of qualification labor force. Thus, seeking for suitable works is critical task. As well, the low quality of labor, unskilled labor is become a key constraint for foreign owned enterprise. With this result, the foreign companies is required for hiring or employed labor and imported foreign worker. There is rarely to see recent research study focus on labor demand, the most recent study is by ADB in 2009-2010 within 8 provinces, 819 companies found that, there is reaming high demand for laborers in specific areas as the table below:

Table 2.3 Labor Force Demand by the Companies

Types	No
Agriculture	113
Mining	90
Food processing	59
Textile/garment	3009
Wood/furniture	312
Other manufacture	59
IT/media	219
Machinery/electronic	457
Service	86
Construction	150
Transport	34
Tourist/Hospitality	148
Total	4736

Source: Lao PDR Development Plan 2016-2020

Table 2.4 Requirements for Personnel in 8 Provinces

Types	Northern Province				
	Vientiane Capital	Luangnamtha	Luangprabang	Vientiane Province	Total
Agriculture	36	0	1	251	288
Mining	322	0	3	10	335
Food processing	202	0	0	1	203
Textile/garment	5020	0	0	50	5070
Wood/furniture	257	5	5	7	274
Other manufacture	917	1	11	2	931
IT/media	224	0	4	15	243
Machinery/electronic	1844	11	42	38	1935
Service	476	13	15	7	511
Construction	1186	16	18	1	1221
Transport	43	0	5	0	48
Tourist/Hospitality	94	24	13	25	156
Total	10621	70	117	407	
Middle-Sothern part Province					
	Khammuan	Savanakhet	Champasack	Attapeu	Total
Agriculture	0	5325	155	0	5480
Mining	0	7	0	0	7
Food processing	0	18	14	0	32
Textile/garment	5	154	0	0	159
Wood/furniture	12	108	35	3	158
Other manufacture	4	30	5	0	39
IT/media	2	2	0	0	4
Machinery/electronic	12	44	31	2	89
Service	0	61	11	1	73
Construction	53	12	21	10	96
Transport	6	7	0	0	13
Tourist/Hospitality	16	207	16	9	248
Total	110	5975	288	25	17613

Source: Lao PDR Development Plan 2016-2020

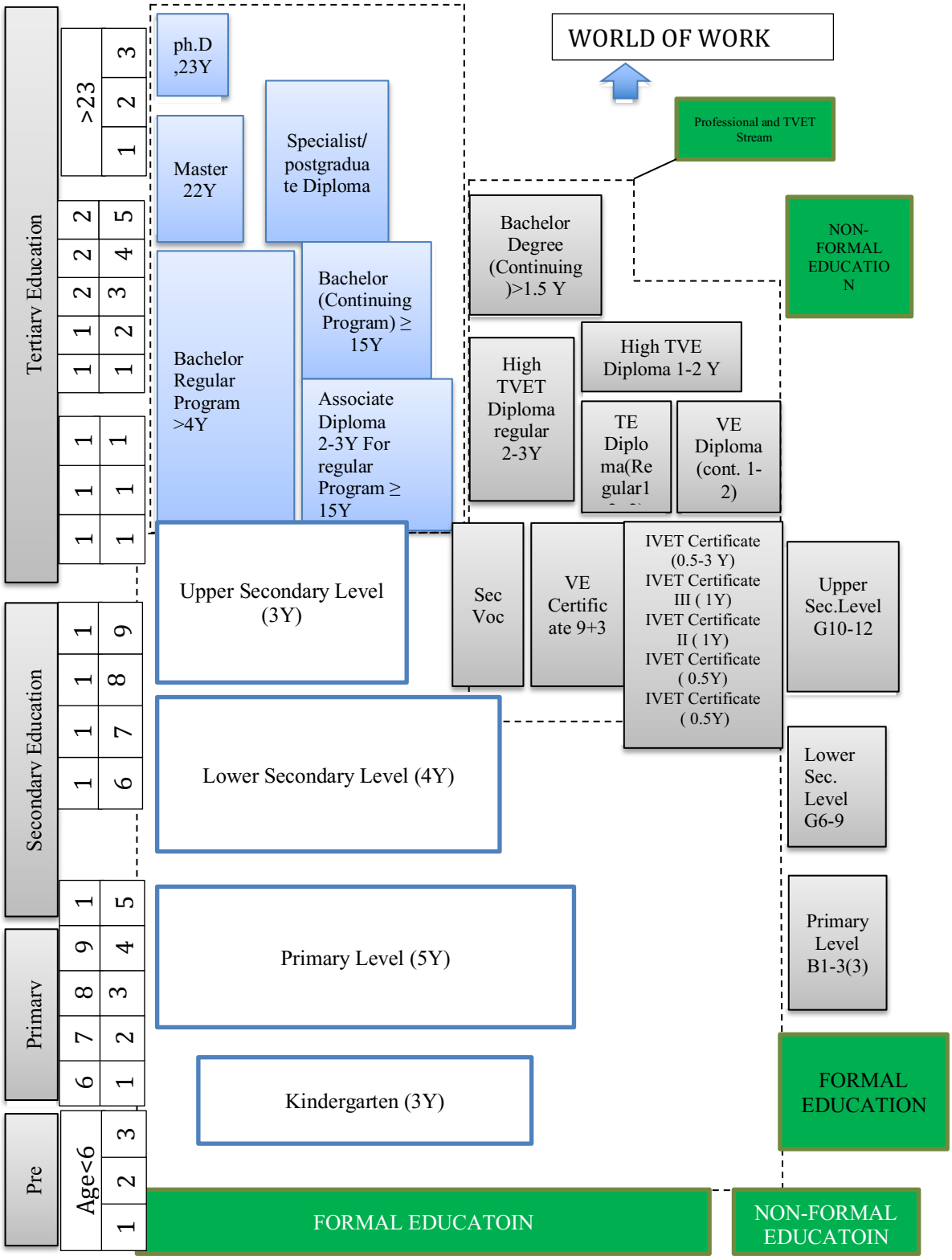
Table 2.4 shows the number of the requirement of laborers in each province, the demand of labor would be increased, since, the rapidly changing socio-economic context of Laos, during the period 2008-2013 economic growths exceeded 7 percent per year, this situation of development would continue. Therefore, there are more economic opportunity for Lao PDR, for instance, the linked to AEC and Asian

integration, as the East-West economic corridor Myanmar-Lao-Vietnam and Emerald Triangle (Laos, Vietnam, Cambodia). The number of investment will be increased in many sectors, for example, hydropower, mining, textile, garment, machinery/ electronic, construction and other manufacture.

2.2 General Education System of Lao PDR

Formal educational system in Lao PDR including general education, technical vocational education and training (including teacher education) and higher education. Additionally, informal education is outstandingly provided for dropout, non-school attended youths and adults. The general education system in Laos is consists of four levels: (1) pre-school, age 0-2 years old, and Kindergarten, aged 3-5 years old. (2) primary school included five years of schooling (Grade1-5) children aged 6-10 years old; (3) lowers secondary school included three years schooling(Grade 6-8) children; (4) upper secondary school is included three years of schooling (Grade 9-11) for children age from 14-16 years old. However, according to the Education Development Plan 2006 to 2010 and the draft of National System Reform Strategy 2006 to 2015, the duration of schooling in general education is increased from 11 years (5+3+3) to 12 years (5+4+3), with extent 1 year of schooling at the lower secondary school (Grade 6-9), then upper secondary school is becomes Grade 10-12 for children age from 15-17. Nevertheless, government is considered to introduce grade 0 either in pre-school of primary school respectively to provide for a smooth transition through primary school education and emphasis a high repetition rate of the early grade at the primary level. Figure 2.3 present the diagram for formal educational structure of Lao PDR.

Figure 2.3 Structure of Education System in Lao PDR



Source: Vocational Education Development Instituted (VEDI), MOES (2011)

TVET system admitted student after 8 or 11. There are two types of TVET: 1) program for preparing skilled for work at upper secondary school level as (8+3) this admits students who are graduated at post-secondary school level as 11+12 and 11+3; (11+2) and (11+3). 2) program for lower secondary' graduates, including vocational education for three years and technical with specialized level for two years (8+3+2).

Teacher education, there are five choices that respectively offered for the teacher. 1) preschool teacher: 1year program after upper secondary school (11+1); 2) primary school teacher: three years training course at the end of lower secondary school (8+3); 3) primary school teacher: one-year program at the end of upper secondary school (11+1); 4) lower secondary school teacher: three years training program upon completion of the upper secondary school (11+3); 5) upper secondary school teacher: must enroll in the faculty of education at University level as (11+5) or (11+4).

For higher education, this admits students at the University who completed or graduated at the general secondary school level. They will be admitted 1-2 years of foundation studies, then followed by 4 or 5 years of professional studies offering by particular faculties. At this stage, student will be received a bachelor degree from university such as National University of Laos, Champasack University, Souphanouvong University, Savanakhet University, and University of health and Science under the authority of the Ministry of Public Health.

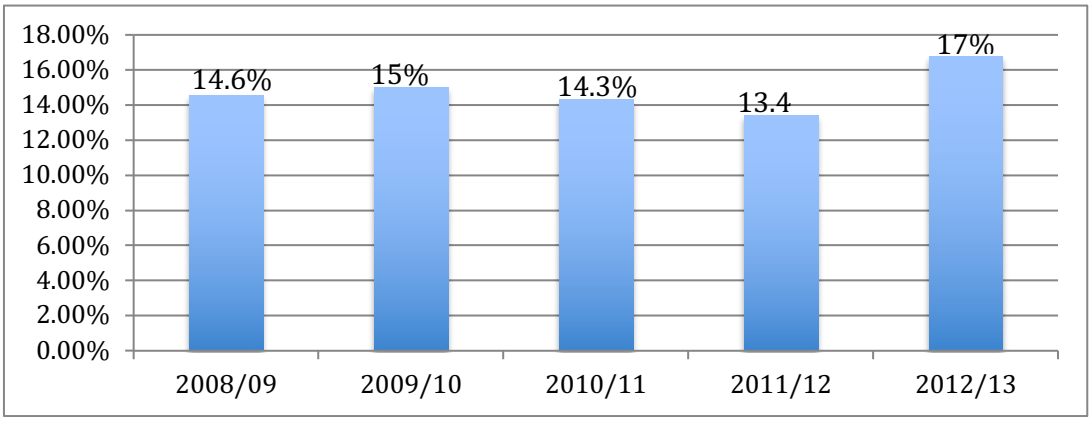
Moreover, Government also provided the informal education which has three targets group such as 1) children and young aged between 6-14 years old which doea not attended to primary school and voluntary to follow the literacy and continues education course, 2) for the adult-aged between 15-20 years old with literated voluntary to follow the literacy and continues education course, 3) youth and adult aged between 15-24 who do not definite vocational and are voluntary to follow basic vocation training. Apart from that mention above, there is another pathway for education that is private education. This provides in parallel with e-public formal education that is one very

important sector in the education system at pre-school, TVET, and higher education.

2.3 Educational Finance in Laos

For the strengthening and simultaneous education system expansion of quality development, according to the Economic Strategy Development Plan (ESDP, 2011-2015), it identified that the main challenges of improving the quality of learning and teaching. The governance is derived from the low of non-wage recurrent spending. Because of the share of non-salary recurrent expenditure is decrease 25 percent of the total educational budget by 2015. Remarkably, the government has introduced the school block grants, this grants to be improving the quality of teaching and learning based on a developed school improvement plan. In addition, the ministry of finance has strengthened the commitment as to funding the school block grant by doubling the six of grants from three USD in 2011-2012 to over six USD in 2012-2-13, these similar grants are expected and continuing forward. The figure 2.4 shows the education share total budget of government budget, the highest increase is in 20102-2013 to compare with the previous years. This mean that the government pay a lot of attention to education sectors as to spent more or allocating and increasing the government budget to improving education quality see figure bellow:

Figure 2.4 Educations as Share of Total Government Budget



Source: MoES (2013)

Therefore, the most challenges of leaving the LDC for Laos and also to achieve the MDGs goal, this reaming a priority for the government as support from the largest number of an external or international organizations such as INGOs, Australia, JICA, UNICEF, WFP, World Bank and other global partnerships for education. Apart from this, some of the major donors such as ADB, China, GIZ, Germany, KOICA, Switzerland and Luxemburg are supported from expanding the post-basic education and subsector. However, the number of students enrolling in traditional TVET is very small due to the student preferred to enroll in University.

Table 2.5 Main Donors Support for TVET during 2008-2015

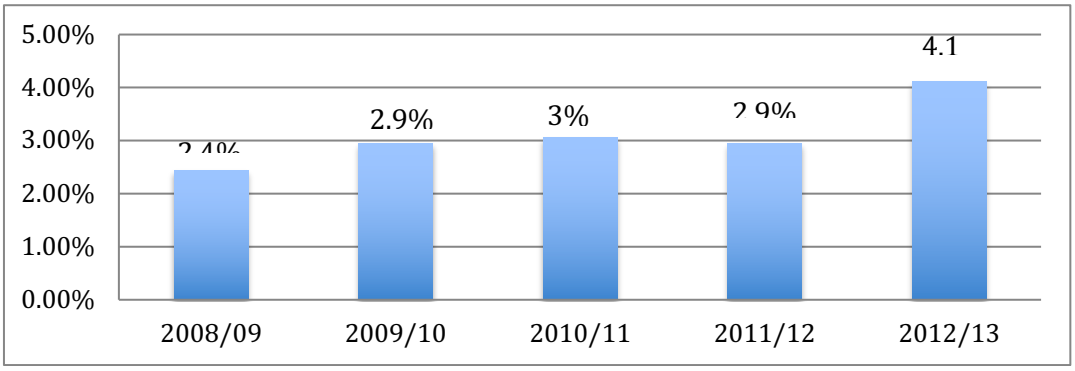
Organization	Amount contracted during the period 2008-15	End	Planned next step after completion
TTEP	4.1 million EUR	2013-2016	Under discussion
TICA	3 million USD	2015	Under discussion Likely to be extended
Swiss Agency for Cooperation and Luxemburg Cooperation (LANTH)	15 million CHF	2016-2020	
Francophonie	0.15 million USD per year	2015	Under discussion
KfW	6 million USD	2015-2019	
Total	69 million USD		
Estimation of remaining budget for 2016-2020*	36 million USD including 15 CHF for LANITH		

Source: Lao PDR Development Plan 2016-2020

Therefore, the external or international organization supports for TVET has been increased during the past 5 years. In addition, in 2010 the external donors supported for TVET is mainly from Germany, Switzerland, Belgium and UNESCO, with the total amount of about 22 million USD. Figure 4.6 shows the share of the education budget in the academic years 2012-2013. With this regard to compare between the government investment and foreign investment, it showed that foreign investment is rather bigger than government investment in each subsector budget share. It shows that the government and foreign investment are mainly intentioned in three types of education, including primary, lower, and upper secondary educations.

The National Assembly of Lao PDR affirms the public or government budget. In the middle term of ESDP implement has changed the government budget structure. This proposes the challenges to the implementation plan in order to correspond to the current and investment, particularly for external finance budget. The budget agreement process is discussing between provincial education budget and Ministry of Education and Sport (MoES). In addition, most education budget and expenditure are determined by norms and decision at government level, for example, salaries, allowance, scholarships…. etc. Furthermore, most of the investment budget is directly manage by MoES.

Figure 2.5 Educations as Share of GDP



Source: MoES (2013)

Figure 2.5 shows the education share of GDP, there is a largely increases in 2012-2-13 compare with each previous year. With this large increased due to the increasing of teacher salaries. The major sector for the education sector is engaged in civil servants; therefore the whole civil service salaries is a major impact of the education budget, thus education budget is remain limited with some extent, and this is a huge challenge for the government needs a lot of attention to educational budget, as to responses to the implementation, policy development, strategic plan, budgeting and monitoring of performance sectors; improving of legislation and cooperate with development partnerships, along with the managing of external finance in order to cover the investment financing gaps.

2.4 General Background of TVET System

In the period of 1996-2000, the education sector are fulfilled the planning development based on five years program, namely Pre-school and General Education Program, Non-Formal Education Program, Teacher Training Program, Vocational and Higher Education Program and Administration and Management Program. The TVET has been continuously reformed since 1997 based on the 1997 Strategy Paper and the Prime Minister' decree No.209 on the Development of TVET in Lao PDR date October 19th, 1998.

According to the 1977 Strategy Paper, there are many inconsistent legal provisions and regulations that have been improved as principal tools for administration, management, and implementation of TVET. As well the education sector are enhanced and improved the education Strategic Version in the year 2000, which divided into three programs: enlarging equitable entrance to education programs, improving quality and relevance programs and education administration and

management programs. The above mention education strategic version during the implementation process, TVET is completed many targets. The government of Lao PDR recognizes of the significantly of TVET role as to provides skillful labor that could equip and contributes to economic development of the nation as well as living condition of Lao people.

Presently, there are 155 educational institutions providing the higher diplomas and certificate level under Ministry of Education and Sports (MoES). There are 92 private colleges, however, 34 colleges offer bachelor degrees. For the government sector, there are 36colleges, 5 universities, 10 TTC, 22 colleges and 27 colleges under the Ministries of Agriculture, Finance, Justice and Health (information from Education Standards and Quality Assurance Centre, Panya Chanthavong). Table 4.6 shows public expenditure of total education budget which divided and grouped into three levels of educations, including primary, lower and upper secondaries, and higher education. In addition, for upper secondary and higher education are include TVET, teacher training and University level. However, the percent of public expenditure of total budgets on TVET is consisting increased such as in 2008-2009 is 2.44 percent of total education budget increased 3.62 percent and 10.90 percent in 2009-2010, but it decreased from 10.90 percent to 7.88 percent in 2011-2012 and 5.47 percent in 2012-2013, however, if we compare to other education sector is remaining low. Even trough, government pays more attention to developing TVET, the education budget on TVET is remaining limited as showing in table below:

Table 2.6 Percentage of Public Expenditure of Total Education Budget

% Public Expenditure of Total Education Budget					
Types of Education	2008-09	2009-10	2010-11	2011-12	2012-13
Kindergarten	2.2	3.5	1.70	2.1	3
Primary	21.5	17.2	36.7	36	31.1
Lower Secondary	7.8	7.2	12	13.2	13
Upper Secondary	8.4	7.5	13.9	14.6	12.1
TVET	2.4	3.6	10.9	7.9	5.4
Teacher Training School	1.9	1.7	2.6	3.2	2.6
University	6.1	15.8	8.9	8.9	7.2
Informal Education	0.3	0.4	1.7	1.4	0.7
Administrative	49.4	43.2	11.7	12.2	24.7
Sport				0.5	0.3
Total	100	100	100	100	100

Source: Department of higher education, MOES (2013)

Consequently, the public sectors remain account and efforts been made over the decade to improve basic education with comparatively less focuses on the issue of quality and relevance of education. As the highest percent of public expenditure of the total education budget is on the primary education level and others remaining low to compare with previous years. The table 2.7 shows the benefit incidence of total public expenditure of education service in the academic years 2008-2009. Almost all types of expenditure and education budget is presented as the second column presents the salary budget and is come after by another recurrent budget such as domestic and foreign investment and share of total budget. The last column has presented the share of expenditure types. At this moment, the highest share is on the administrative type and consistency balance in each education level. Whilst the other remaining low such as informal education and teacher training and TVET. The second highest is in primary education level as about 21.45 percent and then the foreign investment is larger than domestic investment see below:

Table 2.7 Education Budget by Level of Education and Type of Expenditure in Education Sectors, Years 2008-09 (parliament permission)

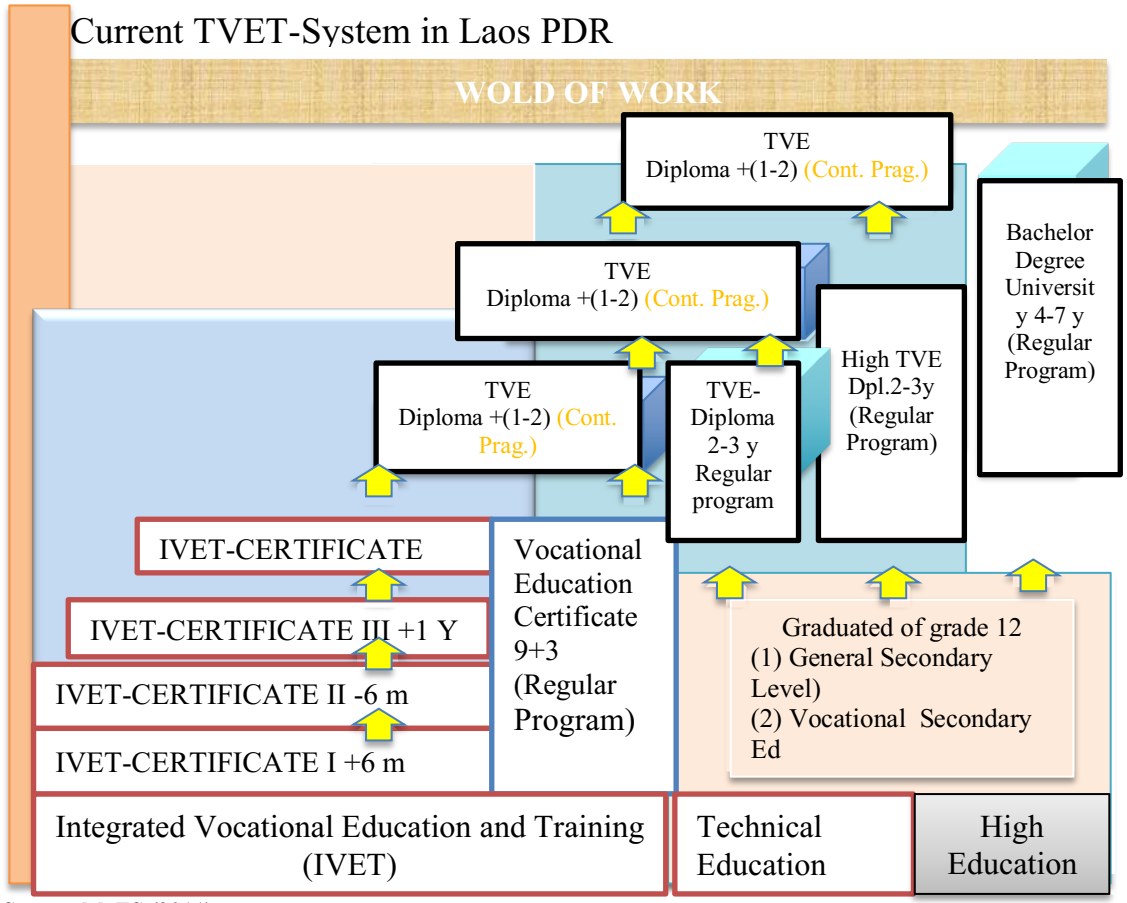
Items of Expenditure	Recurrent		Investment		Total	Share of Items
	Salary	Other Recurrent	Domestic	Foreign		
Kinder garden	25,077	3,026			28,103	2.2%
Primary	225,952	36,136	5,023	5,909	273,021	21.5%
Lower Secondary	85,514	11,509	2,045		99,070	7.8%
Upper Secondary	84,485	17,279	3,661	1,351	106,778	8.4%
TVET	14,433	10,254	4,195	2,141	31,024	2.4%
Teacher Training	9,680	14,993			24,673	1.9%
University	24,567	43,084	9,750		77,401	6.1%
Informal Education	1,632	2,256			3,888	0.3%
Administrative	81,172	84,008	68,178	395,714	629,072	49.4%
Share to Total	43.4%	17.5%	7.3%	31.8%	100%	

Source: Lao Ministry of Education and Sport (2008)
Note: Unit in one million Kips

2.5 Technical Vocational Education and Training Systems

There are 50 registered of education curricula in 27 areas covering 4 main fields such as agriculture, business, industry and handicraft. 47 public and private institutions and more than 50 training centres which provide short term course as NGOs and on-the job training including a diversity of short course and workshop both internal –external training survey (DTVE, 2007). There are 22 TVET institutions underneath the Ministry of education and Sports. The course provided high diploma level; middle level and certificate level with different type of schools. There are 5 Technical Vocational Colleges (TVC), 8 Integrated Vocational Education and Training School (IVETS), 8 Technical Vocational School (TVS), and 1 Vocational Education Development Institutes (VEDI). Their courses provide in different levels vocational education or technical vocational education and training (TVET), which are separated into three levels: first level or primary level (at upper secondary level), middle level and high level (at post-secondary level). Therefore, TVET is a part of upper secondary and post-secondary educations, which is formally apart of higher education.

Figure 2.6 the Structure of TVET Systems in Lao PDR



Source: MoES (2011)

In upper-secondary TVET and post-secondary TVET, there are provided five certificates and four diplomas, respectively.

The upper-secondary level offers these following certification:

- The Vocational Education (VE) certificate will be given after completing 9+3 regular programs by students graduated from lower secondary education;
- IVET certificate I will be given after 6 months of continuous education;
- IVET certificate II will be given after an additional 6 months of continuous education;

- IVET certificate III will be given after an additional 1 year of continuous education;
- IVET certificate IV after additional 1 year of continuous education;

The post-secondary level offers these following diplomas:

- The Technical Education (TE) diploma can be obtained after completing 12+2 regular programs by students graduated from upper secondary education or with the VE Certificate;
- The Vocational Education (VE) diploma can be obtained after completing 1 to 2 years of continuous program by students who already possess the IVET Certificate IV;
- The High TVE diploma can be obtained after completing 2 to 3 years of regular program by students graduated from upper secondary education, or after completing 1 to 2 years by students who already possess the TVE Diploma either as a regular or continuing program; and
- The Bachelor Degree can be obtained in 1.5 years or more by students who already possess the High TVE Diploma, either in regular or continuing programs (TVET master plan 2008-2015. Page.5)

The homogenous classification applies in the skills development center under the Ministry of Labor and Social Welfare (MoLSW), where skill level 1 (6 months) be comparable with semi-skilled workers, skill level 2 (+6 months) be comparable with skilled worker, skill level 3 (+6 months) be comparable with tradesmen, and skill level 4 (+6 months) be comparable with supervisors. (UNESCO, 2013).

The government of Lao PDR has established TVET school at least one TVET school and /or training centers in every provinces of the country and also in some districts with desirable atmospheres; it is for improving and expanding TVET schools, training centers and skills training center. In some provinces, upgrading some TVET

schools to be technical vocational education colleges in order to provide training in different types and levels. For example, sort-long terms, full-part time courses as table below:

Table 2.8 TVET Institutions Divide by Region

TVET divided by region		
Region		
North	Luangprabang Technical Vocational School	IVET school of Luangnumtha province
	Borkeo Technical Vocational School	IVET school of Huaphan provice
	IVET school of Xayyabuly province	IVET school of Xiengkhuang province
	IVET school of Udomxay Province	IVET school of Pongsaly province
Middle	Vocational Education Development Institution	Dongkhamxang Technical and Agriculture School
	Polytechnic Collage	Khammuan Technical Vocational College
	Pakpasak Technical Collage	Vientiane Technical College
	Lao-German Technical School	Borikhamxay Technical Vocational School
	Vientiane-Hanoi Vocational Friendship School	
South	Champasack Technical Vocational College	IVET school of Saravan province
	Savanakhet Technical Vocational School	IVET school of Sekong province
	Attapeu Technical Vocational School	

Source: Department of Measurement and Evaluation, MOES, Laos (2013)

As well, in each type of TVET schools are providing variety subjects; it is a very wide range of skill learning opportunities offered by different type of school and training centres. it considers to individual areas and socio-economic condition, in particularly, to provide and accessibility in training for lower level education people and a disadvantaged groups such as youth, low-skilled people, people with disabilities, ethnic minority groups and the socially excluded

Table 2.9 TVET Course Provide by Types of School

Course provide by types of school	
Contents	Majors/subjects
TVET Colleges	Electronic. Electrical engineering, Motorbike repair, Accounting, Business Administrative, Computer technology, information technology, Computer Business, Tailoring, Construction, Welding and Plumbing, Carpentry and Tourism
Technical Vocational School (TVS)	Accounting, Administrative information, Computer technology, Electronic, information technology, Computer Business, Tailoring, Construction, Welding and Plumbing, Carpentry
Integrated Vocational Education and training school (IVET)	Furniture, Animal husbandry, Crop production, Restaurant and Hotel, Electronic, Automotive technology and Carpentry
Vocational Education Institute	Mechanical Engineering, Agriculture and forestry, Business and Administration, Electronic and Construction

Source: Department of Measurement and Evaluation, MOES, Laos (2013)

Moreover, TVET institution is not only provides by Ministry of education and Sports, however, there is other pathway to accesses by other providers such as: other ministry and organization etc. The major structures and characteristics of vocational education in Laos would be illustrated a reference to TVET education underneath supervision of the Ministry of Education and Sports and Ministry of Labor and Social Welfare (MoLSW). Table 2.10 shows distribution of other TVET providers.

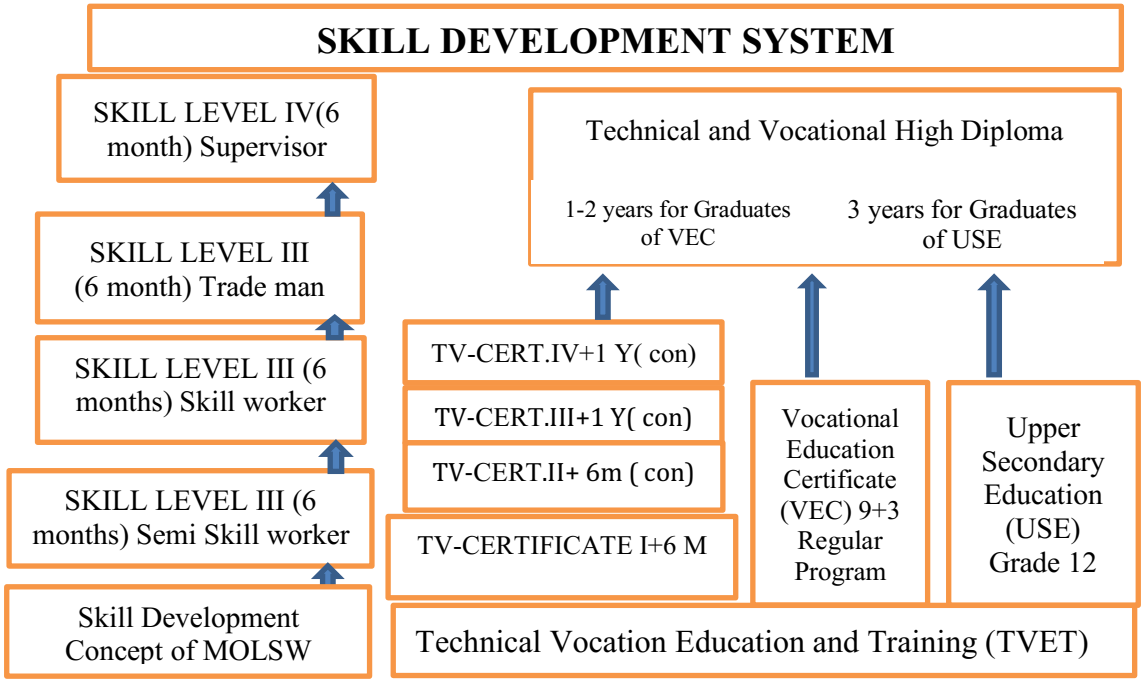
Table 2.10 TVET Delivery Course under Other Ministry and Organization

	TVET Institutions	NO. Trainees	Course Contents
Ministry of Public Health	University of Health Science and 12 Nursing School	In 2008-2009, 13 Master degree; 52 Specialists; 308 Bachelor degree; 277 High Diploma; 90 Diploma; 638 Nursing Certificates	
Ministry of Finance	3 Training Institutes	2008-2009 ,4,500 Trainees in Certificates and Diploma Course	Finance; banking, accounting
Ministry of Agriculture and Forestry	5 Specialist Training Institutes	2009, 448 Students Graduated	Crop production, livestock, fisheries, forestry, irrigation
Ministry of Information and Culture	5 Training institutes		
Ministry of Justice	3 Training Institutes		
Bank of Lao	1 Training institute	2008-2009, 440 Trainees in non-formal Course	Cookery, garment, hairdressing, beauty,
Lao Women' Union	3 Training Centers		
Lao Revolutionary Youth Federation	10 Training Centers	2008-2009, 900 Trainees	Languages, beauty, tailoring, computing
Community Learning Centers	21 Centers Around the Country	2008-2009, 1,608 Trainees in	Literacy, equivalency and short basic vocational skills

Source: UNESSCO 2012, p.11

As table above, shows that beside the MoES and MoLSW a diverse kind of TVET institutions providers are supervised by different ministries such as the Ministry of Public Health, Ministry of Agriculture and Forestry, and Ministry of Justice. Therefore, skills development of labor force is strongly considerable for the government of Laos. Example, the MoLSW has provided training for workforce as to upgrading skills and performing in the technical and technological skills. This is preparation for participating further employment generation. Figure 2.8 below shows the comparison of TVET and Skill development under supervision of MoLSW.

Figure 2.7 Comparisons of TVET and Skill Development



Source: Development of Standards for Vocational Teachers at bachelor Level in Lao PDR

The summarized the comparisons of TVET and Skills development consist of five skills level such as:

1. Basic skill level: learning period I six months or below, for a person has never obtained any vocational training course;
2. Skill level I: semi-skilled vocational courses and programs with learning period at six months, for general target groups;
3. Skill level II: skilled vocational courses and programs with training period at six months, for those passed the skills testing or assessment on level I with one year experience in relevant works;
4. Skill level III: mechanics/engineer/tradesman courses and programs with training period at six month, for those passed the skill testing or assessment on level II with one year experience in relevant work; and

5. Skill level IV: supervisor courses and programs with training period at six months, for those passed the testing or assessment on the skill level III with minimum two year experience in relevant work (TVET master plan 2008-2015. Page 8)

Furthermore, TVET education has provided by many sectors as training centers, school, colleges both public and privates. This provides more opportunity for young people access to trained their skills ability and competency for further employment. Table below show the number of trainees at training centers under MoLSW

Table 2.11 Number of Trainees at Vocational Training Centre under the MOLSW 2012-2013

Training Centre	Number of trainees	
	Total	Female
Lao-Korea Vocational Training Centre	843	177
Northern Training Centre Oudomxai Province	206	54
Champasack Vocational Training Centre	15	7
Vientiane Vocational Training Centre	757	502
Borkeo Vocational Training Centre	24	15
Women Vocational Training Centre (Huaihong)	4	4
Tailoring Vocational Training Centre	191	173
Total	2040	932

Source: TVET Development Plan 2016-2020

However, the government of Laos pays a lot of attention to provide TVET institutions as school, college and training centers not only under the Ministry of Education and Sport, it's still many other Ministry and Organization such as Ministry of Agriculture and Forestry, Ministry of Information and Culture, Lao Women's Union, Lao Revolutionary Youth Federation are also provide training in many aspects. On the other hand, TVET still remaining not attractive for young people to applying or study, they tend to be interested in higher education, and limited access to TVET, vocational training is not fulfill provide accessibility for all target group in particularly people who are living in rural areas. As a result, TVET remaining miss-match on supplying the

demand of labor market. According to TVET development Plan for 2016-2020 has identified priority skills needs as relevance to current market demand of TVET as summarized in table bellows:

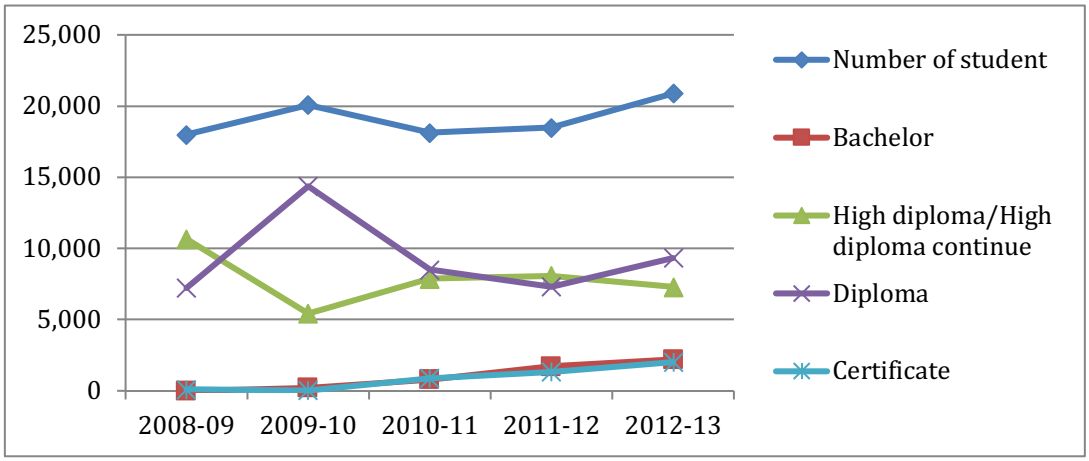
Table 2.12 Comparison Supply and Demand for TVET Students

Main sectors with identified needs for skilled labor	**Current TVET offer and plans**
Agriculture	Significant number of student in TVET institution and stable number in the institutions of the Ministry of Agriculture Taking into account the manpower importance of agriculture for Lao economy and the need to improve the productivity of t he sector, the current capacity of TVET and the Training offer in agriculture are still insufficient
Industrial processing, automated manufacturing	The government of Lao PDR plans to diversify commercial goods from the industrial processing sector and to modernize it, so that it becomes a basic sector if the economy to create employment adequate TVET offer is needs to this target
Small and medium enterprises development	Small and medium enterprise in service sector can provide for jobs in the area where larger industry is not present. There is a need to support development of entrepreneurial skills
Garment	Low number of students and lack of industrial facilities in TVET institutions The existing training center of the Garment association provides some training for employees. Vast majority skill development of semi-skilled worker delivered on job by the company. However, there is a need to replace foreign technicians, supervision and managers.
Constructions	Priority need, very low number of students even in the programs covered by international assistance and scholarship
Hospitality and Tourism	Important sector, significant number of student in TVET institutions and expected significant international support through the Luxembourg Swiss project
Mechanical systems, small motors repair	Continue need, insufficient number of student in certificate and diploma course
Furniture	Continue need, some training provided through existing training institution of the Furniture Association. Insufficient number of students in TVET
High technology equipment for buildings, electronic, energy	Engineering needs to support higher technology and modern manufacturing system

Source: TVET Development Plan 2016-2020

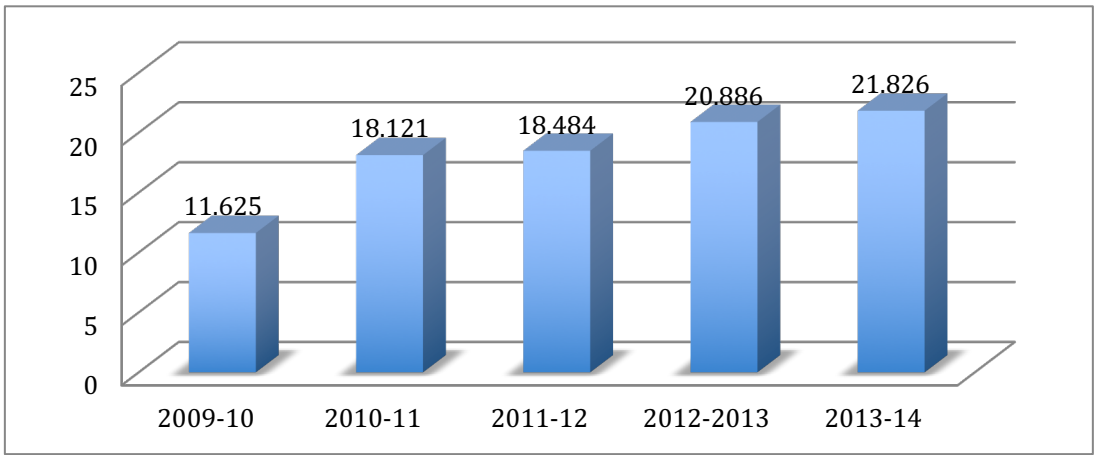
Figure 2.9 shows the student number in each fiscal years, it is fluctuated and there is a large the gap between high diploma/high diploma continue course, diploma and certificate level, the number of student at certificate level is consistently low to compare with diploma levels.

Figure 2.8 Statistic of Student Divided by Years



Source: MoES (2013)

Figure 2.9 Number of Student Enrolled at 22 TVET under the MoES

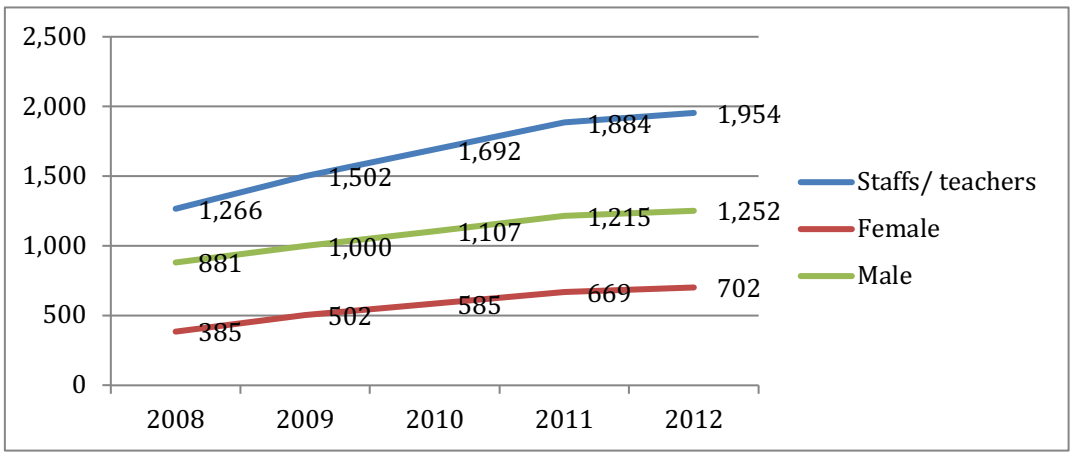


Source: TVET Development Plan 2016-2020 (2015)

Figure 2.9 shows that the number of students enroll to TVET institutions underneath the Ministry of Education and Sports. There has been increased of TVET students'

registration. In addition, the expansion on certificate level is mainly up to finical support by STVET project. The vouchers support approximately 4.145 students during the projects of late 2014; however, the students are not attractive on training option. There is insufficient number of students enrolled at certificate level as for skilled workers, for example, trades, construction, motorbike repaired and automotive mechanic. Even though, the government has provided TVET training in various option for the individuals, especially, most of the courses is mainly targeted in the main economic sectors such as: 26 programs in service, 3 agricultures and 25 in industry. Moreover, some TVET providers are mandated to deliver non-formal vocational training, but until now their capacity does not fulfill the utilization. Presently, TVET School trend to open course on higher qualification levels, with fees charge (TVET Development Plan 2016-2020).

Figure 2.10 Statistics of Staffs and Teachers

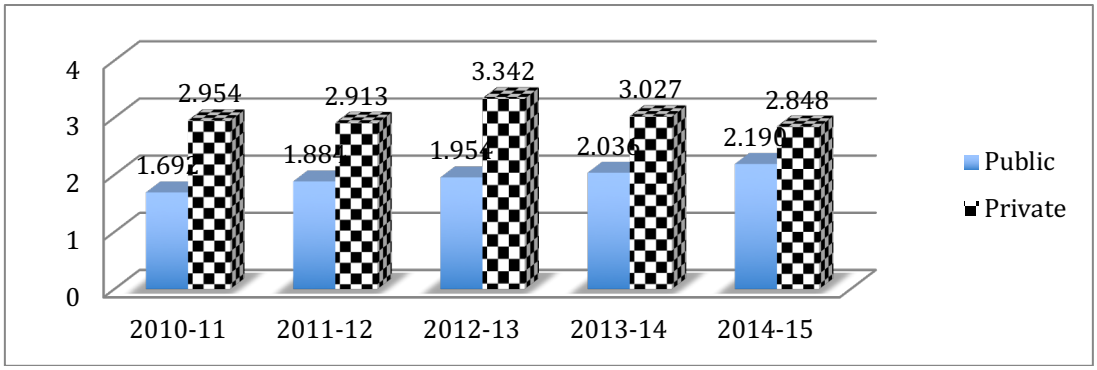


Source: MoES (2013)

Figure 2.10 show that number of staffs and teachers in each academic year is increasing from 2008 to 2012. Although, the number of teacher and staff is increasing, however, from many TVET teacher recruit, from graduated student of TVET institution with low experiences, untrained and unqualified for teaching skills, some

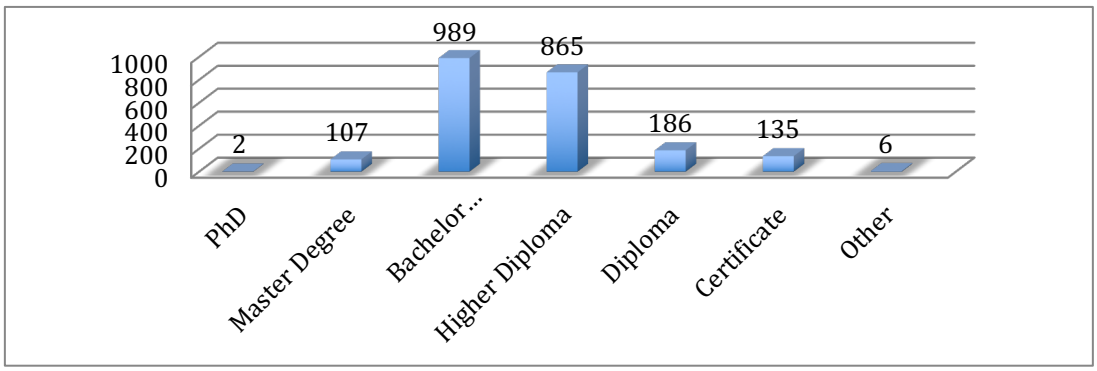
they teach long hours than they should be 30-40 hours per week, the teacher's education level is remaining low in 2007, within the staff involved in TVET under the Ministry of Education and Sport; there are 2 persons have PhD, 29 have master degree, 160 a bachelor degree, while 793 a level at high diploma or lower. Most of teacher is young (Laos TVET master plan 2008-2015). Figure 4.12 shows the statistic of TVET teacher's compares between public and private institution.

Figure 2.11 Statistic of Public and Private Teachers



Source: TVET Development Plan 2016-2020 (2015)

Figure 2.12 TVET Teacher Educational Level



Source: TVET Development Plan 2016-2020 (2015)

Figure 2.12 shows the TVET teacher educational level, notwithstanding the support of several external donors, especially for TICA, STVET, and GIZ TTEP project by supporting bachelor, master and PhD studies for TVET teachers. However, there are many of TVET teacher remains holding just higher diploma qualification as showed

in the figure. Moreover, for the TVET teacher training activities is implemented in two institutions such as: Faculty of Engineering of National University of Laos and Vocational Education Development institute (VEDI). Currently, the number of qualifications for teachers is insufficiency for the requirement of the performing in TVET system. The personnel development is key factors and identified as priority, which urgently needs training for TVET teacher's trough a short or long course training both internal and external training (DTVE plan for 2014-2015).

Therefore, in terms of quality development especially for improving the enlarging equitable access and strengthening administration and management. The TVET technical meeting and Higher Education Reform in Vientiane capital on 12-13 June, 2012 was strongly for strengthening of TVET quality improvement. The National Education System Reform Committee (NESRC) members agreed to proposed the basically, National Qualification Framework as follows:

Table 2.13 National Qualification Framework (Lao PDR)

Qualification Level	Higher education and Sport (MoES)	TVET (MoES)	Skill Training (MoLSW)
7 (Professional)			
	PhD		
	Specialist 2		
	Master Degree		
	Specialist 1		
	Graduate Diploma		
6	Bachelor Degree	Bachelor Degree	
5	Associate Degree	Higher Diploma/higher technician	Foreman/supervisor/skilled level 4
4		Diploma 2/ Technician	Tradesman/skilled level 3
3		Diploma 1/ Certificate 4/ skilled work	Skilled labor/skilled level 2
2		Certificate 3/ semi -skilled	Semi -skilled/skilled level1
1		Certificate 2/practical skill	Award
		Certificate 1/ basic skill	Award

Source: NESRS from 2006 up to 2015 (2008)[5]

[5] MoES (2007): National education System Reform Strategy (NESRS) 2006-2015, Vientiane

The table above shows the grid and translation National Qualification Formwork for all qualification throughout the country. This would provide the benefit for all education providers, employers and job seeker, which able to subsidize the improvement of worker skills, educational facilitation, labor market mobility, and enhancing the accessibility for individual to over the top in different level of education and training. With this regard, to be more effectively implementation or achieves the goal, the government needs closely cooperation with all education stakeholders both domestic and international organizations.

2.6. TVET Curriculum Standard in Lao PDR

Technical Vocational Education and Training (TVET) is aimed to produce individual or students with workable knowledge and skill, which are require by the world of work. Therefore, government of Laos has established and developed several of TVET curriculum as for enhance accessibility to all citizen to equip human development of a country. According the ministry decree No.2354 on National Curriculum Standard for Certificate and Diploma or Middle Level, date 19 November 2004. The government has defined, so-called vocational education curriculum standard, which 3 months to 3 years of schooling after completing secondary and upper secondary school or non-formal education (equivalent). The graduate's student in each level would obtain qualification achievement following the decree 82/PM date 19, May 2003 on personnel rule of Lao PDR. See table below:

qualification achievement following the decree 82/PM date 19, May 2003 on personnel rule of Lao PDR. See table below:

Table 2.14 National Curriculum Standard

Graduated Level	National Curriculum Standard (Certificate and Diploma Level)		
	Year of Schooling	Qualification Achievement	Grade/Salary index
G8	3-6 months	Certificate 1	2/1
G8	1 Year (8+1)	Certificate 2	2/2
G8	2 Year (8+2)	Certificate 3	2/3
G8	3 Year (8+3)	Certificate 4 = Diploma 1	3/1
G12	1 Year (12+1)	Middle Level or Diploma 1	3/1
G12	2 Year (12+2)	Middle Level or Diploma 2	3/2
G12	3 Year (12+3)	Middle Level or Diploma 3	3/3

Source: National Curriculum Standard (2004)

Table 2.15 Qualification Achievement and Credits

Certificate Level	Credit	
	Lowest	Highest
Certificate 1 (3-6 months)	6-12	8-15
Certificate 2	25	30
Certificate 3	50	60
Certificate 4 = Diploma 1	80	90
Middle Level or Diploma 1	30	40
Middle Level or Diploma 2	60	80
Middle Level or Diploma 3	90	120

Source: National Curriculum Standard (2004)

Regarding the credit requirement and calculation, the curriculum standard has defined in four terms such as: 1) Subject of study or module for theoretical is 1 hour per week through 1 semester at least 16 hours equivalent to 1 credit; 2) Subject of study or module for laboratory 2-3 hours per week through 1 semester at least 32-48 hours equivalent to 1 credit; 3) Subject of study or module for field work or practical hours in school 3-6 hours per week through 1 semester at least 48- 96 hours, equivalent to 1 credit; and 4) Out school fieldwork or intensive in factory and other organization is 2-4 credit, at least 8-16 week. In addition, most of TVET School and training centres can provide the certificate in each level under the rule. School must be strongly followed to the standards term and completion at all requirement of curriculum standard for teaching – learning process.

Furthermore, the graduates who completed vocational education level and holding diploma (middle level) or equivalent able to continue to higher educational level such as: associate degree (high diploma) and bachelor degree at Technical Vocational Colleges and University. This type of study is called as 'continuing Curriculum'. The applicants require a vocational qualification, which related to previous graduated subject of study under the terms of that institution. For example, for Associate Degree 2-3 years can continues in 1.5 years of schooling, including four units of major subject of study such as: common subject, 3-6 credits; core subject, 12-14 credits; majoring subject, 28-32 credits, in this actual learning, 26-28 credits and writing report and final defense 2-4 credits; and selective subject, 2 credits. For Associate Degree 4 years can continues in 2 years of schooling, including four units of major subject of study such as: common subject, 6-8 credits; core subject, 18-22 credits; majoring subject, 34-40 credits, in this actual learning, 30-36 credits and writing report and final defense 4 credits; and selective subject, 2 credits.

As mention above, there is multiple-way for student to study in TVET institution, for example. TVET also produce student at high diploma level, the course or curriculum is provided for student who graduated in upper secondary school (Grade 12) for 3 years schooling and graduates at middle level with related subject for 1-2 years of schooling. The admission is an interview and qualifying the skills. The distribution of subject of study, see (appendix 4).

2.7 Technical Vocational Education and Training (TVET) Policy

Since the government of Lao PDR recognizes the significant of TVET in order to produce sufficient number of labors for labor market, the government of Laos is cooperated with other countries partnership along with international organization has

establish regulation and institutions to enhancing the technical vocational education and training (TVET) in Laos the following:

1) To supporting units (permanent Office of NTV, Trade Working Groups). Government has established the National Training Council (NTC);
2) Elaborating and issuing different legal provisions as tools for the administration, management and implementation of TVET such as:
   - Decree on Vocational Training Act, Prime Minister Decree 209/PMO, 19. October 1998;
   - Decree on National Training Council (NTC), Prime Minister Decree 35/PMO, 04. April 2002;
   - Decree on NTC, Regulations, Role and Rules, NTC President Decree No.1327/NTC.02;
   - Decree on Trade Working Groups, NTC President Decree No. 4 25/NTC/03, No. 1663/ 10.10.1998;
   - Decree on Vocational Education Development Centre (VEDC), Minister Decree No. 481/24.03.2004;
   - Decree on Integrated Vocational Education and Training System (IVETS), Minister Decree No. 1503/ED.HV.03, 10.09.2003;
   - Decree on Management of Additional Income, Minister Decree No. 193/11.12.2001; and
   - Decree on Upgrading of Polytechnic School into Polytechnic College, Minister Decree No. 1464/01.08.2006
3) Established the Vocational Education Development Centre, Integrated Vocational and Technical (IVET) Schools in some provinces including the provision of facilities, training equipment and materials needed;
4) Improving pre-service and in-service vocational teacher training system along with the implementing of training courses for many teachers and

administrative personnel in order to meet the development needs of TVET both formal and non-formal;

5) Improving and Developing curricula, media for teaching -learning and training materials for many teaching subjects in working together with public and private training providers; and

6) Implementing internal projects and projects in cooperation with international organization and foreign countries for building, extension and improving of public and private vocational schools and training centres. (Strategic Plan for the Development of TVET from 2006 up to 2020. April 2007)

Beside that government has used various policy approaches to define education for work and for socio-economic development. Such as education policy is affected by both internal and external factors, which the Loa government has taken into consideration in creating its education strategy. This plan is the operational basis for education institution. With respect to preparation of people with skills for the job market by promoting TVET policy as:

TVET policy as:

1. Forty percent of TVET students receive scholarships from 2011;
2. New curriculum programs will be designed to meet labor market requirements;
3. A focus on skilled vocational education level (9+2), (9+3) and technical level (12+2), (9+3) + (1 to 2) in 4 priority skill areas where there is an identified labor demand;
4. An institutional focus on 7th TVET institution and the Skills Development Centres;

5. Minimum of 50,000 students from 2015 with 50% female and 20% from poorest families;
6. Three hundred new TVET graduated instructors and teacher per annum from 2012;
7. Establish 3 to 4 vocational training centres in cities where economic development is well established; and
8. Introduction of voucher system to students, targeting girls and ethnic groups from the poorest families, and provision of dormitory accommodation to increase enrolment in certificate and diploma courses (TVET Strategic Plan 2006 up to 2020. April 2007).

As well as, expansion access to education for the improvement of quality, integration, administration, and management of the vocational education and the professional training, which aims to achieve the expansion of the strategy and its master plan by 2016. it also aims to develop active steps in order to success in human resource development, especially knowledge and capacity development and the upgrading of staff, laborers, skilled workers and technicians in accordance with the need of country socio-economic development. With actual demand for vocational education, there is a need to improve on three important aspects (Outsa, 2012):

1) Sufficient quantities for basic needs;
2) Higher quality; and
3) More effective and efficient rules and regulations, mainly for students.

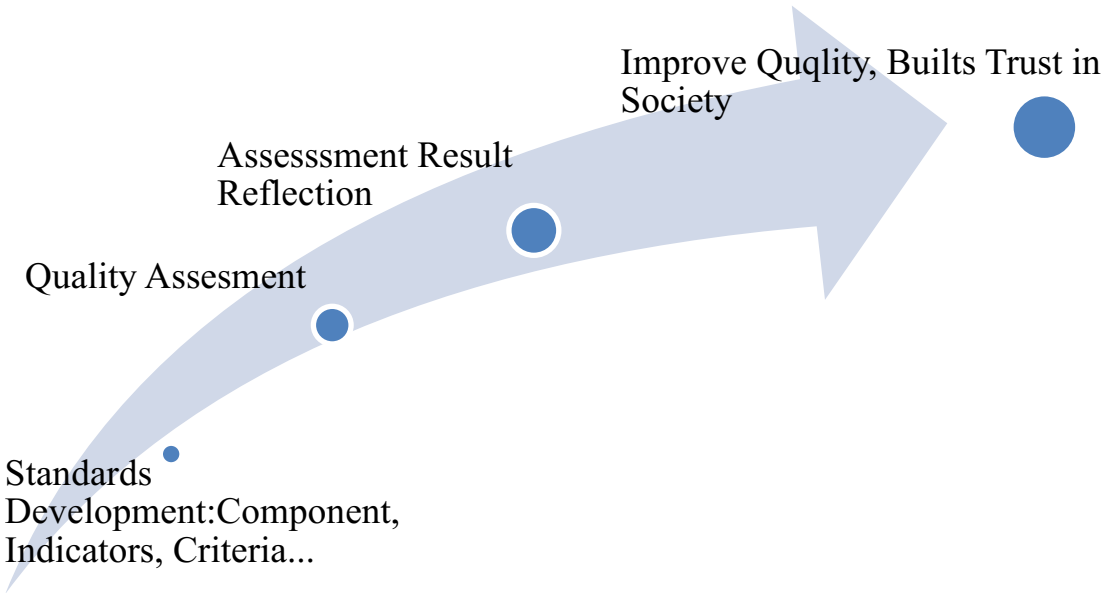
The implementation of TVET policy as to providing knowledge in basic skills and academic fields that help people develop new perceptions and plans with the hops that to overcome unemployment issue, it is very challenges task for all TVET sectors, for

example, currently, the number of unemployed is increasing, especially people in rural areas and most of them are ethnic people. Because of this phenomenon, there are of youths who migrate to work in the neighboring country, and migrate workers are a big issue in many countries, which trying to reduce unemployment, particularly for young people who are a very important human resources of each country. When people migrate to another place, there is higher competition for seeking jobs, and some people end up as unskilled laborers. Other remains unemployed and eventually become a burden on society as they resort to theft, drugs, gambling etc. these people are often youth who has not receive enough education, do not have experience and lack of knowledge.

- **Quality Assurance of TVET Systems in Lao PDR**

To ensure and improving TVET quality, the government has cooperated with local expertise, the Department of Technical Vocational Education and Training, (DTVET), the Educational Standard and Quality Assurance Center (ESQAC), Colleges and other international organization such as UNESCO Bangkok Asia and Pacific Regional Bureau for Education and German Society for International Cooperation (GIZ), its quality assurance system for TVET institution and has developed in a views of international process and practices that can be adapt to the local context by establishing the quality standard, conducting assessment and using the result of assessment as fundamental principles of the quality assurance system in Lao PDR, see below:

Figure 2.13 General Principles of the Quality Assurance System



Source: Quality Assurance Manual for TVET Institution, the Committee for the Quality Standard in TVET Institutions, Ministry of Education Lao PDR (2011)

The general quality assurance system in Laos is begins with establishing the quality standard, organizing assessments and using the outcome of the assessments, this to attaining the quality standard involves all stakeholders by assessing all TVET sectors such as TVED, ESQAC, and organizations that employ students and graduates of the institutions, for obtaining and bring a beneficial to TVET institutions, teachers, students, and the public. The TVET quality standard comprise of 10 components and 32 indicators as follows:

Component 1: Vision, mission, and objectives;

Component 2: Curriculum and teaching-learning delivery;

Component 3: Learners, support of learners and graduates;

Component 4: Staff management and development;

Component 5: Budget and funding sources;

Component 6: Facilities and Environment;

Component 7: Management of information system;

Component 8: Public relations and marketing;

Component 9: Quality assurance system Component; and

Component 10: Enhancement of invention and innovation; and promotion of community services. (TVET master plan 2008-2015)

2.8 Issues and Challenges

1) Low investment and support in TVET;
2) Insufficient TVET School's infrastructure and facilities to accommodate increased number of trainees and students;
3) Mismatching between TVET students produced and labor market demand, thus suggesting insufficient integration of TVET with market needs;
4) Insufficient training materials and out-of-date machines and tools for practical training of students;
5) Insufficient teaching staff, moreover they lack teaching skills and industrial experiences;
6) Most courses stress on time-based and school-based, and not student-centered;
7) Weak inspection system; and
8) Weak linkages between industry and TVET institution (TVET master plan 2008-2015)

There are many potential challenges and critical issues that structural to improve the quality and important of TVET. The TVET plays an essential role in human resources development. Among the critical issues, it must be carefully considered on planning TVET programs which is provided opportunity for rural and urban.

In order to cope with economic growth as globalization trend, there are a number of issue and challenge that need to be addressed of TVET in Laos. There remain disparities in approach to all levels of education and the challenge is remaining to provide sufficient incentive for teachers to serve in very remote areas. The output of skilled workers remains low and out of balance with the needs of the labor market. Quantitative expansion has been impressive but this has not always been matched by improved quality and relevance of learning outcome. There remain limited capacity and knowledge of education administration, especially, at district levels and weak linkages between planning and budgeting at both central and provincial levels. Sector monitoring also needs to be strengthened. Finally, the education share of the total government budget remains low compare the need for development and that of neighboring countries and regional standard. In particular, the recurrent budget provides very limited finances available for non – salary activities linked to quality improvements (MOES 2006). As well as Laos has recently joined the World Trade Organization (WTO), and the creation of the AEC in 2015 will open other areas of cooperation, which will have a huge impact on the labor markets both within Laos and within the region

2.9 Chapter Summary

This chapter displays the country overviews of Laos. The researcher beginning with reviews the socio-economic condition and labor force, market situation of Lao PDR. Furthermore, this study examines the education system and finance of education. As to be more understandable and related to research interests in particularly TVET system as the same as Technical vocation colleges. Researcher reviews the general background of TVET system, policy as well quality assurance of TVET system and issue and challenges. This chapter is also fully reviewed previous study and documentary,

particularly, the terms of structural educational quality of TVET as a means of human resources development. Policy implementation issues and challenges in order to cope with the economic growth as a globalization trend. This is linked to development plan and budgets at national and sub-national level and sector monitoring also needs to be strengthened. In addition to reduce the gaps or resolving the disparities in access to education at all levels. Currently, quantitative expansion has been impressive but this has not always been matched by improved quality and relevance and further employment opportunities for individuals.

CHAPTER III

LITERATURE REVIEW

In order to be more understandable on the TVET the debates, it is important to be considered the relevant theories and problematic that base on debate. This chapter addresses the theories regarding TVET and attempts to explain its impact on developing countries. In particular, it examines education and skill demand, employability, TVET in economic development and a global context. Finally, this study also applies the theory of human capital and social capital, which is interlinked with graduates' employment and affects the TVET curriculum development

3.1 Training Quality and TVET in Economic Development

In terms of quality, it's very important factors and has very special attention to education and training. As well, there is widely recognized, however, its conceptualization and measurement as an essentially stayed understudies (Abili, Thani, Mokhtarian & Rashadi, 2001). The education quality is very difficult to installing, measurement and evaluation because of impalpability characteristics (Thakar, Deshmukh, & Shastree, 2006). To the global market and social- economic changes, the education institution is high considered the service quality. Training institution needs to identified and understanding of customers/students and expectation which related to service provision, especially for the factor that influences student expectation and relevance to the context of skills training (Mohd Zuhdi Ibrahim et al., 2012).

TVET is enable individual learning competency which equip them more productive in defining and participating where economic activities such as job, particular work duty and economic sector (Lauglo, 2009). Vocational training is

developing the performance of people for specific job and focused on individual competency development to gain access to employment.

Alam (2007) analyses the labor market, which is a powerful influence in human capital theory. The investment in education and training brings outs a benefit to both the individual and society. Investment in education and training for society has affected a skilled workforce that able to cope with global competitiveness and economic growth. In addition, the return of individual would be a better occupation prospects, increasing income and a better quality of life. Based on the concept of 'human capital' propose that education and training increases the individual productivities and incomes competency (Fagerlind and Shah 1989).

Regardless of change in the structure of occupation and skills requirements. This expansion is strongly criticized by researchers such as Ahola, Kivinen & Rinne (1992), who note that dealing with economic growth as the acquiring of individuals with knowledge skills and competency increases social inequality and give it legitimacy.

However, in the differentiated domains of the expansion of education, economics, marketing and recruitment by employers are several problems with the mismatch between demand and supply. For instance, employers' demand and educator supply are connected to the difference in educational expansion, market demand, the satisfaction and recruitment of employers. Therefore, the unemployment of graduates and lack of skilled labor in specific occupation areas coexist, and this situation is occurring in Lao society as well.

Regarding the mismatched factors of higher education, they are linked to the credential (Value of credentials). It depends on the monopolization of certain professionals by their education qualification, that is, to certify that the owner of the degree follows the discipline. Education credential is highly used by employers, they become an indicator, not just of a job applicant's knowledge, but also a performance

measurement. However, in the process of gaining knowledge by undergraduates, it is unclear whether they can use those skills obtained in the workplace. Kivinen & Ahola (1999, p196) point out that it is insufficient to measure competency in the labor market and to rely on including human capital acquirement through credential measurement information. However, this monopolization of education qualification is essentially relevant for obtaining satisfactory employment.

Collin (1999) mentioned that TVET have provided both skills labor and general education. Again, Alam (2007) notes that when employment significantly increases, there is a higher demand for a skilled workforce to supply rapidly growth. They argue that the government have to consider and focuses on TVET which could equip individual with skillful labor and overcome unemployment issue for young people and help older labors find a job.

There are also several researchers such as Zymelman(1976), Psachorpoulos (1987) and Tolak (1998) noted that investment in TVET may receive lower return and the general education. However, Bennell (1996) state that TVET' student is less 'academically brilliant', however, the rate of return remains high. Colin (1999) notes that TVET can play an essential role for development and planning, however, he recognized that policymakers must be updated and incorporating the latest development and trend, otherwise it will be useless. Again, Colin claims that, there is no limitation of TVET, but it has a limitation for the educational policy of the country. Foster (1965) also claims that the vocational school would be no success or fail, since the failure of educational development planning, as result, the vocational can be effective by individuals acquired skills are utilized properly.

However, Arriagada and Ziderman (1992) research finds that TVET does not pay suitable function in development and claim that return of investment value needed for TVET does not provide return as much as possible for a high rate. According to his critical perspective on TVET role, it can explain the significant role of TVEVT in the

development such as : vocationalization mean the vocational education institute have to try to involved the curriculum, practical skill which enable student acquired knowledge skills and well prepared as a skillful workers to access the labor market . Bennell (1996) says that TVET would have a negative impact on the development process.

3.1.1 Education Training and Skills Demand

The various perspectives and debates in many countries concerning education productivities'' primary role in each level of education on whether graduates enter the workforce. The debates are whether education should specialize in term of employability is related personal skills, characteristic, technology, and providing the student more general education (ILO,2001; Mcintosh & Steedman 2002; Trench & Quinn 2003; West, 2000. Similarly, Martin et al., (2000) insist that each educational institution has to have clear and acceptable goals, and have meant to significantly prepare students for employment. However, Candy & Crebert (1991) not that to prepare students for their future work is challenging school/ university given the uncertain relationship between a school /university and work. Again, However, Candy & Crebert (1991) and Resnick (1987) note that advance learning depends on each person and competitive while the working experience is regularly combination and team-based. Furthermore, school/university foster broad learning, meanwhile work is mostly task-based and offers decontextualized knowledge.

Education and training are highly important in human capital formation; such as education at college level mostly increase income in many countries (Becker,1993). In a contrary perspective, education must be a jump over from broader, decontextualized knowledge to individual work skills. Crebert et al (2004) observe graduates of Australian University and workplace training programs shows general

skills improvement. However, they mostly gain much more experience of work during employed through learning and training practices, teamwork, responsibility and incorporation of learnings which also able to apply for their occupation.

A recent study by Smith and Bath points out that the quality of teaching programs is not just based on student learning outcomes, but that, colleges/universities should recognize that social responsiveness and incorporated perspective of student's learning experience, captured the ideas of the learning community.

Many studies examine education productivities' role in the education process. The education outcome factor is related to generic graduate's attribute or transferable skills, a skill that graduates would hold, and there are suitable for the extensive range on task and contexts into the university environment, (Gilbert, Balatti, Turner & Whitehouse 2004).

In terms of whether graduates' training must be professionalized provide the skillful worker by the labor market demand(Winch 2000), Huggins and Harries (2004), cited by Brown, Green, and Lauder (2001) point out that to build a highly-skilled society, it included more attention to multiple-sectors or stakeholders such as employers and educators to build up and more influence to education system. However, Beckett and Hager, (2002) argue:

> Work and its upon adults in the workplace has been the focus of policies across the Western world since the start of the industrial revolution. Because of new demands, governments have developed policies support skill-based marketable, rather than time-based initiation into processes which are character forming. (p.5)

Beckett and Hager (2002) recognized that higher education is significant in enhancing students' obtaining the job which linked into their professional skills. However, Inexperienced practices must express students' inclusive education rather than depend

on narrow, behavioristic skill acquiring. They also suggested that simple skills acquiring is not acceptable in lifelong learning and work-based training policy because vocational training concentrates on "skilling the hands and perhaps the head and forget the heart".

The theorist has been proposed the concept organic learning or learned behaviors and knowledge, which are absorbed within a working condition, the trainee behaving in a psychomotor manner, cognitively, socially, and physically active. Again, Beckett and Hager has defined as concept of work-based learning to improve acknowledgement /intellect; it mainly linked to both the formation of skills and wider education outcomes. This pays the functional characteristic of school/university in terms of responsibility to dissolve the distinguish by two goal for higher education, labor market and comprehensive education. Barrow and Keeney (2001) perceived a medium-term shift in research focused on learning systems from generic-skills development to adaptable lifelong learning to achieve appropriation with personal and community's purpose. They assert that the development itself is mainly connected to both education and personal fulfillment (including employability). This results in the issue of employability. Therefore, it's become fundamental to this research to give the problematic of graduates' employment.

3.1.2 Skills acquired and impact of employment status

In terms of the impact of knowledge and skill impact on employment status has become a significant theme in educational development. For example, A graduate may not acquire sufficiency for practical training during schooling life. Kivinen and Ahola (1999) point the distinguished between theory and empirical evidence, the individuals' education level is insufficient for capability in the labor market, nor the human capital acquired which necessary needs relevance and obtained employers satisfaction by

stakeholders in education process. In order to deal with the labor market and relevant to the job market demand, Butter wick & Benjamin (2006) state that the workers have to always adaptable to the changes and improvement as following the working environment, and the use of new technology in globalization regime. As well the global economy has changed, the educational and labor policies are mainly linked and require the educational institutions must be responses to for employability of their graduates, all graduates must update their knowledge and skill (Mohamed & Hamzah, 2013). As well as, Green & McIntosh, 2007) claim that whenever the graduates are educationally miss-matching, they may unable to use or utilize their skill acquired through the learning, as well they also unable to gain real output from education investment. Therefore, the educational experience helps students developed their practical work, and enhance students perceives the procedure, performance and the demand of real-life (Awe, 2008). According to Osuala (1999) claim that the skill is the outcome of training, which students acquired and employees to perform the professional and simply on jobs task by using the acquired knowledge skill.

In terms of technical vocational education is widely perspective as a type of education, which focuses on participating in acquired for the practical skills, comprehensive and knowhow, and necessary for specific job or trade group (Atchoarena & Dulluc, 2001). There are several authors discusses on workforce skill gap in the capitalist economies. The rapid changes and shifting the relationship between globalization and industrial innovation requires for the different set of expectation for the workforce (Barret et al. 2005).

3.1.3 Work-based Learning

This focus on work-based learning (WBL) has not unexpectedly been theorized, and there is a lot of literature from many different types of study or learning on university

and college institutions. Work-based learning, however, has been reviewed as being market operated and short of research focused (Boud, 1998). It has become a challenge for a primary role of a university in under development country (Boud&Sollomon, 2001; Dunne1999; Holford, Jarvis & Griffin, 1998; Beckett & Hager, 2002). However, Boud mention that work-based learning become a challenges concept what educational university are and how does university contribution to lifelong learning. Boud, Solomon, and Symes (2001) define WBL as:

> University that bring together universities and organizations to create new learning opportunities in workplace to meet the needs of learners contribute to the long-term development of organization and (which) are formally accredited as university course. (p .4)

Beckett and Hager (2002) notice that learning is a collectively of the individual including emotion, intellectual, activities and values. Learning experience and informal learning system of the adult have effectively to the formal learning. Beckett and Hager characterized the informal learning in these following points:

- Practice-based informal workplace learning is holistic or organic;
- Practice-based informal workplace learning is contextual;
- Practice-based informal learning is activity and experience based;
- Practice-based informal workplace learning arises in situations where learning is not main aim;
- Practice-based informal workplace learning is activated by individual learner than teachers or trainers; and
- Practice-based informal workplace learning is often collaborative /collegial (p.115)

They claim that work-based learning arguably encourages graduates employability and can connect the gap among skill and degree of graduate's knowledge and employers expectations and labor market stands. Raelin (2000) described the successful outcome of work-based learning that it is the combination of theory, practice and knowledge experience. Garrick (1999) also point out that learning in a workplace is based on human capital, knowledge and skills; and strategy that bringing together academic, individuals and workers support the development of the social capital network. Additionally, work-based learning (WBL), combining the theories concerning the practice and knowledge experience, equips or support the human capital theory in knowledge and skills to help graduates successfully enter the workforce.

3.2 Employability and Skills Impact

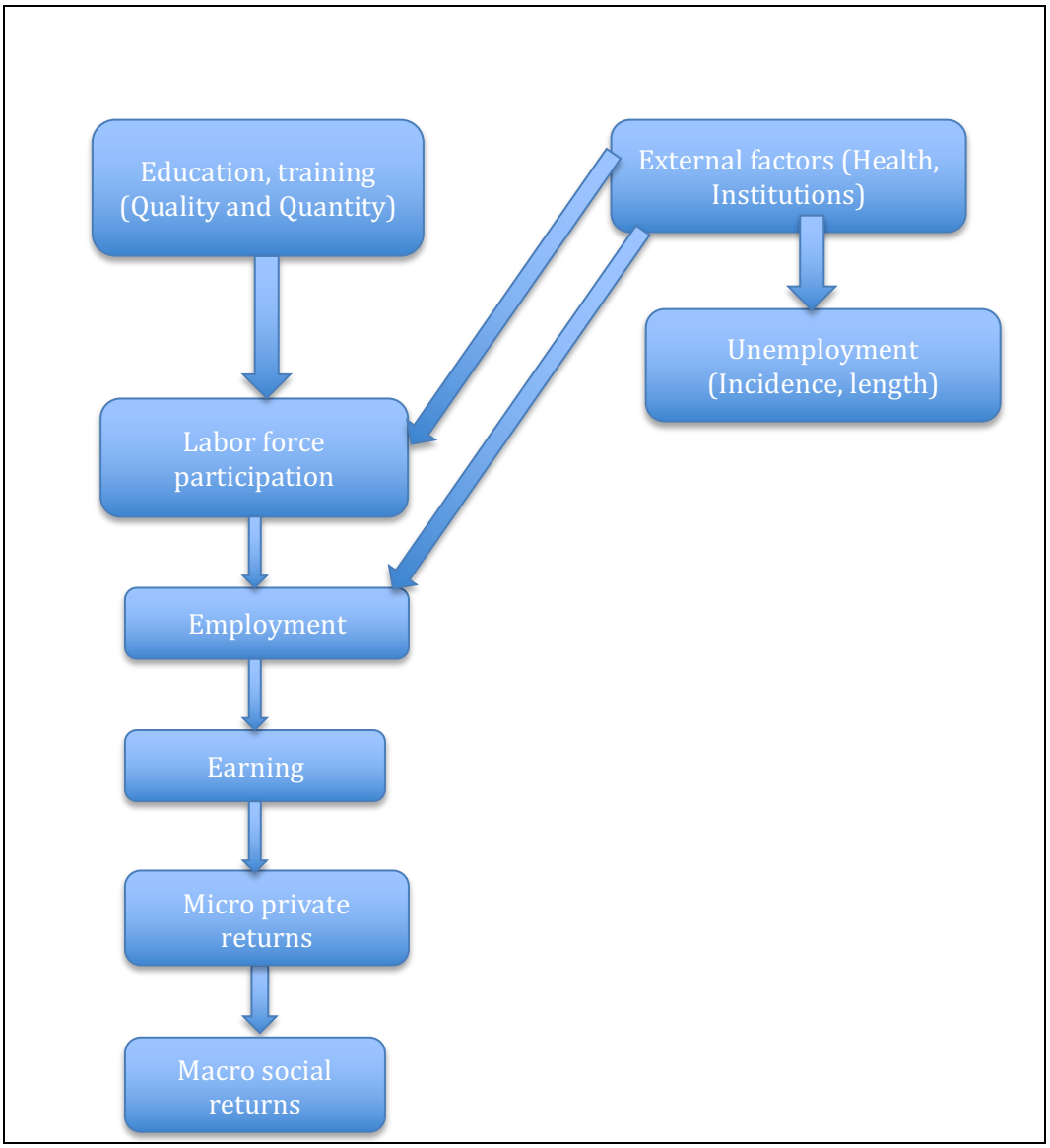
The debated topic in educational research is the relationship between education in general and student preparation for future employment. It is broadly accepted if a college or university helps students to get employ which also support the national education policy and planning, There would be similar to educational views for particularly personal and social interested. Gibbis (2000) stated that:

> Employability is not the end of education, but (is) a competency of skilled authentic social agent. He recognizes that there is no difficulty in employability skills being incorporated within a more general set of aims for higher education. (p.559-560)

Gibbis argue that a restrictive on education definition' goals, it might be instrumentalized our education system that emphasized on employability as a principal target of higher education. Lifelong learning is a significant choice and suitable objective of education. Psacharopoulos at el. (2004) claims that, concerning the

matching between people with a job, this needs the skills acquisition and skills needed by employers. Therefore, the employability can be affected by labor market institution, skills and knowledge supply by education and training.

Figure 3.1 Analytical Dimension of Employability



Source: Source: Created by Author based on Psacharopoulos and Schlotter (2004)

The most important aspect of employability for education establishment is that graduates have to ensure professional arrangements, as they are moving forward into the labor market. For the government, curriculum design and implementation of

education are mainly targets to the graduates 'employability, since employability is a fundamental key needs necessary for educational outcome (Yorke, 2004a).

Again, Yorke (2004) identify employability as a pack of fulfillment skills, personal attributes and comprehension. These assist graduates in gaining employment and benefit themselves with the successful decision of their occupation selection, work, ,society, and economy.

The ability to get employ is not only a labor market situation but also associated with human capital. Graduates ready to enter the workforce should be characterized whether work duty and whole process of quality of transferable skill, and a facilitated demonstrative be used to reduce in insufficiency of employability (Beckett & Hager, 2001).

Knight and Yorke (2003) provide three main characteristics in term of employability:

- From graduates' perspective, employability is gaining a job;
- Employability as a student, being developed by their experience of higher education; and
- Employability as personal achievement (p.4)

There are divers' characteristics of individuals regarding employability. Many researchers warn about the complication of employability dealing with job acquired. they hypothesized that employability would base on working experience and whether the experience of individualized curriculum can ensure graduates' employability. The employability is a status of person whose suitable for work is an estimate by the employers (Knight and Yorke 2003).

3.2.1 Skills Needed Employment

Currently, The Employability has been discussed in many different dimensions. Fugate et al. (2004) proposed that employability is a trend of "pro-active adaptability" that comprises the dimension of individuality job, social networking and individual ability. Harvey (2001) has been defined the employability into five characteristics, which are the job types, the timing, the essential attribution, advance learning, and employability skills. Misra and Mishra (2011) note that employability related to many factors including satisfaction, capacity, training mobility and flexibility.

Several Study such as Zaharim et al., 2009b; Zaharim et al., 2009a and Common Wealth of Australia (2002) found that for employability the technical skills or hard skills is insufficiency for graduates employment, there are strongly needed employability skills such as communication skills, problem-solving skills and interpersonal skills. Sarimah and Dahiru Mohamed (2014) suggest that to receiving sustain job employment the employability skills is very important needed skills in addition to technical skill. The previous study as Crebert, 2004; Hewitt, 2005, Dunne Rowwline; and Rasul et al., 2010 also employability skills is a suite of knowledge and attributes which student gain, maintain and exceed in employment. Zaharim (2009a) defined employability skills into three kinds of skills, such as core skills, generic skills and personal skills Core skills is a technical competency with particular knowledge and ability to practice associated specific duty in the applied instrument and tolls efficiently Zaharim, 2009a). Generic skill is a non-technical competency that not involving machines, equipment, and tools. The generic skills can be described as information and communication skill. Personal attributes is characteristic, suitable attitude and traits that personally used to obtain, maintain and succeed in employment. Person attributes are an element of good attitudes and traits of individual learn a different culture, tribe and ethnic groups for unity (Zaharim, 2009a).

Sofia Asonitou (2014) mentions that for improving employability or employable of graduates, there are mostly associated with soft skills, for instance; interpersonal and communication skills, ethics, entrepreneurship, leadership, critical thinking lifelong learning, problem-solving, adaptability responsibility, flexibility, and others. there are not just focused on hard skills, for instance; practice individuality skills, technique and information technology skills. Many educational researchers such as (Bennet et al ., 2000 and Blackwell et al., 2001) have developed educational research methods in order to enhance employability skills of students as to adapting curricula which including the specific skills courses, experimental, instructional methods, innovative information technology, job planning, service learning, and extra-curricular activities. Besides that internship learning and work-placements become as on methods that acceptable and most efficient to fulfil the gaps among education and employment requirements. The contribution of an internship assist student learn and practice. It is an opportunity to improve their skills, support students to proceed and improved their initiatives, self-confident, maturity and ensured low-cost training (Sapp & Xhang, 2009; Raelin, 2001).

3.3. TVET Curriculum Development

TVET should reform in order to improve the individual skills to reach on both supply and demand dealing with the changes in economic development. The reform may be influenced whenever TVET course design is improved on elementary of suitable the vocational curriculum. Overall, the curriculum is a method to the improvement of professional skills and knowledge, which simplifies the circulated in theory and practice. The comprehensive advantage of vocational curriculum are: 1) it give student with instruction in several different fields that need technical skill much more than academic knowledge, 2) give student to concentrate on practical training for job, and 3) as the main advantage, give a flexible program usable for diversity of source (Ellis,

2003).

According to UNESCO (2009) has been characterized by the curriculum can be a set of the learning systems. In order to generate a specific and learning outcomes. Since curriculum development is mainly a sort of practice with a specific purpose and introducing plan changes in order to gain better achievements. The vocational education training course provides skills to the learners for strengthen their professional abilities, as well as to enable individual competency and enhanced human capital with practical training in order to reduced employment issue (Oketch, 2007). The consequence of the entire variable is a structure of vocational education program based on appropriate designs for a vocational course curriculum. Vocational education and training is an significant component of the economic development strategy of the country. Development skills and knowledge of the workforce are necessary for obtaining or preserving economic competitions, particularly in the context of progressing globalization. Therefore, the role of technical vocational education become a very important key which equip the economic deployment (Grosmann and Naanda, 2006). Consequently, training tradition must be changed both the organization and the employees (Roy and Raymond, 2008).

Furthermore, Chookhampaeng (2003) states that the classroom level has direct effect on the student, which influence by the course curriculum. To improve the curriculum, it needs to emphasize not just the course descriptions but also results after course (Promchun, 2007). And also an efficient assessment is needed as Wongwanich (2005)'s study on the needs of public and individual involved shows that it ensure the accurate information as to build the object for improving curricula or even to deal with an essential barriers, it can be one result to resolving issue for them(Taba,1962, Oliva, 1992; and Suangsuwan, 1998).

Based on discussion above, TVET has a positive influence on economic development and one most important aspect of education sectors. In addition, TVET

pays a crucial role in providing a skill to the learners in order to enhance their professional ability and improving skill competency of the workforce, which necessary for participating in economic development and competitiveness. Therefore, for more consistency of TVET, it need highly considerable for a structure of vocational programs based on appropriate or properly design of vocational curriculum development. Since, the curriculum or course subject would provide and students gain more learning experience from school, which they can apply and benefit from the actual works in reality.

3.3.1 Employers Expectation and Curriculum Development Perspective

There is wide debate and acknowledge that it remains a gap and miss-match on the employability of graduates and work requirements (Ranasinghe, 1992; Lindsay, 2002). In addition, some employers state that 'the degree subject of studied is not just a effectively to graduates competency and enable carry complicated information and communication. It influence that graduates needs to handle variety of skills such communication skills, intellectual, and others more than a specific subject and skill knowledge (Knight and Yorke, 2000 cited in Lowden et al. & Lewin, 2011). The employers mostly look forward at a level of skill applied as a common of the different job areas, for instance, communication, teamwork, initiative, leadership, flexibility, problem solving and enthusiasm, as this result, mix of skills is relevance to the employability and enhance employability of individual (Aida, Norailis & Rozaini, (2015).

Reddan and Harrison (2010) claim that TVET curricula are strongly emphasized on the outcome of knowledge, skill and the requirement of the industry. As well as, the TVET institutions need further restructure the programs for responding to the labor market demand. King and McGrath (2004) point out that TVET must equip

the youth, for being able to integrate into the working world. In addition, Knight and Yorke (2002) claim that curricula designed improve the employability and may also be useful for academic terms such as: for the additional subject can be addressed on particular generic skills, self-efficiency and critical thinking.

Similarly to Dune (1999) state that, there are many higher educational institutions faced challenges under the pressure to accommodate the educational styles as for the meeting of quality outcome and employers' expectations. Several researchers as Lips-Wiersma & Wright, 2012; Vitouladit, 2013,2014) note that the employers and employees can be compatible work with each other, as well the employees improve a generic ranging as for transferable skills, for example, communication skills, personal skills, problem-resolving skills, teamwork, and the decision-making skills. However, Harwood et al. (1999) claim, the employers choose enlists the personnel on a non-academic skill, for example, interpersonal skills and flexibility. Knight and York (2000) point out that some employers refer that the degree subject of study is less important than graduates' ability or competency to deal with complicated information and communication. Furthermore, The graduates must be acquired a diverse of other skills. According to Archer and Davison (2008) noted the considering employers' perspectives on graduates employability, there is a contrasting between educational institution or university and employers requirement, for example, the contrasting among what educational institution is promoting and what is the requirement of the industry or employers

Evers, Rush & Berdrow, (1998); Brow, Hesketh & Williams, (2003) claim that many graduates is lack of transferable skills requires of the workforce. Furthermore, Robinson (2006) claims that the competencies of graduates applied skills are the value of identifying the workplace. The employer mostly focuses on graduate's characteristics and soft skills than the degree acquired from colleges or universities' name (Branine, 2008).

Above discussion describes the differentiations issue faced, and feedback. Furthermore, the research also focused on the employer's views regarding the quality of Technical vocational education on providing student practical training. This study mainly discusses the relationship between skill acquired and skill required in the current employment situation in Laos, particularly, the relevance between skills acquired to actual work receiving of graduates, as well in-depth information to investigate the linkable impact of skills acquired on employment status. Moreover, this study highlights the extent of the subject effect on employment in terms of success and status, and the needed or missing skill and weakness based on actual working experience. Additionally, regarding further improvement with the discussion on employers' satisfaction and expectation.

3.3.2 Graduates Satisfaction

Mahapatra & Khan (2007) claim that there are several customers and stakeholders that the training institutions needed to consider their satisfaction including students, alumni, parents, employers and government. However, students become the main actors to measure the training quality of training institution service by students feedback especially, teaching aspect, training curriculum contents (Nair, Murdoch, and Mertova 2011 cited in Mohd Zuhdi Ibrahin, et al., 2012) Furthermore, Graduates students are also pretended to be a main customers which in play many different roles in training institution. Since they are a product of a process, and as an internal customer for training institutions facility, the labor of learning process and the delivery of course material.

Hill, Lomas,& MacGregor (2003) found that student perception on quality of learning experience in higher education, the most influential factors is the lecturer and the students support systems such as the quality of the delivery lecture in a classroom, student reaction and communicative student. In addition, Maimunah Sapri, Kaka,&

Finch (2009) also found that students' learning experience is influenced via three main factors such as teacher performance, service and facility which support the main process. Sakthivel, et al. (2005) developed a model which implementation of students' satisfaction of academic performance. There are five majors considerations such as course delivery, campus facility, customer feedback, courtesy, and students' satisfaction. Again, Maimunah Sapri, Kaka,& Finch (2009) research in three universities of Malaysia found the significant factor are library, laboratory, and campus environment were very significant by student perspective.

Douglas, & Barnes (2006) research measurement students' satisfaction found that most significant perspectives was related to teaching and learning that influenced by students' feedback. Academic linked to activities are necessary important than non-linkable to academic. Academic activities should be diverse in the classroom and cover the variety of teaching processes that can improve well value, characteristic and personality (Jalali, Islam, & Ariffin, 2011).

3.4 Chapter Summary

In his chapter, the researcher reviews the previous study, which relevant to the topic of study. First, researcher reviews in terms of TVET in economic development as a global trend to educational development and demand are examined, particularly the globally significant increase in demand for education is observed, such as the increase in the quality of graduates skills and the demand of the labor market. Therefore, the quality and relevant issue are identified for graduates as working opportunities, consistent of skills and matched with the position and actual work. This research concludes by using descriptive theories of many other authors' view especially TVET trends and its curricula.

The second, section focuses on education, skills demand and concept of

employability. These concepts are highly debated at the present time, among education productivities. And the role at all education levels on whether graduates can access employment or workforce.

Finally, this reviews the previous studies of human capital and social capital in order to better understand the ideas or concepts of employability. Therefore, human capital theories are discussed and the meaning of employability proposed, which allowed the researcher to go beyond the restricted possibility in existing education and employability. Furthermore, the researcher discusses the concepts of lifelong learning and work-based learning, which emphasizes how human capital, meets the social demand for graduates' employment.

CHAPTER IV

METHODOLOGY

In very wide terms, there is a diversity principle of the methodology used in education research at the present times. Researchers use an objective or hypothesis to recommend regulation/laws or to analyze the result of education policy, which can provide a model/theory that can be used repeatedly and controls events (Hughes, 2004). Therefore, this study investigates the TVCs graduates' feedback, perception based on their actual experience. According to Millington (2008) point that, the tracer study has given quantitative structural data, particularly for employment and occupation, working feature, competency, and experience of the graduates. As similar to Guzman et al (2008) claim that, tracer study is suitable tool for examining for educational institution capacity regarding preparing graduates to meet the requirement of the workplace as market demand. Furthermore, the tracer study provides the information as systematic feedback to former student. Thus, the institution or school can know the situation whether graduates student obtained employment after graduation and their working conditions, retrospective assessment of the course of study, which can be encouraging the curricula debate and it would be also interesting for current or later students (Schomburg, 2003). Again, Guzman et al (2008) point that, tracer study is involving the determination in the job search mode, time and employment situation, where the skill acquired from school can utilize to actual work, and job satisfaction.

The study employed qualitative methods. The secondary data also used to obtain the requirement of data. There are three types of data collection tools developed and used are:

- Structured questionnaire and interview guideline will be developed for collecting primary data;

- Necessary data collection from graduates and employers; and
- Document data and analysis issue will also be identified and used

Therefore, this study starts the chapter with research strategies with reference to the research dimension perspectives. There are two exclusively used social science research methodologies such as quantitative and qualitative. In addition, there are three main areas of qualitative research that criticized by several quantitative researchers: a) qualitative research, they assert, argue that the subject feather of qualitative research prevents the application of traditional standards/criteria of reliability and validity; b) qualitative research needs even more time for data collection, analysis and interpretation; and c) qualitative research often risks anonymity and has unavoidable bias. Haveman and Wolfe (2004) claim that the different forms of qualitative research need comprehensive explanations or expressions, in which the results are through statistics.

4.1 Theoritcal Framework

Schultz popularized human capital theory by building on Jacob Mincer's reintroduction of Adam Smith (*The Wealth of Nation 1776*), based on human capital theory was developed. Mincer (1961) pointed out that the investment through education and training develops and improves the quality competencies of students helps them to get high-paid occupations in the future. However, Schultz (1961) argues that it took time for economists to fully recognize the role of human capital accumulation in economic development:

> What economists have not stressed is the simple truth that people invest in themselves and that these are very large. Although economists are seldom timid in entering on abstract analysis and are often proud of being impractical, they have not bold in coming to grips with this form of investment. (p.2)

For investment through education and training, Schultz said that people's skills and

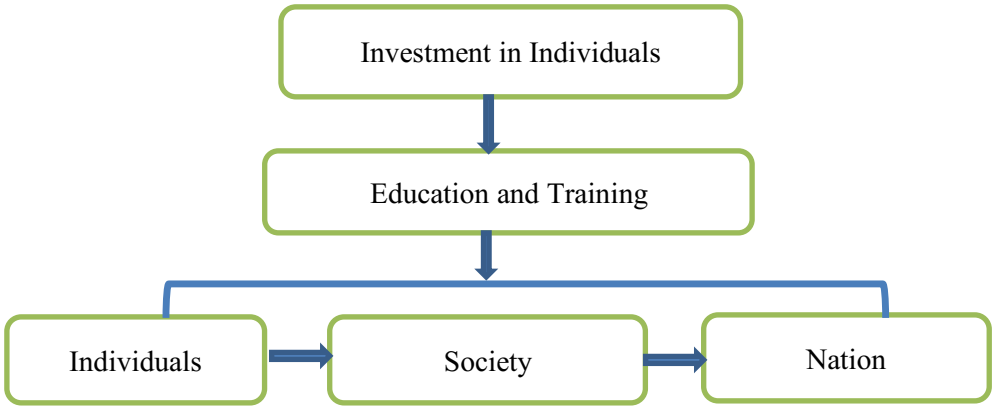
training influence economic development as they lead to economic growth and social prosperity of the country (1960, 1961). Later, Becker identified empirical evidence concerning the return and growth of investment for individuals and society at large and the nation. Again, Becker (1965), note that the strong relative position between education and training in the labor market is due to a higher level of education and training allowed for individuals to obtaining higher skills.

Currently, the human capital theory has broadly developed regarding the quantitative measurement of human capital components, or values, such as information, knowledge, skills, and competencies. There diverse views by many theorists regarding individual assets even though, people have not inherited properties. For instant, Divanna and Rogers (2005) write:

> Measuring human capital is not a subjective exercise for academics, but rather a fundamental business requirement that requires an ongoing exchange of information among investors, managers and employees. (p.8)

The following diagram shows an interpretation and conceptualization of a complex model of human capital theory.

Figure 4.1 Conceptual Framework of Human Capital Theory



Source: Created by Author based on Mincer (1961), Becker (1965)

Figure 4.1 presents the summarized logic of the human capital theory. It shows that a country's investment in an individual through education and training is strongly related to economic growth and the achievement of an individual or personal outcomes. At the same time, it underlines that education is an important key component of human capital theory. In addition, there are several researchers who identify many other contributing factors such as Bloom & Canning (2003) and Deaton (2004) who emphasized community health's role in national development, but these factors are out of the scope of this study. In developed countries which driving force of national economic growth and societal wellbeing are mainly linked to the effectiveness of the human capital development process. Therefore, we can summarize those relationships as an investment in training with a return/outcome of the government policy leading to:

- Preparing people for future work and lifelong learning;
- Individual/personal and social return;
- Enhancing the productivity rate;
- Personal improvement, social and national growth rates; and
- Improve performance at personal, social, and national level.

The developed country's policy is incorporating human capital theory, including the policies of the OECD. In general, these policies are designed to meet the needs of individuals, communities and employers' requirements such as continuing for improvement, the ability to be maintained and sustainable in the economy and quality of life recommendation by the OECD (2001a, 2001b). These policies focus on the following points:

- Development of non-cognitive skills to meet rapid knowledge and economic changes;
- All learning environment are valuable;

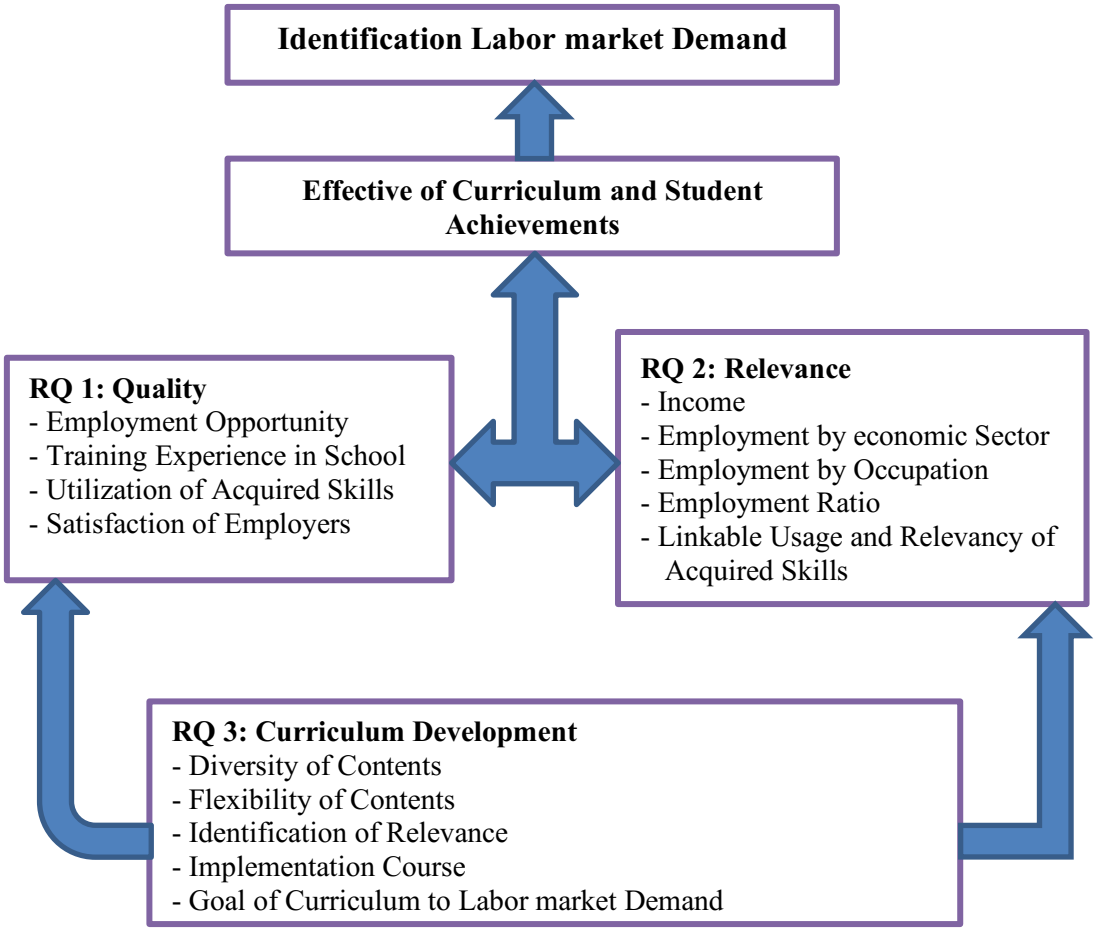
- Pursuit of equity and social cohesion;
- Coordination with all sectors/parties (stakeholder) to connect education policy for employment and social protection;
- Enhancing participation and social protection;
- Addressing adverse variations of education and training; and
- Human and social capital development takes time.

Despite the importance of human capital theory, there are criticisms of it. Bouchard (1998) argues that one weakness of the theory is that, it strongly depend on further investment in education, but it would not be able to predict the future requirement of employers. The hypothesized common relationship between investment in education and its return remains weak. He also points out that the skills employers need change when the market expands, and that teaching institution are unable to change its curriculums as quick as the markets. He states that employment will be improved with the level of compatibility between existing skills and the needs of employers, and demonstrates this views by showing that the labor market is full of people who have been trained. Based on human capital theory. Its more criticized in terms of countries' investment through education and training as to improve knowledge, skills, and competencies of individuals which beneficial for the achievement of an individual or personal outcomes, community, economic growth and society. This very significantly linked and suitable to use to explain the phenomena of a country especially for Lao PDR. The Government of Lao have tried to benefit for all including natural resources and human resources, to fulfill the demands of economic growth and global market application. Therefore, there are strongly needs skillful workers as to strengthen their opportunities for employability, young people which are flexible and reach to the demand of current situation.

4.2 Conceptual Framework

Before embarking on the study regarding the relationship between employability of TVC graduates and curriculum development, which affect student outcomes, the framework of this study is shown in the figure below. It portrays an analytical diagram identification factor affecting TVET curriculum development, which influences student outcomes. The study categorizes possible identification factors in each group.

Figure 4.2 Conceptual Frameworks



Source: Created by Author based on Mouzakitis (2010)

First stage is the analysis of the identification of market need and is associated with three features: 1) business factors including, resource, international orientation; 2) decisions and selections associated with human resources, technological and managerial factors; and 3) market factor base on trend of domestic production and demand, forecast for the future, which is influenced by economic policies, political status, and relationship among customers and products.

Second stage, the assessment of the TVC process, it is important to assess the implementation of education and training programs. There is multiple aspects /methodologies to evaluate in the process, such as identification of relevance, implementation course, goals of the curriculum to labor market need and periodic analysis. Therefore, based on curriculum development content, the TVC system should emphasize making sure students improve into productive workers as well as fitting into living and work situations, as well as including diversity of content, the flexibility of delivery, and practical skills. The curriculum development have to reflect 1) students and their requirements, particularly the capacity, and employment opportunities; 2) the relationship to the education system; 3) setting up methods and plans, and 4) student enhancement for tackling the complex situation of labor market demand

Third stage, in term of quality, this meant that quality of success such as the education can be able to equip student with knowledge, skills, and utilization of skill acquisition or transferable competency they require to succeed after graduation with high quality of learning experience or learning environment and enhance by good qualification of teaching process.

Fourth stage, in terms of relevance, this strongly needs a flexible, innovative learning approach and delivery methods. The relevant issues become a big debate in education to make students obtain employment after graduation. Besides that, its need to be considered to graduates employment status, this can be measured by income, employment by economic sectors, and employment by occupation; unemployment ratio and linkable use and relevance of acquiring skills

Last stage, the effectiveness of curriculum development is measured by the success of students in acquiring required skill sets, course delivery that can help train students to tackle future challenges, and the extent of the arrangement of student for future lifelong learning.

4.3 Hypothesis

According to state regulations, Technical Vocational Colleges should prepare students with skills and capabilities that well-matched the needs of the labor market in the country. This study consists of three research questions, each research question consist of three sub-research questions. The following hypotheses are presented relevant to each sub research question of this research:

Hypothesis #1: Students graduating from TVC have a high risk of unemployment. As well, the practical skills and competencies acquired from TVC are irrelevant to graduates' current jobs.

Currently, the complex technological and globalization changes all around the world has been affected by education and employers. There are highly needs workers constantly adaptable to the changes, in addition, this requires higher learning to responses and ensure for employability of their graduates. Johnson and Adams (2003), the research study found the existing of public technical vocational education and training systems are suffering from the critical issue including the decline of quality, irrelevant to job demand, under-enrollment ,and under-funding. Quek (2005) notes that employers require workers with mixed and interpersonal skills or generic competency, such as leadership, teamwork and problem solving, to perform required work. Training and skill development continue to be discussed in educational research. There are challenges for educators to provide the relevant and meet to the requirement of

employers. Winch (2000) claim that graduates' training must professionalize to provide the skills demanded by employers or the labor market.

Hypothesis # 2: Practical training and skills acquired by TVC graduates are insufficient for their actual work.

In terms of skill acquired of graduates, there is various research studies and literature confirm the need for skill competency, which appropriates and applicable for labor market demand and the global economy. Employers claim that graduates is being lacked of transferable skills to meet the requirement of the workforce (Brown, Hesketh & Williams, 2003). And several researchers, such as Morely (2001), Shivpuri & Kim (2004), and Kivinen & Silvennion (2002), raise the issue of the huge skill gaps between students who graduated from TVET programs.

Hypothesis #3: subjects of study have positive influence on graduates for seeking jobs.

Employability of graduates, this consider as many points of view, for capacity, degree and graduates subjects. Knight and Yorke (2000) review some employers' perspective, the degree subject of study is less important than graduates' ability with sophisticated information and communicate, effectively and a variety of other skills. However, several researchers have been discussed in terms of the subject of study related to graduates job employment. Hard skills or specific subjects acquired from school is seem insufficient for graduates to enter the employability of graduates. There are many researchers found that within a core subject of study in school, but to ensure the graduates employable, graduates need to be good in generic skills subject such as information management skills, communication, problem-solving, critical thinking, entrepreneurship, leadership, and humanities skills…..etc. (Malhi, 2009, Oliver et al., 20014 & Suleman 20016).

Hypothesis # 4: Graduates subject of study may have different opportunity for employability.

Graduates faced unemployed issue is mostly depend on their academic qualification. For employability requires more than a major subject, it also needs to consider the general subjects such as communication skills, information, teamwork, problem-solving, critical thinking and professional ethics (Ahmad Zaini 2005). Another research as IPPTN (2004) found that unemployed graduates were from subjects of study such as sciences, literature and technical, the weakness in non -technical skills between graduates and the lack of communication is a major case for being unemployment.

Hypothesis # 5: Employability of TVC graduates have negative impact among the different groups.

Mohammad Sattar (2009) observed that employability is not just technical skill, however, the non-technical and occupational skills are strongly important to consider the employment opportunity. Employability of graduates may different among the graduates themselves. Some of the employers looking for a worker with specific skills and professional with core skills that graduates can work immediately in the workplace, in addition, employers also need graduates with generic skills such as non-technical skills and occupational much more than technical skills (Ahmad Zaini, 2005 &Mohammed Sattar, 2009). Furthermore. Kearns (2001) mention that, to provide graduate having ability and survive in employment circumstance of current economic development. Graduates is strongly needed employability skills and adaptive skills.

Hypothesis # 6: Among the graduates subjects of study to access the actual working , there is strongly differences in term of skills mis-match.

Knight and York (2000) point that some employers do not care much about the major of study, but they prefer to have graduated with certain skills or competencies that can deal with complicated information and communication. In addition, most employers value more on the personal characteristics of graduates and soft skills, rather than the completion of colleges or university programs (Branine, 2008). There are different perceptions and requirements of employers in regards skill mismatch. Many of research studies attempt to examine a set of skills that can equip graduates more employable. Therefore, employers and graduates' perceptions are very significant role that requires improve training quality (Washer, 2007 & Bojars, 2010).

Hypothesis # 7: Eemployer' expectation of TVC graduates has a positive impact.

Ramlee(1999) research founded Malaysia technical graduates have sufficient technical skill, However, there is not fulfil the requirement of employers particularly interpersonal skills, communication skills, problem-solving and entrepreneurial skills of the graduates. As well, Ahmad Zaini (2005) found that 80.000 technical skill were remained unemployed. Hesket (2000) comments that employers reflected about graduates' teamwork and IT skills which is very satisfied and strong demand, However, Employers were mostly dissatisfied with competency skills.

Hypothesis # 8: TVC course/curricula programs do not reflect the professional development of the students.

In terms of educational quality, it's related to the managing of curriculum development of the educational institutes. There is widely debate on mismatch educational production and market demand. Knight and Yorke (2001) claim that curriculum with proper design improves the employability of graduates and beneficially for academic

terms. Vocational training curriculum must provide flexible course programs, introduce in different field of technical training and provides students emphasize on training for a job (Ellis, J. 2003). Curriculum designed may different target and output which more focus on employable of the individual. Since, the curriculum is an alternative way for developing professional skills following the theoretical to practices (Mouzakitis, 2010)

Hypothesis # 9: Employers expected TVC institutes provide a variety of subjects of study for trainees. This may have a positive impact working quality of graduates.

The individuals require a new variety of skill competencies for the knowledge economy, for instance, language skills, negotiating skills, self-confident, social network, problem-solving skill, teamwork and so on (Bank, 2007 cited in Murgor T.K (2013). Ikegawu Emmanuel et al., 2014. The educational curriculum must evaluate go further learning more practical like hand-on training not just provides the theoretical learning. Employers satisfaction of graduates has been discussed in over the decade, therefore, it mostly criticized that vocation institution have provided insufficient skills knowledge for students. However, graduates are weakly prepared for hard skills but employers were acceptable for soft skills of graduates. Graduates mush be flexible and holding various kinds of knowledge skills (Suleman, 2016).

4.4 Research Design

This study applies a case study method to investigate multiple cases, focusing on graduates, employers, administrators and teachers. Merriam 1998 and Wiersma (2000) notes that a case study is one type of qualitative research design. Qualitative research, putting emphasis on consideration of the whole thing interpretation of phenomena, is originated from descriptive analysis Wiersma (2000). Again, (Merriam 1998, p.6) notes, “qualitative research can reveal how all parts work together to form a whole”. A multi-case study is probably to improve and generalized the research and comparable

between or over the case (Wiersma 2000). Yin (1994,13) describes, “A case study is an empirical inquiry that explores a contemporary phenomenon within real-life context”. Therefore, this study attempts to understand the general trend across by looked into the multiple- sectors, which are involved and affected on the graduate status and employability.

4.5 Data Collection

In the study, data collection are conducted using semi-structure interviews, observation and document reviews. The field research was conducted in Laos in August and September 2013 and 2014.

4.5.1 Sampling

This study generates explanatory information on the issue under the reviews. Bell (1999) defines the case study, it’s very useful for searching to clarify what happens in a given situation. Furthermore, Adelman et al. (1976) argue that the terms of the case study is a step action and provide individuals with a richness of data interpretation. However, collecting plenty of numbers for the observation is considered time-consuming and the processing. Additionally, Cohen and Manion (1994) noted an obvious explanation for the case study research as there is simply observing the characteristics individuals by doing aims for making generation about other similar of individuals, For example, student, teacher and school management. The table below shows sample selection. This study focuses on two colleges of five public technical vocational colleges under the supervision of the Ministry of Education and Sports, Lao PDR

Table 4.1 Distribution of Sample by Administrators and Colleges

Name	Female	Male	Total
Officers (MOES)	0	3	3
Officers (Provincial Level)	0	3	3
Graduates (Vientiane TVC)	38	137	175
Graduates (Champasack TVC)	38	137	175
Total	**76**	**276**	**356**

Source: Created by Author

Vientiane Province Technical Vocational College and Champasack Technical Vocational College are located in Vientiane province, and Champasack Province, Lao PDR. These two provinces are the largest in Laos and are the center of trade and economic activities. The provinces are an important strategic location in Lao PDR, economically and politically, as they share a border with neighboring countries - Thailand, Vietnam, and Cambodia. There is extensive communication with each country in terms of trade, economic cooperation, tourism, communications, and other services. The sample size and sampling methodology that will minimize bias and increase precision to allow conclusions of the study to be representative of the study population.

Table 4.2 shows data about types of employers, which were selected. They have classified into two types as a 12. In addition, the private company has divided by size of the company such as small companies<10 employees, medium companies < 30, large companies with more than 30 employees, see table below:

Table 4.2 Distribution of Employer Divided by Type of Employers

Name	Frequency	Percentage
Government official	15	50
Private company	15	50
Total	**30**	**100%**

Source: Created by Author
Note: companies size: small companies<10 employees, medium companies<30, large companies with more than 30 employees

Table 4.3 Distributions of Graduates Fields of Specialization

Subject graduation	Medium-Level		High Diploma		Total
	N	%	N	%	
Construction	49	14	67	19.1	116
Electricity	23	6.6	87	24.8	110
Automotive Technology	52	14.9	72	20.6	124
Total	**124**	**35.5**	**226**	**64.5**	**350 (100%)**

Source: Created by Author

Table 4.3 shows the distribution of graduates by fields of study or specialization of the respondents, which participated in this research. There are 124 respondents or 35.43 percent who graduated or specialized in automotive technology, followed by 116 respondents, or 33.14 percent graduated or specialized in electricity and 110 respondents, or 31.43 percent graduated or specialized in construction.

Table 4.4 Distributions of Administrators and Teachers

Types	Champasack TVC		Vientiane TVC		
	Male	Female	Male	Female	Total
TVC directors	2	0	2	0	4
Administrative officers	3	0	3	0	6
Teachers	5	1	6	0	12

Source: Created by Author

Table 4.4 shows the distribution of graduates by field of study or specialization of the respondents, which participated in this research. There are 124 respondents or 35.43 percent who graduated or specialized in automotive technology, followed by 116 respondents, or 33.14 percent graduated or specialized in electricity and 110 respondents, or 31.43 percent graduated or specialized in construction.

Table 4.5 Distributions of Graduates by Gender

Gender	Frequency	Percentage
Female	76	21.7
Male	274	78.3
Total	**350**	**100**

Source: Created by Author

Most of the graduates are single with 260 respondents or 74.7 percent, followed by those married with 88 respondents or 25.3 percent. There are only 2 respondents or 1.1 percent that are divorce. Then, this table shows the distribution of ages of respondents as

Table 4.6 Civil Status of the Graduates

Civil Status	Frequency	Percentage
Single	260	74.7
Married	88	25.3
Divorce	0	0
Not respond	2	1.1
Total	**350**	**100**

Source: Created by Author

Table 4.7 presents data about age of respondents, they have classified into five main groups. The graduates with the highest percent of age distribution are 271 respondents or 77.4 percent, with ages between 20-25 years old; follows by those who the age between 26-30 years old, 53 respondents or 15.1 percent. There are only 9 respondents or 2.6 percentage, between 30-35 years old; while only 5 respondents or 1.42 percentages between 36-40 years old and 2 respondents or 0.6 percent, aged over 40 years old. It also shows that 10 respondents or 2.85 percent did not indicate or respond to their ages.

Table 4.7 Distributions of Graduates by Ages

Ages	Frequency	Percentage
20-25 Years Old	271	77.4
26-30 Years Old	53	15.1
30-35 Years Old	9	2.6
36-40 Years Old	5	1,4
Over 40 Years Old	2	0.6
Did not respond	10	2.9
Total	**350**	**100**

Source: Created by Author

Table 4.8 shows the year of graduation of TVC graduates. It shows that 96 respondents or 27.4 percent, graduated in academic years 2011-2012; followed by 80 respondents or 22.7 percent, who graduated in academic years 2012-2013. There are 59 respondents or 16.9 percent, graduated in academic years 2010-2011; and 43 respondents or 12.3 percent, graduated in academic years 2008-09; while only 39 respondents or 11.1 percent, graduated in academic years 2007-08; and 33 respondents or 9.4 percent, graduated in academic years 2009-2010.

Table 4.8 Distributions of Graduates by Year of Graduation

Year Graduation	Frequency	Percentage
2007-08	39	11.1
2008-09	43	12.3
2009-2010	33	9.4
2010-2011	59	16.9
2011-2012	96	27.4
2012-2013	80	22.7
Total	**350**	**100%**

Source: Created by Author

Figure 4.3 Research Site

Source: http://www.lonelyplanet.com/maps/asia/laos

4.5.2 Key Informants Sampling

Key informants in this study are the person who has the best knowledge of technical vocational education and training. It considered to the best source of information and provided in-depth information to the researchers. These participants include:

- Director General of TVET;
- Specialist
- TVC Directors;
- TVC teachers; and
- Employers.

4.5.3 Data Collection Methods

This research examines the importance of Laos national income in the future in regard to the current acquisition of human capital in its recent generation. While there is an increase in participating in present economic development; physical resources are decreasing a long with human capital resources. This study relates human capital to the rate of return of investment and economic return, which is not fulfilled given outcomes from investment expectation without a change in policy. These outstanding phenomena

need qualitative research, thus, data collection through semi-structure interviews is considered to be a suitable technique to respond to the research question and meet the study objectives.

- **Primary Data**

The designed questionnaire includes two main themes:

1. Employability of graduates,
    - Socio- economic background;
    - Employment status;
    - Timing in applying for jobs;
    - Areas of employment;
    - Competition and available jobs;
    - Risk in being unemployed; and
    - Opportunity for changing job.
2. Further skills and knowledge improvement that graduates and employers opinion should be included in TVC curriculum
    - Level of applying knowledge from TVC courses to actual work;
    - Criteria implemented in the employee selection;
    - Employer' opinion and satisfaction level regarding Working quality of graduates;
    - Skills requirement by hiring employers/companies;
    - Skills/subjects that are missing from the course; and
    - Perspective on TVC curricula.

Interviews Technique Review

The main concern for this study is to build a good understanding with the students and teachers making them comfortable during the interview so that we can elicit reliable information. They will fell unfamiliarity with in-depth interview techniques and display and argumentative nature with some issues. Since this study employs the personal interview strategy with a small number of participants, it is very important for the author to obtain consent from the interviewees in advance. In this case, the author informs the participants about the interview to encourage accuracy and fulfill their responses by asking permission for recording and note during the interviewing. The consent from each participant can help build trust between the researcher and participants. Furthermore, it is also important to keep contacting the participants even after interviews to get approval on transcripts of interviews and get their feedback.

Qualitative research highlights the importance of data collection by a friendly and transparency interview technique. Both a secure relationship and a semi-structured interview give a chance to gain in-depth data (Wengraf, 2001 p.5). Structured interviews will not be used when the research questions need greater breath and for in-depth data requested during the interviews process as to identify each person 'experience, perception and reasoning, designated the emphasize of this research, the researcher is required independent tracer the issue arise in the interviews, particularly, when the more description seem to be requires. As noted, the investigation of participants' perceptions with regard to TVC graduates employability; this is the reason for the researcher's option of the qualitative methodology using semi-structure open-ended interviews.

- **Interview Technique**

To investigate the complex issues associated with Laos TVC graduates' employability, the researcher is using open-ended questions. The question investigates factors mentioned in the research questions by tracing participant's experiences, views and

reasoning with further questioning by eliciting concrete examples and greater descriptions of absolute issues. This strategy is to compare and correlate recurring topics.

In the beginning stage, the researcher introduced himself and the research topic during telephone contact with interviewees. Almost all participants were willing to participate in this study. The researcher has also categorized participants into a range of categories to collect information from the participants for strengthening interview techniques and questioning. For example, the conversation is assured from unemployed, employed graduates and employer category to open interview subjects with employers. This provided beneficial information and increased the depth and credibility of the research methodology. Before an interviewing, the researcher explained the objective of study. The participants also were guaranteed privacy and allowed the interviewer to use a tap-recorder. The interviewing was done in the native languages (Lao languages) of all participants.

❖ **Document Data Reviews**

Documents are provided as written evidence, since this study also consists of policy reviews; therefore, documents play a key important role in this study. This study reviews some of the documents and how the government, policy and regulations were interpreted concerning the education system. The relevance of material collected such as:

- Policy documents;
- Educational statistics;
- Master Plans; and
- Others necessary report papers. Those were obtained from Ministry of education and Sport (MOES), Lao PDR

❖ **Field Observations**

This study is also conducting participant observation to help the researchers to learn multiple perspectives of the population with any given case study or research locations. There are three very useful aspects for observation, which recognized by researchers such as observation triangulate and examines research findings from interviews and documentary analysis (Merriam, 1998). Furthermore, Ono (1991) note that the observation helped the researcher to comprehension the nature and characteristic of research subject from seeing and hearing. Thus, observation is necessary and very important data collection for this research study, particular, the respondents' or participant's behavior and interviews expression as for understanding the true nature of their feeling and perceptions. As a result, this study is utilized by both interview and documentary analysis.

Moreover, Merriam (1998) point that observation would assist the researchers as the outsiders to observe or see the thing, which is normal and routine in the research site; however, it is meaningful for the research. While, this study is implemented and interviews at college during the learning and practical training hours in school, and graduates working condition. Respondents provide researchers some ideas and recommendations about the situation, which occurs in the actual work. The interviewees were feeling free to talked and discussed with researchers. This provides researchers to get in-depth interviews and collecting useful data for the research objective.

❖ **Descriptive Data of Collected Samples**

Overall access to Technical Vocational Colleges in Laos is mainly comes from urban areas as Table 4.9 present the distribution of respondents by location, based on interviews of 350 graduates in two technical Vocational Education Colleges. The

respondents graduated during the period 2008-2013 and majored in electricity, construction and automotive technology. In terms of accessibility to TVC students, the research investigates graduated locations to find the difference of student access to TVC colleges between urban and rural areas. The highest percent of student access to TVC colleges are mostly from urban areas, for example, 184 respondents or 52.6 percent; 119 respondents or 34.0 percent, are from rural areas and 47 respondents or 13.4 percent, are from other provinces, which is outside or far from TVC colleges. Therefore, there is reaming a gap of access for students to TVC Colleges between urban and rural areas and students from other provinces. There are 52.6 percent differences as the highest percent is the student come from urban areas; while the percentages of students from rural access to TVC remains low and very small percent, which come from other provinces.

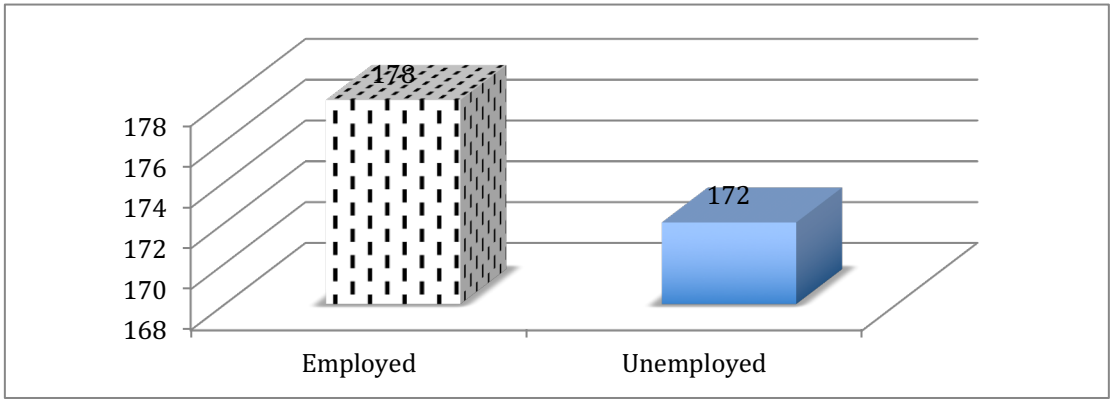
Table 4.9 Distributions of Graduates by Location

Contents	Frequency	Percentage
Urban	184	52.6
Rural	119	34.0
Other province	47	13.4
Total	350	100%

Source: Created by Author

In terms of the employability of TVC graduates, there is remaining high percentage of unemployed graduates. As shown in figure 4.4 based on interviews 350 graduated students from two Technical Vocational Colleges, those respondents graduated during the period 2008-2013 and majored in electricity, construction, and automotive technology. It shows that 178 respondents or 50.9 percent were employed, and surprisingly 172 respondents or 49.1 percent, are unemployed. This constitutes a relatively high unemployment ratio of Technical Vocational Colleges (TVCs) graduates.

Figure 4.4 Graduates Employment Status



Source: Created by Author
Note: N=350

Drive from the result of the employment status of TVC graduates, as presented in figure 4.4. Therefore, the researcher attempted to seeking for more detail about the types of the job do graduates acquired. Table 4.10 presents the types of jobs, which graduated students received in the current job market in Laos.

Table 4.10 Job Types

Job types	Frequency	Percentage
Teacher	10	5.6
General staff (Government)	137	76.1
General staff (Private.co)	17	9.4
Self-employment	16	8.9
Total	180	100%

Source: Created by Author

Based on the above table presents that most of the graduates tend to work in government sectors as the general staff. There are 137 respondents or 76.1 percent, that work as general staff of government sectors; 17 respondents or 9.4 percent, work as general staff for private companies or private sectors; 16 respondents or 8.9 percent, as self-employed and 10 respondents or 5.6 percent, as teachers.

In the case of unemployed of TVC graduates as shown in table 4.10. The researcher investigates more reasons and causes of unemployment after graduating. Why they are unemployed dealing with current graduates situations such as searching for employment, continuing to study, applying for jobs and waiting for employers to reply and not searching for employment.

Table 4.11 Cause of Unemployment

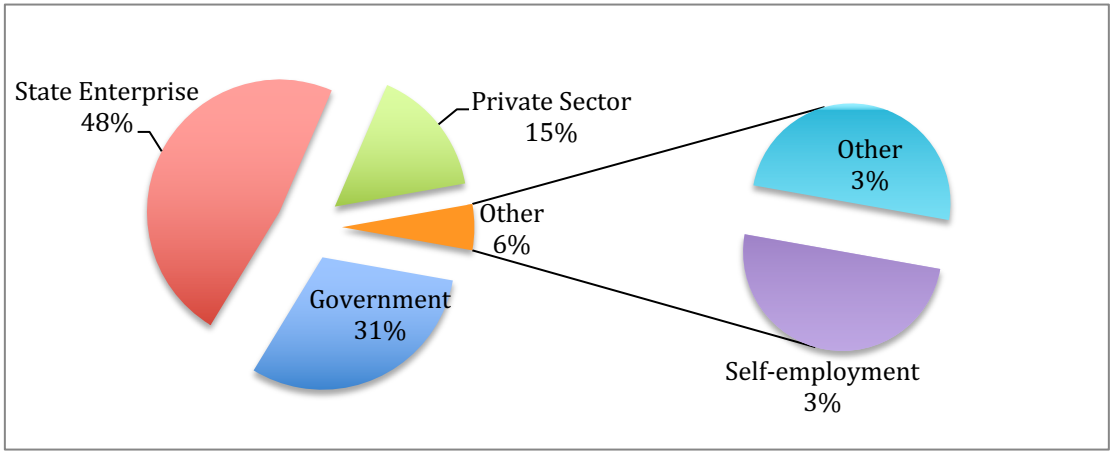
Contents	Frequency	Percentage
Searching for Job	88	51.1
Continuing Study	19	11.0
Waiting for Reply	47	27.3
Not Searching for Job	18	10.5
Total	172	100%

Source: Created by Author

Table 4.11 presents the cause of unemployment, with 172 respondents or 49.1 percent (figure 5.1). There is 88 respondents or 51.1 percent, were currently searching for their first employment; 19 respondents or 11.0 percent, were continuing to study; 47 respondents or 27 percent, were waiting for a reply; 18 respondents or 10.5 percent, were not searching for a job. Therefore, this illustrates that graduates from TVCs who major in electricity, construction and automotive technology faced difficulty in finding employment.

The figure below shows the employment sector of graduates by type of stakeholders compared to the percentage of TVC graduates employed in their current jobs

Figure 4.5 Employments of Graduates by Type of Stakeholders



Source: Created by Author

Figure 4.5 shows the employment status by type of employment. Thus, in this regard, the employment of a type of stakeholder, from 178 respondents or 58.9 percent, which are employed. TVC graduates are highly concentrated in state enterprise sectors; 85 respondents or 48 percent; 55 respondents or 31 percent, work in government institutions; an unexpectedly low 28 respondents or 15 percent, work in private sectors. There are only 5 respondents or 3 percent, work as self-employed and other sectors. This circumstance shows that TVC graduates trend to work in public sectors rather than private sectors. This shows that the current TVC program seems to be limits job opportunities in the private sector, and is irrelevant to the real need of the labor market. The following table shows the duration of the length of obtaining employment. The following table shows the duration or length of time to obtain employment.

Table 4.12 Duration Received Employment After Graduation

Contents	Frequency	Percentage
1-3 months	35	19.7
3-6 months	28	15.7
6 months -1 year	23	12.9
1-1.6 years	59	33.1
Over 1.6 years	33	18.5
Total	178	100%

Source: Created by Author

According to above table 4.12 shows the findings on the duration of graduates applying for a job by the length of time until receiving employment. It shows the highest percent is that graduates, on average spent 1 and half years searching for an employment with 59 respondents or 33.1 percent, followed by 35 respondents or 19.6 percent, spent 1-3 months; 33 respondents or 18.5 percent, spent more than 1-1.6 year; 28 respondents or 15.7 percent, spent 3-6 months; 23 respondents or 12.9 percent spent 6 months-1 year. This finding indicates that graduates form TVC spent quite a long time for obtaining their employment, which means that the graduates are trend to be a higher risk of unemployment. Next, Table 5.7 shows the distribution of TVC graduates monthly earning in their current jobs

Table 4.13 Distribution of TVC Graduates Monthly Earning in Their Jobs

Monthly Earning	**Frequency**	**Percentage**
800.000 Kip to less than 1.000.000 Kip	5	2.8
1.000.000 Kip to less than 1.500.000 Kip	48	27.0
1.500.000 Kip to less than 2.000.000 Kip	61	34.3
2.000.000 Kip to less than 2.500.000 Kip	42	23.6
2.500.000 Kip and above	22	12.4
Total	**178**	**100%**

Note: Currency calculated as Lao Kip (Kip). Exchange rate, 1 U$= 8.133 Kip
Unit: A million kip

Table 4.13 shows the highest earning is between 1.500.000 Kip to less than 2.000.000 Kip, with 61 respondents or 34.3 percent, followed by 1.000.000 Kip to less than 1.500.000 Kip of 48 respondents or 27.0 percent, 42 respondents, or 23.6 percent, earned between 2.000.000 Kip to less than 2.500.000 Kip; while 22 respondents or 12.4 percent, earned 2.500.000 Kip and above; and 5 respondents or 2.8 percent, earned 800.000 Kip to less than 1.000.000 Kip. The table below shows distributions of year of graduation and employment status.

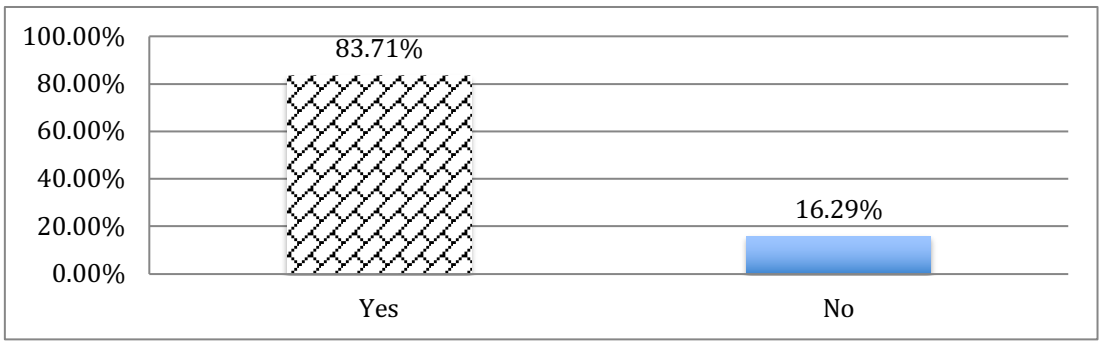
Table 4.14 Distributions of Graduates by Employment Types

Employment Types	Frequency	Percentage
Temporary	18	10.2
Regular/ Permanent	142	80.7
Casual	3	1.7
Contractual	13	7.4
Did not respond	2	1.1
Total	**178**	**100%**

Source: Created by Author

Table 4.14 illustrates that most of the graduates had regular or permanent types on their jobs with 142 respondents or 80,7 percent followed by temporary status, 18 respondents or 10.2 percent. There are 13 respondents or 7.4 percent, with contractual status; additionally, there are 3 respondents or 1.7 percent remaining working as casual status. Figure 4.6 shows graduates' job conditions after graduation with the question " Is it your first job after graduation?"

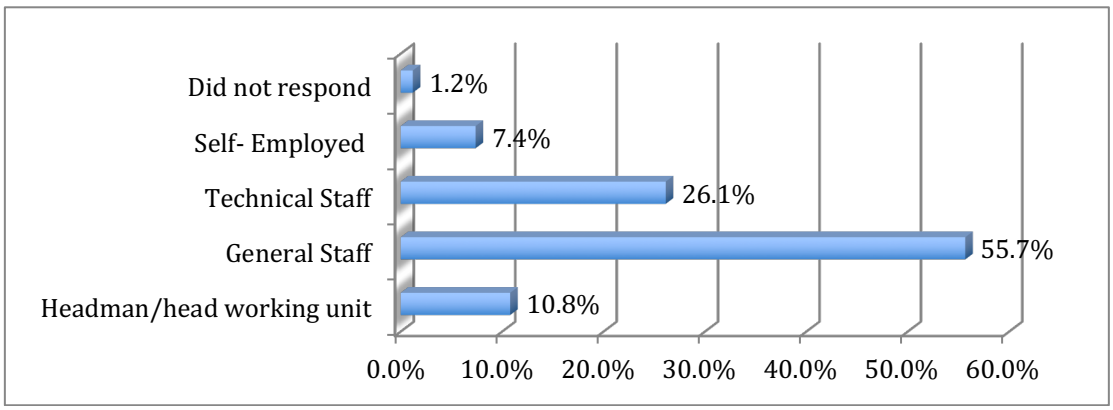
Figure 4.6 Graduates' First Jobs after Graduated



Source: Created by Author ; Note: N= 178

Figure 4.6 above shows the employment situation of graduates after graduation. There are 149 respondents of total participants in this research or 84 percent, that said that this is their first job after graduation, while there are only 29 respondents or16 percent, which said that it is not their first job after graduation.

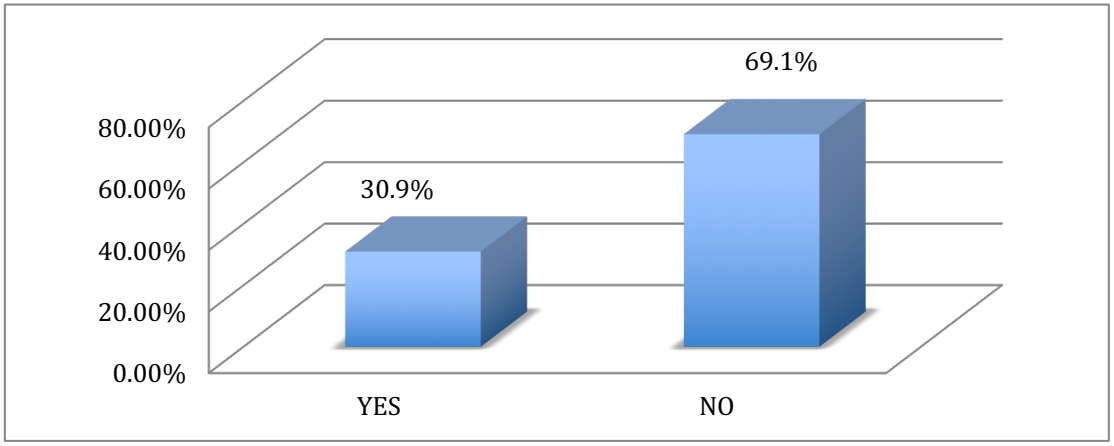
Figure 4.7 Distribution of Employed Graduates by Job level Position



Source: Created by Author

Figure 4.7 shows that the majority of job level positions of the employed graduates were general staff with 98 respondents or 55.7 percent, of total employment of graduates. There are 46 respondents or 26.1 percent, working as technical staff; while there are about 19 respondents or 10.8 percent, working as headman or working units; and 13 respondents or 7.4 percent, working as self-employed.

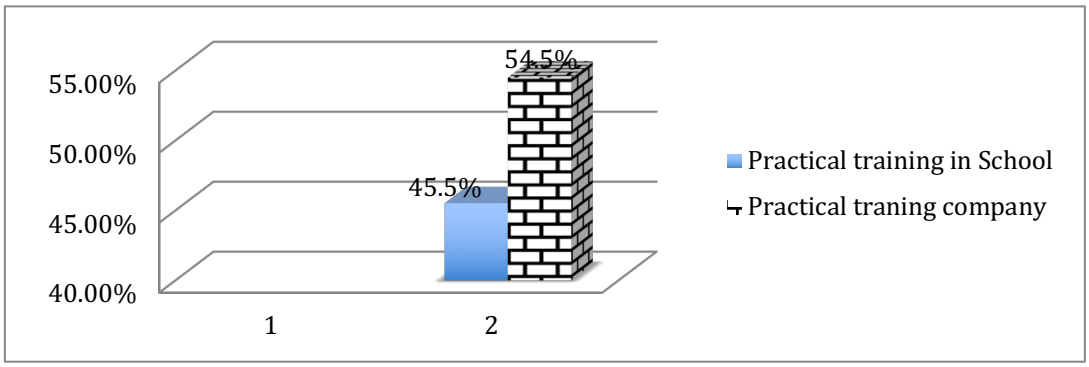
Figure 4.8 Employed After Graduation



Source: Created by Author

Figure 4.8 shows percentages of TVC graduates received employment after their graduation. There are 123 respondents or 69.1 percent sates that they are not received immediately after graduation; while there are only 55 respondents or 30.9 percent, receive employment after graduation. This result shows the situation of graduates on employment opportunities. The graduated subjects of study may be a cause or increased employment opportunity for graduated students.

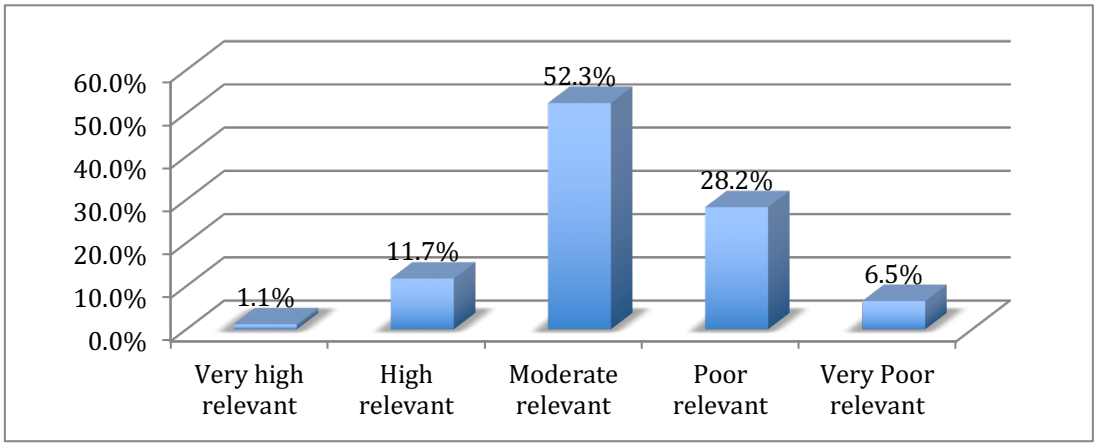
Figure 4.9 Graduates Preferred Teaching -Learning Methods



Source: Created by Author

Figure 4.9 shows that graduate's preference for the type of teaching-learning method, which would be useful and highly provide skills for students. From 156 respondents, there are 85 respondents or 54.5 percent, with the need for intensive or practical training in the external sector as a private company, state enterprise and other. Additionally, there are 71 respondents or 45.5 percent, with the need for intensive or practical training in school. This result illustrates that in terms of teaching – the learning process of TVC School needs to highly concentrate or focus on practical training rather than provide student with theoretical learning

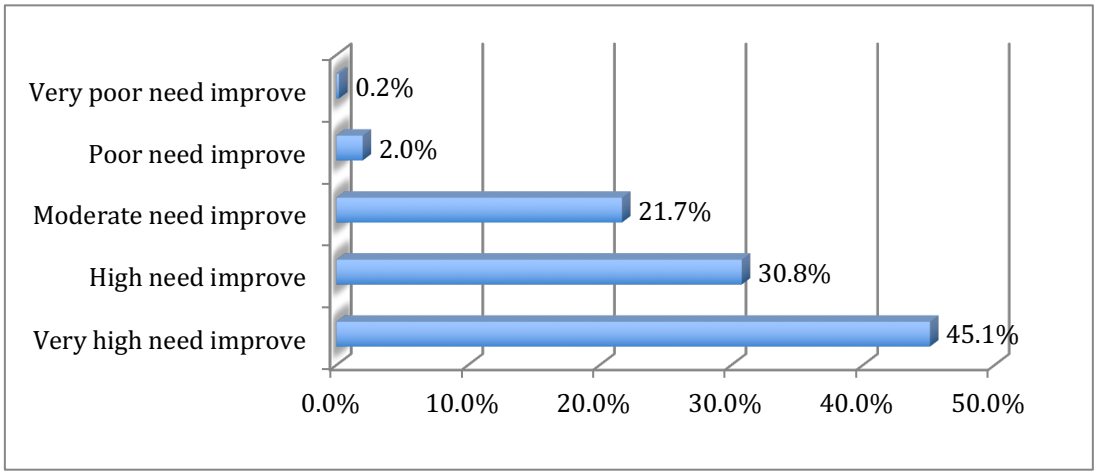
Figure 4.10 Distribution of the Relevancy of TVC Curricula to Current Job Demand



Source: Created by Author

Figure 4.10 shows how TVC curricula relevance matches the present job demand by graduates rating the level of relevancy. The highest is 183 respondents or 52.3 percent, rated with moderate relevance, followed by 99 respondents or 28.2 percent, with fair relevance. There are 41 respondents or 11.7 percent, rated that highly relevant, while there are 23 respondents or 6.5 percent, as poorly relevant; and 4 respondents or 1.1 percent, as highly relevant.

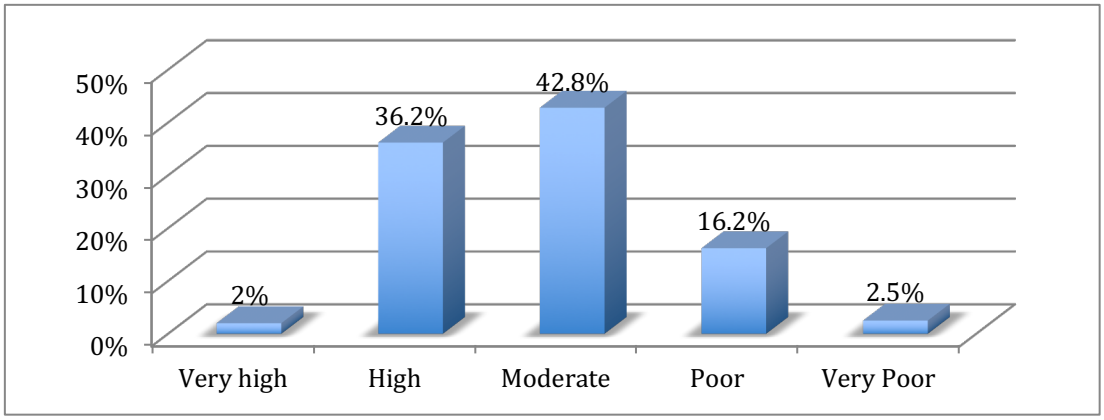
Figure 4.11 Distribution of the Requirement for TVC Curricula and Teaching-Learning Process



Source: Created by Author

Figure 4.11 shows the requirement for an urgent improvement of TVC curricula and Teaching – Learning process as for responding to current job demand. There are 158 respondents or 45.1 percent, with very highly needing improvement; followed by 108 respondents or 30.8 percent, with highly needing improvement, 67 respondents or 21 percent, with moderately needing improvement; while there are only 7 respondents or 2 percent, with fairly needing improvement; and 1 respondent or 0.2 percent, with poorly needing improvement.

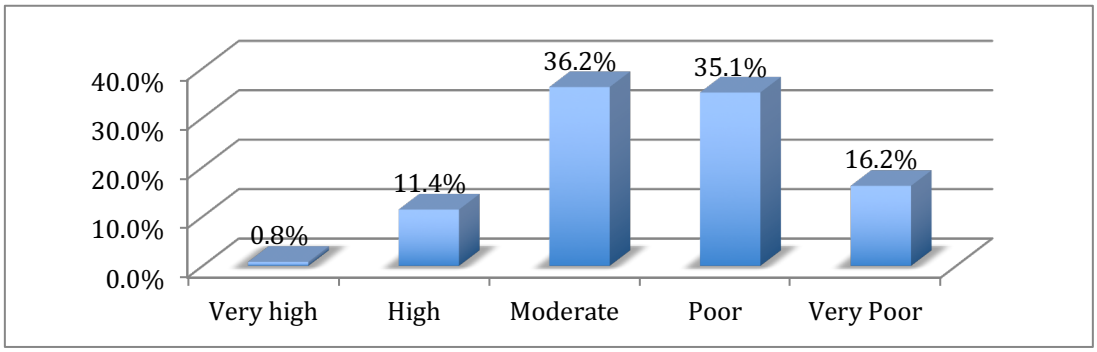
Figure 4.12 Distribution of Teaching Qualities of TVC in terms of Theoretical



Source: Created by Author

According to Figure 4.12 shows the rating of teaching quality of TVC by graduate. Most graduates, 150 respondents or 42.8 percent, rated teaching quality as moderate; followed by 127 respondents or 36.2 percent, as high. There are 57 respondents or 16.2 percent, as fairly, while there are 9 respondents or 2.5 percent, as poor and only 7 respondent or 2 percent, as very high.

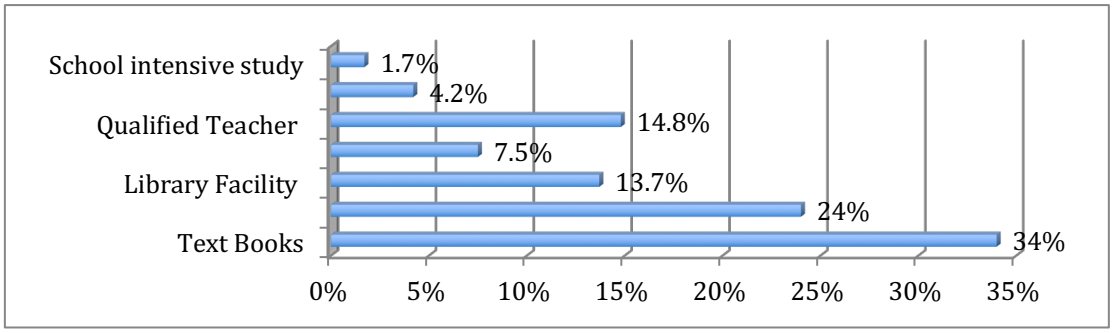
Figure 4.13 Distribution of Teaching Qualities of TVC in term of Practical



Source: Created by Author

Figure 4.13 shows the rating of teaching quality of TVC by graduates. Most of graduates is rated, 127 respondents or 36.2 percent, with moderately, followed by 123 respondent or 35.1 percent, with fair; followed by 40 respondents or 11.4 percent, as high. There are 57 respondents or 16.2 percent, as poor and only 3 respondents or 0.8 percent, as very high.

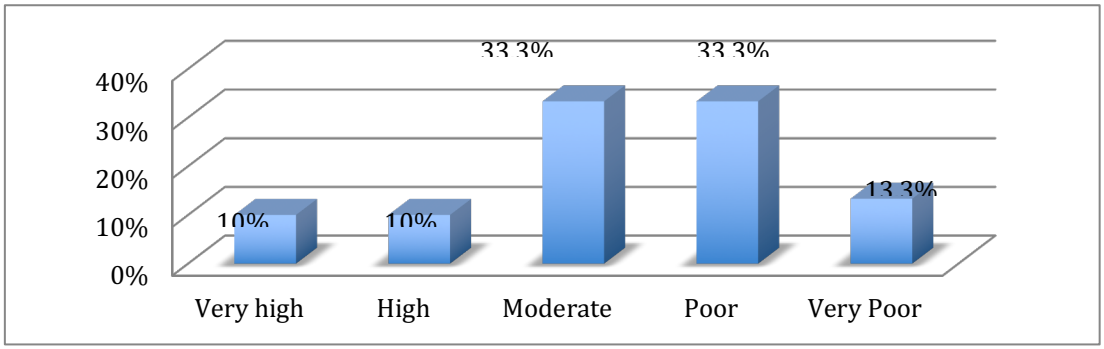
Figure 4.14 Distribution of Area Need Improvement of TVC



Source: Created by Author

Figure 4.14 shows the requirement for the improvement of TVC by graduates. Most graduates, 119 respondents or 34 percent, rated the greatest need as textbooks, followed by 84 respondents or 24 percent, as laboratory equipment or tools. There are about 52 respondents or 14.8 percent, as needing qualified teachers and 26 respondents or 7.5 percent, as needing factory intensive study; while there are 15 respondents or 4.2 percent, as needing teaching skill; and 6 respondents or 1.7 percent, as needing school intensive study.

Figure 4.15 Working Capacity of TVC Graduates



Source: Created by Author

Figure 4.15 shows that the working capacity of TVC graduates to actual work, as rated by employers. The highest percent is at 33.3 percent, with moderate; followed by 33.3 percent, with fair; and 13.3 percent, with poor, while there are only 10 percent, with high and very high. This result illustrates that TVC graduates skill or capacity acquired remains low when compared to each percentage. Figure 5.11 below shows the level of graduates solving work problems. This examines graduates tactic or skill at solving problem levels while they faced in actual work as rated by employers.

Table 4.15 shows the skill and competencies of graduates acquired, which TVC curricular offered such as communication skills, information technology, entrepreneur skills, critical thinking skills and human relations skills.

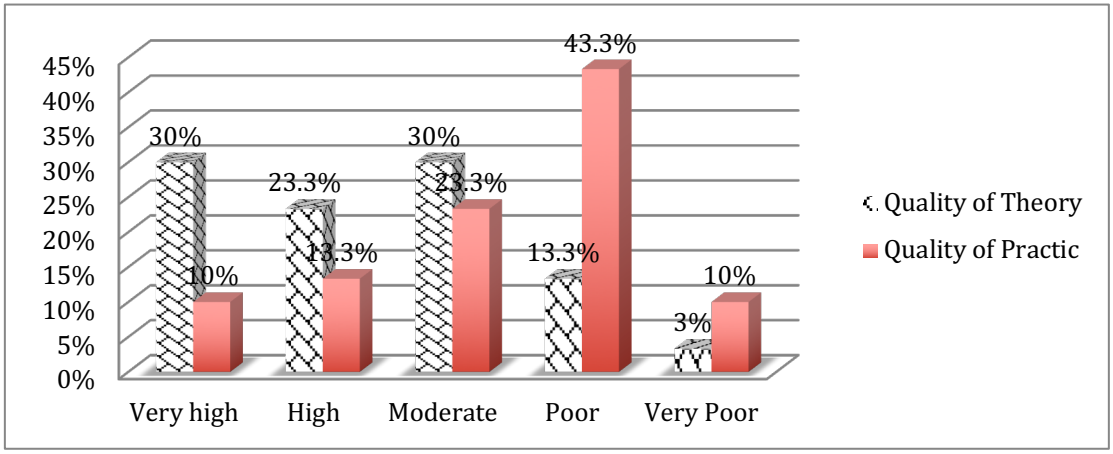
Table 4.15 Distribution of Skills and Competencies Acquired of TVC Graduates

Content	V. High (%)	High (%)	Moderate (%)	Poor (%)	V. Poor	Total
Communication skills	11(36.6)	9(30.0)	5(16.0)	3(10.0)	2(6.7)	30(100.0)
Inf. technology skills	2(6.7)	17(56.6)	9(30.0)	2(6.7)	0(0.0)	30(100.0)
Entrepreneurial skill	1(3.3)	3(10.0)	14(46.6)	10(33.3)	2(6.7)	30(100.0)
Critical thinking skills	2(6.7)	3(10.0)	9(30.0)	12(40.0)	4(13.3)	30(100.0)
Human relations skills	12(40)	9(30.0)	5(16.0)	12(40.0)	1(3.3)	30(100.0)

Source: Created by Author
Note: percentage in parentheses ( )

Table 4.15 describes that the skills and competencies of TVC graduates acquired from curricular offerings. Most TVC graduates received a high level of communication skill; with 36.6 percent, with very high, and 30.0 percent, with high rated by both private and state employers. Additionally, information technology skills acquired, approximately 56.6 percent with high, and 30.0 percent with fair. There are 46.6 percent of entrepreneurial skill with moderate, and 33.3 percent, with fair. Critical thinking skills are 30.0 percent, moderate and 40.0 percent with fair, while human relations skills are approximately 40 .0percent, with very high and 30.0 percent, with high. It is not surprised that the result illustrates that the TVC curriculum provided a suitable and good skills in terms of communication skills, human relations skills, and information technology skills. Other skills, such as entrepreneurial skills and critical thinking skill were also good, with moderate and fair acquired.

Figure 4.16 Quality of Theory and Practical Skill



Source: Created by Author

Figure 4.16 shows the level of agreement of employers regarding the quality of TVC in terms of theoretical and practical skills. This compares between theory and practical training, which TVC School provides with high quality of theory as 30 percent of employers rated, with very highly provided theory, followed by 23.3 percent, with high and moderate, while there is only 13.3 percent, with fair and 3 percent, with poor. However, quality of practical training at TVC remains low, with 43.3 percent of employers rated, with fair and 23.3 percent, with moderated. There are only 13.3 percent, with high and 10 percent, with very high. This circumstance means that practical training / skill at TVC needs a lot of improvement.

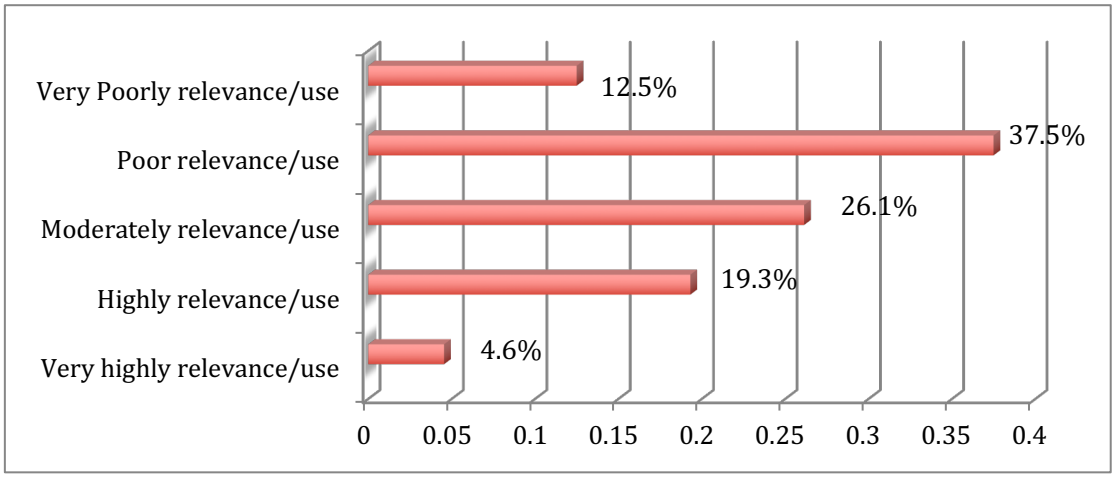
Table 4.16 Distribution of Training Quality at TVC

Content	V. High (%)	High (%)	Moderate (%)	Poor (%)	V. Poor (%)	Total
Quality of Training	3(10.0)	4(13.3)	9(30)	11(36.6)	3(10)	30(100.0)
Qualified Teacher	3(10.0)	2(6.6)	8(26.6)	13(43.3)	4(13.3)	30(100.0)
Reputable training institution	3(10.0)	3(10.0)	14(46.6)	9(30.0)	1(3.3)	30(100.0)
Curriculum relevant to current job	3(10.0)	2(6.6)	11(36.6)	12(40.0)	2(6.6)	30(100.0)

Source: Created by Author
Note: percentage in parentheses ( )

Table 4.16 describes the distribution of rated level of agreement of training quality at TVC by employers. Most employers rated that quality of TVC training is fair with 36.6 percent, 30 percent is moderate, and 13.3 percent with high. In terms of the qualifying teachers in TVC schools, there is approximately 43.3 percent with fair, 26.6 percent, with moderate and 13.3 percent, with poor, while only 10 percent with very high and 6.6 percent with high. Beside that the employers has rated about the reputable training TVC institution. There is 46.6 percent, with moderate, 30 percent, with fair. There is a small percent with very high and high such as 10 percent, with very high and 3 percent with high and poor. The employers also rated 40 percent with fair, in term of TVC curriculum relevant to current job demand, 36.6 percent with moderate, followed by 10 percent with very highly relevant, while there are only 6.6 percent with high and poor.

Figure 4.17 Extent Use and Relevancy of Acquired Knowledge Skills



Source: Created by Author

Figure 4.17 presents the level of applied knowledge and skills which graduates received /learned from Technical Vocational Education Institutions; 66 respondents or 37.5 percent, had fairly relevance and used their skills in their current working position, followed by moderately relevance, with 46 respondents or 26.1 percent. There were 34 respondents or 19.3 percent with highly relevance; while 22 respondents or 12.5 percent, stated that they had poorly relevance and there are 8 respondents or 4.6 percent,

that had highly relevance. From this result, the highest percent had little applied skills in actual work of graduates, which indicates that graduates got a job that was irrelevance or mismatched with their graduated subject of study.

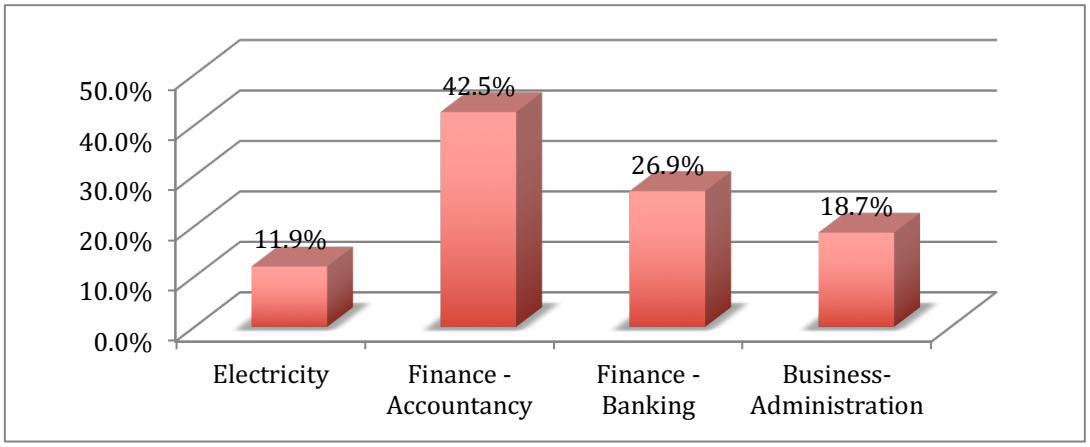
Table 4.17 Distribution of Employed Graduates According to Job Position

Job Level	Frequency	Percentage
Headman/head working unit	19	10.8
General Staff	98	55.7
Technical Staff	46	26.1
Self- Employed	13	7.4
Did not respond	2	1.2
Total	**178**	**100%**

Source: Created by Author

Table 4.17 shows that the majority of job level positions of the employed graduates were general staff with 98 respondents or 55.7 percent, of total employment of graduates. There are 46 respondents or 26.1 percent, working as technical staff; while there are about 19 respondents or 10.8 percent, working as headman or working units; and 13 respondents or 7.4 percent, working as self-employed.

Figure 4.18 Further Subjects of Study Required for Graduates



Source: Created by Author

Figure 4.18 shows the majority of the further subjects of study of graduates is finance –accountancy with 57 respondents or 42.5 percent; followed by finance –banking with

36 respondents or 26.9 percent; while business administration with 25 respondents or 18.7 percent, and there is only 16 respondents or 11.9 percent, that need to study electricity

Table 4.18 Graduates Employment Status divided by Graduated Subject

	Employed		Unemployed		
Graduated Subject	F	%	F	%	Total
Construction	53	29.8	63	36.6	116
Electricity	69	38.8	41	23.8	110
Automotive Technology	56	31.4	68	39.5	124
Total	178	100	172	100	350

Source: Created by Author

Table 4.18 shows the distribution of graduate employment status divided by graduated subject. Compared between the three majors or graduated subjects of study. The highest is 69 respondents or 38.8 percent, of electricity, with employed; followed by 56 respondents or 31.4 percent are employed; and 53 respondents or 29.9 percent. From those employment ratios, the highest percent of unemployment of TVC graduates is automotive technology, with 68 respondents or 39.5 percent.

Table 4.19 Graduates Employment Sectors divided by Graduated Subject

Employments sectors	Graduated Subject			Total
	Construction (%)	Electricity (%)	Automotive Technology (%)	
Government	23 (12.9)	5 (2.8)	27(15.1)	55(30.8)
State Enterprise	19(10.6)	54(30.3)	12(6.7)	85(47.6)
Private company	9(5.0)	5(2.8)	14(7.8)	28(15.6)
Self-employment	1(0.5)	1(0.5)	1(0.5)	5(1.5)
Other	2(1.1)	1(0.5)	2(1.1)	5(2.7)
Total				178 (100)

Source: Created by Author
Note: percentage in parentheses ( )

Table 4.19 shows graduates employment with their current job acquired by type of employment sectors. Most graduates are engaged, with the highest percent working in state enterprises and as government officials. There are 54 respondents or 30 percent, of electricity working with state enterprises; followed by 27 respondents or 15.1 percent, of automotive technology working as a government official; and 23 respondents or 12.9 percent of construction working in government sector. While there is small number or percentage of TVC graduates working in a private company and self-employment.

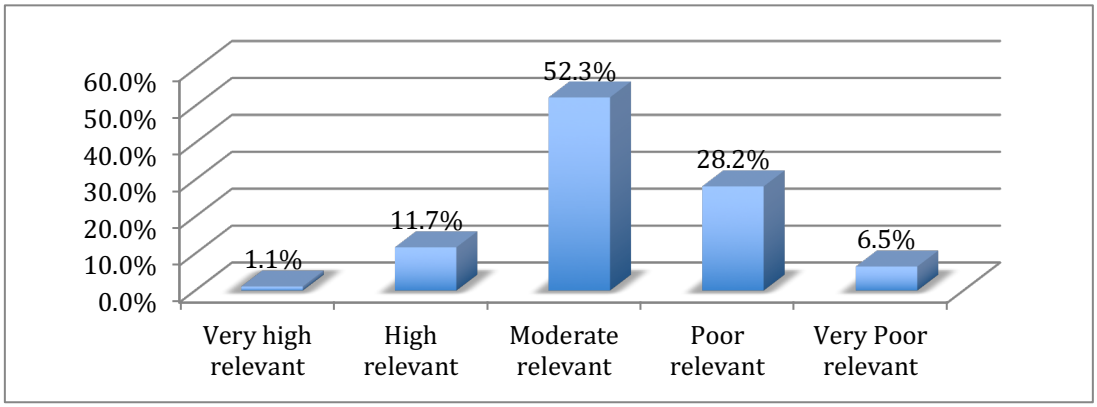
Table 4.20 Distribution of Graduates Employment Types divided by Graduated Subject

Employment Types	Construction (%)	Electricity (%)	Automotive Technology(%)	Total
Temporary	8(4.6)	5(2.9)	5(2.9)	18(10.4)
Regular/ Permanent	0(0.0)	1(0.5)	2(1.1)	3(1.6)
Casual	42(24.4)	57(33.1)	43(25)	142(82.5)
Contractual	4(2.3)	3(1.7)	6(3.4)	13(7.4)
Total				172(100)

Source: Created by Author
Note: percentage in parentheses ( )

Table 4.20 shows most of graduates received casual employment with the highest percent, about 142 respondents or 82.5 percent. Additionally, a comparison between the three major subjects shows that about 57 respondents or 33.1 percent, of electricity acquired casual employment; followed by construction with 42 respondents or 24.4 percent, and automotive technology with 43 respondents or 25 percent. There is 8 respondent or 4.6 percent of construction work as temporary employment, followed by electricity and automotive technology, with 2.9 percent. While a very small percentage of TVC graduates acquired regular or permanent employment

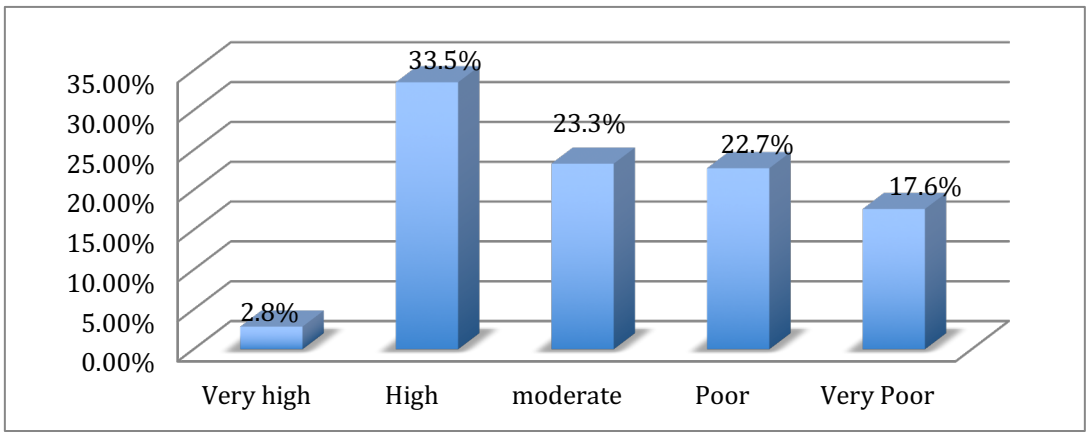
Figure 4.19 Distribution of the Relevancy of TVC Curricula to Current Job Demand



Source: Created by Author

Figure 4.19 shows how TVC curricula relevance matches the present job demand by graduates rating the level of relevancy. The highest is 183 respondents or 52.3 percent, rated with moderately relevance, followed by 99 respondents or 28.2 percent, with fair relevance. There are 41 respondents or 11.7 percent, rated that highly relevant, while there are 23 respondents or 6.5 percent, as poorly relevant; and 4 respondents or 1.1 percent, as highly relevant.

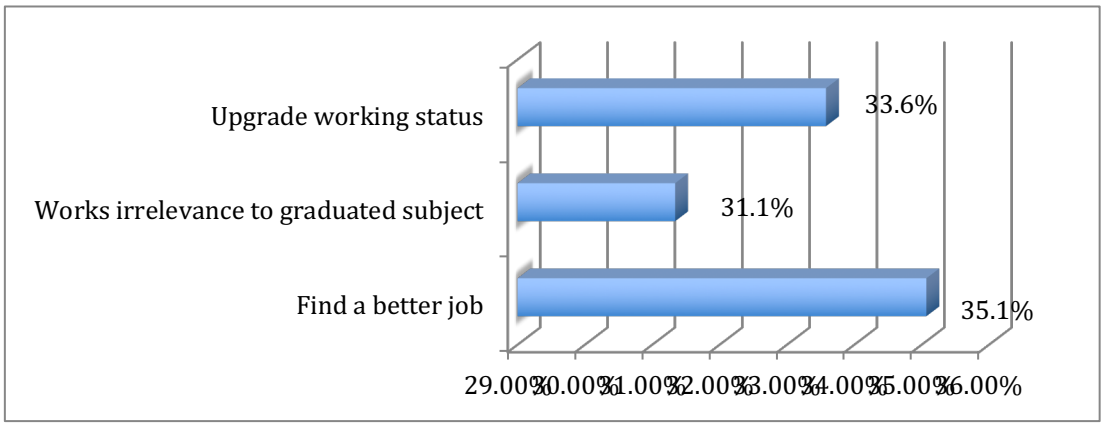
Figure 4.20 Level of Faced Problem in Finding a Job



Source: Created by Author
N=176

Figure 4.20 shows the level of faced problem of TVC graduates on their finding a job by rating the level of problem in the real situation. The highest is 59 respondents or 33.5 percent, faced problems; followed by 41 respondents or 23.3 percent, at moderate. 40 respondents or 22.7 percent, faced high problems; while 31 respondents or 17.6 percent, at very high problem and there are only 5 respondents or 2.8 percent, faced poor problems; and 2 respondents or 1.1 percent, Not respond. Table 5.29 below describes how linkable the impact of skills acquired of TVC graduates to their actual job by rating the level of impact.

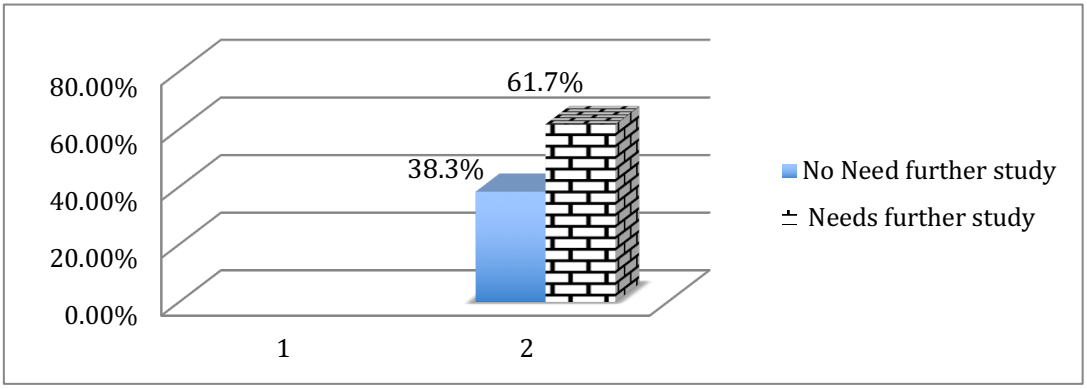
Figure 4.21 Reason of the Requirement for Further Study



Source: Created by Author

According to above-mentioned data on Figure 4.21 presents the reason the graduates require of further study. It shows that there is 47 respondents or 35.1 percent, that need further study to find a better job; followed by 45 respondents or 33.6 percent, that need further study to upgrade their working status or condition; and there is about 42 respondents or 31.3 percent, that need further study because of their current work duty irrelevance to their subject of study

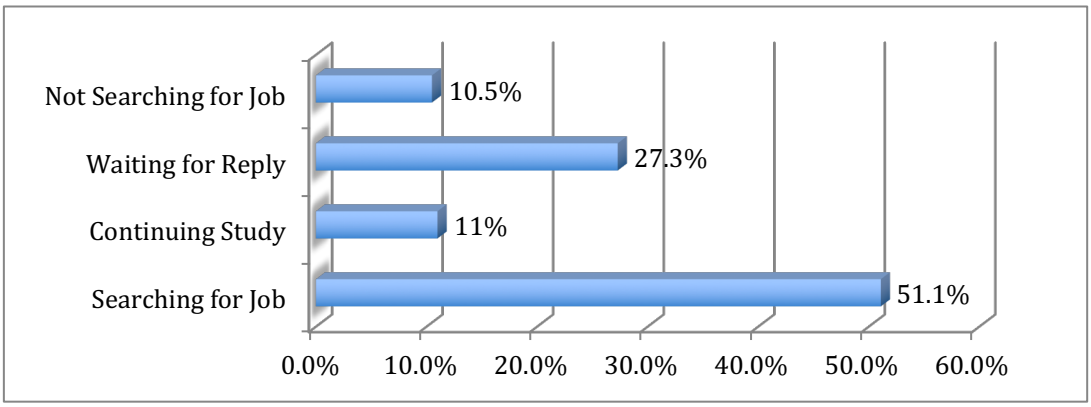
Figure 4.22 The Requirement of Further Study



Source: Created by Author
Note: N= 178

Figure 4.22 shows the requirement of further study. As previous sections and tables show that graduates obtained irrelevant work with their subject of study. Thus, research looking forward to examine the graduate's ratio needs to continue their study. The figure shows that 216 respondents or 61.7 percent need to continue or further study, while there is about 134 respondents or 38.3 percent, that do not need further study.

Figure 4.23 Cause of Unemployment

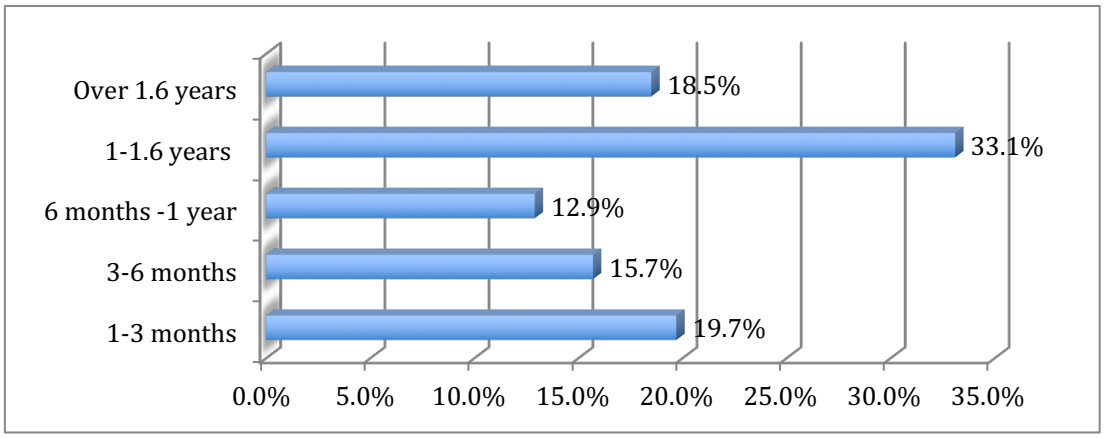


Source: created by Author

Figure 4.23 presents the cause of unemployment, with 172 respondents or 49.1 percent (previous section). There is 88 respondents or 51.1 percent, were currently searching for their first employment; 19 respondents or11 percent, were continuing to study; 47 respondents or 27 percent, were waiting for a reply; 18 respondents or 10.5 percent,

were not searching for a job. Therefore, this illustrates that graduates from TVCs who major in electricity, construction and automotive technology faced difficulty in finding employment. The following table shows the duration or the length of time to obtain employment. Figure below shows the employment sector of graduates by type of stakeholders compared to the percentage of TVC graduates employed in their current jobs

Figure 4.24 Duration Received Employment After Graduation



Source: Created by Author

Figure 4.24 shows the findings on the duration of graduates applying for job by the length of time until receiving an employment. It shows the highest percent is that, graduates, on average spent 1 and half years searching for an employment with 59 respondents or 33.1 percent, followed by 35 respondents or 19.6 percent, spent 1-3 months; 33 respondents or 18.5 percent, spent more than 1-1.6 year; 28 respondents or 15.7 percent, spent 3-6 months; 23 respondents or 12.9 percent spent 6 months-1 year. This finding indicates that graduates form TVC spent quite a long time for obtaining their employment, which mean that the graduates is trend to be a higher risk for unemployment. Next, table 5.7 shows the distribution of TVC graduates monthly earning in their current jobs

4.6 Data Analysis

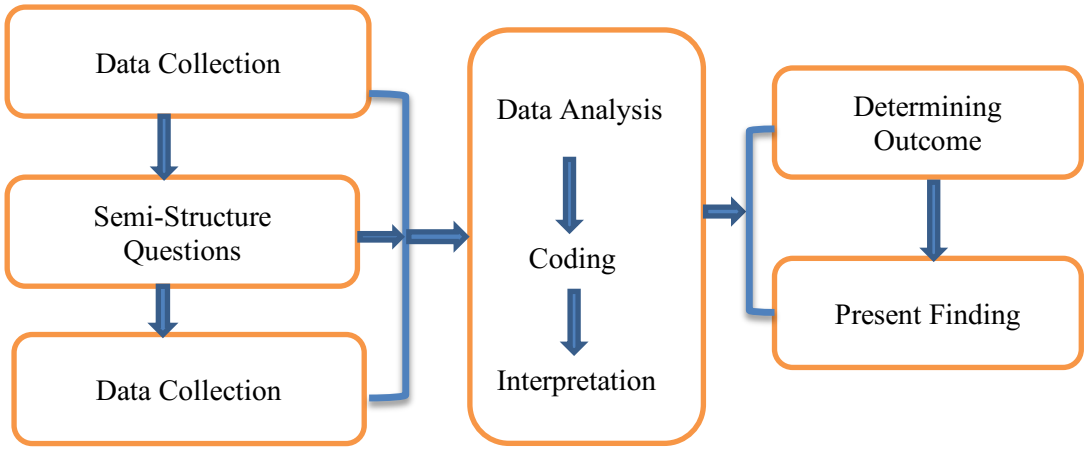
This study used qualitative research methods. In particular, to strengthen the quality of research results, the analyze process of research took great attention. Scratching the effective data collection and analysis that led to the discovery of valuable reasons to carefully select and reliable views and perceptions of research questions with the study participants. A beginning discussion of this research methodology encouraged the selection of an inductive data analysis method for information collected from semi-structured interviews. Data collected from questionnaires and interviews are coded, entered using STATA for Windows and MS Excel for analysis to answer the research questions. Similarly to Merriam (1998), data analysis is a process of producing meanings from the collected data. Since the data itself also have complex forms, consisting of what the researchers have seen and read, other people have said. In this study, the researcher followed the guideline, which derived from Merriam (1998) note that " data analysis is a complex process that involves moving back and forth between a concrete bit of data and abstract concepts between description and interpretation". This concept is provided a process of producing meaningful results in gaining the research finding of this study.

- **Data Analysis Process**

As the above discussion in the previous paragraph, this research study is following the organizing process to analyze semi-structure interview transcripts. The proceeding of data management and analysis of this research is drawing and following the dominant research paradigm by Miles & Huberman (1994) and Thomas (2003). Data analysis determines for the different kind of interview transcription and various interpretations of data as to enrich of finding that connects to the research objective. Therefore, this process can be the improvement of classification from raw data, which captures the key

themes of the framework. The different kind of interpretation of raw data, themes takes place from the analysis crosschecking. Thus, the relationships and links on a primary casual are found between the responses of participants in different categories. Dealing with various kinds of analysis is enhanced the research's more reliable. Figure 4.2 shows the diagram of a data analysis framework of this research.

Figure 4.25 Data Analysis Process



Source: Created by Author based on Miles & Huberman (1994), Thomas (2003)

In very wide terms, there are multiple principles for methodologies used in educational research including qualitative and quantitative approaches. In addition, the qualitative researchers are mostly dealing with validity and reliability threat in unique or specific incidences. Maxwell (2005) states that validity is dealing with how research results or finding corresponded and matched to reality. For the terms of reliability is related to the extent of which research findings, results can be replication. Therefore, most of the qualitative research is fundamentally concerned to produce valid and reliable knowledge. Firestone (1987) noted on the qualitative research as "the qualitative research study provides the reader with a depiction in enough detail to show that authors' conclude 'make sense."

Merriam (2001) claims that to be more confident in research findings is of primary importance in applied fields; for example, in the case of education, to what

extent do the researchers interpose in people 's lives. Again, Merriam observes that the trustworthiness of research results is extended to accountability for their validity and reliability. Therefore, the researchers need to be more careful in terms of their approaches, and conceptualization, for example, the way or method of data collection, analysis, interpretation and presenting the research findings. Thus, being able to trust the results is mostly concerned with validity and reliability. Wiersma (2000) point that ' a study cannot be valid and lack of reliability'. In addition, reliability deals with 'the replicability and consistency of the methods, conditions and results. Base on literature, the researchers review and enhance the validity and reliability as following into two main approaches such as triangulation and a multi-site design.

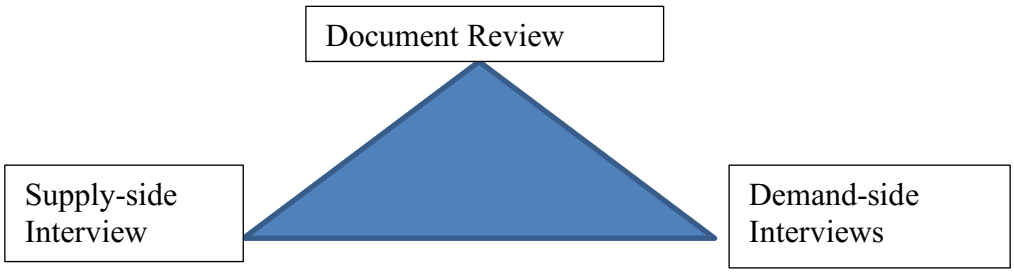
Regarding triangulation, Wiersma (2000) note that triangulation is 'qualitative cross-validation' for accumulating plenty of information and diverse data of different sources. As well, Merriam (1998) also claims that triangulation enhances internal both validity and reliability. In terms of data collection is highly needs to diversify and multiple aspects (Merriam, 1998; Sato, 2000). In this study, triangulation is obtained through the three data collection methods such as interviews, observation and documentary data.

For Multi-site designs particularly strengthen the external validity. Merriam (1998) state that; there consist of an explanation of several sites, cases, or situation to minimize of the richest phenomenon. In addition, these provide the research result cable applied to the other situation. Since this study also based on multiple case study and context, for example, college, graduates and employers.

4.7 Triangulation of Data Source

The triangulation of data source of this research comprises of three components: Document reviews; Supply-side interviews such as Government Stakeholders, and School Stakeholder; and Demand side (Employers and Graduates)

Figure 4.26 Triangulation models



Source: Created by the author

Data collection of triangulation is included the key informant sampling Methods. The Pilot survey has done to make sure the interviews question be appropriated to the respondents. In regard to the key informants' methods, as to avoid the bias of key informants, the researchers applied the method into multi-level authorization to build a triangulation of key informants: central government, TVC directors, teachers and employers.

4.8 Ethical Consideration

Merriam (2001) notes that the validity and reliability in qualitative research involve examining ethical features or characters**.** Therefore, there is some consideration in this study, following Halai (2006), which identifies the key ethical principle such as informed consent, the confidentiality of information shared, the anonymity of research participants, and no harm to participants. As mentioned above, there are some limitations related to the research.

Moreover, the researcher expects to obtain informed consent from all those who are mainly involved in the research study. Particularly a matter of protocol, previous to the research, the researcher received formal permission from my University and the Ministry of Education and Sport (Laos). Thus, I have contacted to each technical vocational colleges with a letter for MoES, I visited schools and asked permission from

colleges directors for consent and cooperation for the research study. I was allowed to collect data from academic affaire information office and personnel and management offices.

For the private company and government employers, the researcher contacted business or company owners and heads of government officials, asked for permission or consent and their cooperation for my study. The business owners and heads of government officials arranged the interview dates. Later, I conducted interview with their staff and laborers.

4.9 Chapter Summary

This chapter describes the research methodology including the research analytical framework, data collection methods, data descriptive and process of data analysis. Therefore, this chapter explains/describes by the nature of the research design of this study, which is purely qualitative; it is the interview data collection strategy. This study has a unique research approach. It focuses on a purposeful sampling strategy or theory by the picking of the key participants that have had a lot of information and have significant experience and interviews with 350 participants/TVC graduates and 30 employers. This research strategy process of data analysis uses the comparative analysis of the interview data for the response from different sources to reach a better understanding of the phenomenon under investigation. It also adopts a theoretical framework based on the human capital theory in the context of a developing country.

CHAPTER V

RESULTS

This chapter queries beyond the extent of the isuues faced by graduates faced in obtaining employment linked to TVC in the current situation. In terms of the employability of the individuals or graduated students, providing employment for the growing population is one of the biggest challenges a country has to face at the present time. This is especially true in developing countries where population growth rates exceed job opportunities. Therefore, in this study, the researcher investigates the employment status of graduates and determines what percent of the graduates have acquired their first job after graduating. The research examines whether employment linked to TVC satisfies student expectations and whether the results account for a good venue for curriculum improvement as well as institutional development.

This study describes examining the information needs to reform education programs to bring about a match between work requirements and studying. The research faced some disadvantages as sometimes it was difficult to locate graduates and complete interview questionnaires. Schomburg (2007) claims that graduates face difficulties and are unable to identify the relationship between the knowledge acquired during studying and their professional lives.

As mention above, the researcher applies an analysis of how particular course is accountable within the human capital framework and to which course program or activities can enable students to acquire the knowledge and skills that make them employable in the labor market. The results are interpreted and presentation bases on data collection, for data gathering, interviews are used for key informants as graduates, administrators, teachers and employers (qualitative data).

The data are managed under two main themes corresponding to the objective of the study. First, the employment status of TVC graduates such as socio-economic background, employment status, timing in applying for jobs, areas of employment, competition and available jobs, risk in being unemployed and opportunity for changing jobs. Second, further skills and knowledge improvement that graduates and employers opinions should be included in TVC curriculum such as level of applying knowledge from TVC courses to actual work, criteria implemented in the employee selection, employer's opinions and satisfaction level regarding working quality of graduates, skills requirement by hiring employers/companies, skills/subjects that are missing from the course, and perspectives on TVC curricula. Also, this chapter includes suggested further improvement of TVC in Lao PDR.

5.1 Training quality and skill acquired impact on Employment status and daily life wok of TVCs Graduates (RQ1)

Trench & Quinn (2003) note that training quality mainly related to quality of teaching process. It is not just focus on student learning outcome, however, educational institution need to response to community, social and student's learning experience. In order to provide the improvement or development of Technical Vocational Colleges (TVCs) in Laos, this study examines its quality and relevance, and presents specific findings, including primary and documentary sources, in key areas of the research by evaluating some relevance and effectiveness as to identify and provide necessary qualitative point of preference for this study. Firstly, to more clearly understand the TVC situation in Laos. The study investigated through the graduates' experience in receiving their initial employment, the relevance of graduates' skills applied to their current work, and knowledge and skills acquired at TVC that have a linkable impact on current employment status.

5.1.1 Skills Acquired through TVC Institutions Impact on Employment Status

This finding relates to the employment status of TVC graduates in order to provide an in-depth assessment of the employment status of TVC graduates in Laos, which connects to and answers sub-research question 1.1. Therefore, skills acquired through TVC institutions impact on employment status. The researcher investigates the graduates' experience in receiving their initial employment by specific information such as socio-economic background, employment status, timing in applying for jobs, areas of employment, competition and available jobs, and risk for being unemployed. In term of the role of TVC on the employment status of graduates, there would be considered the situation of searching for a job as next graduates point below:

> *Currently, Applying for job is very difficult for TVC graduates, especially for high diploma and lower level, since most of the company they are requires at least graduated at bachelor degree. One important is that labor market in Laos is remaining limited. As well the labor laws cannot cover all situation*
>
> (TVC Graduates)

As respondents mention above, the demand of worker particularly who graduated in electricity, construction and automotive technology is limited, this is influent by economic condition of the country, as similar to another graduates comment that;

> *Graduated from TVC is remaining risk for unemployment, sine Laos is a small country, there is very small number of manufactory and company, which is insufficient for the demand of annual graduated student. Therefore, graduates student mostly work at government sectors. However, the number of annual graduates is increased but the labor market demand is decreased especially in government sector.*

(TVC Graduates)

At the same time, some of the respondents are mentions about their experience of their employment stay status. The situation faced after graduates. These illustrate strong influent by the role of TVC as they mention bellow:

> *Based on my experience, some of graduates got a job after graduated, but it is a temporary and casual work. As my case I am presently continue my study and looking for new job. Therefore, TVC cannot fulfill the role, provided a good condition or opportunity for employment of TVC graduates.*
>
> (TVC Graduates)

According to the interviews, the respondents raise up some more very important point, which TVC is needed to improve and commitment for role of education and training to ensure the quality. To receives the target of provide opportunities for low-income people who live in rural areas to study practical skills and capacities trough Technical Vocational College. As to providing more opportunity of the employment of TVC graduates. These require every sector to focuses and see important of producing labor of TVC to support the labor market demand. Based on this result as to responses to sub-research question 1.1 How is skills acquired through TVC institutions impact on employment status?. The result mainly answer the hypothesis

Hypothesis #1: Students graduating from TVC have a high risk of unemployment. As well, the practical skills and competencies acquired from TVC are irrelevant to graduates' current jobs. In this regards all graduates answer that they faced difficulty in seeking a job, TVC cannot fulfill the role and graduated from TVC is remaining risk for unemployment. This illustrates that skill acquired have a significantly impact on graduates employment status.

5.1.2 Skills Acquired through TVC Institutions Impact on Daily Lifework

This finding relates to the relevance of training, regarding its quality and whether it answers sub-research question 1.2. Therefore, skills acquired through TVC institutions impact on daily life work. The researcher evaluates the level of skill training of graduates to analyze the relevance of graduates' skills applied to their current work in terms of opportunity for changing jobs, level of applying knowledge from TVC courses in actual work, and how working position /duty relates to the subject' learned from TVC institutions.

The skill acquired and the level of apply skill to work, it related to the quality of the teaching-learning process in school. Especially, what student can learn during school life? How can they apply to their work? As respondents below point out that;

> *There are highly need skillful for technical work in actual work. I think skill acquire from school is insufficient and general of work. TVC School has to provide more practical hours and duration of field word or intensives. Most of the time in the actual working, practical training experience is very useful for our work.*
>
> (TVC Graduates)

According to the comment above, this illustrates that educational institution is highly required for all stakeholder to improve the quality of training student. As well as, teaching and learning have to be more considering whether graduates received employment after graduation and their working condition. The curriculum must be responses to the labor market demand. Furthermore, Other respondents point out that;

> *Another TVC graduates notes; I got a job with Car Company, which matches, my graduates' subject of study. In the actual working, I feel*

that I need a lot of practical training. Even though I couldn't work well as others, however, it gives an opportunity to work and I can continue my study.

(TVC Graduates)

In the different point of views, in term of quality and relevance is mostly refer to the relevant to the present and future requirements of the learner, however, there are various component and received a different level of the objectives. Therefore, it is important that students themselves have to clear target and know- how, why and what is the need from school. As similar to respondents bellow point that;

In my opinion, school life is a very important period. Even though, I don't acquire skillful from the school. The life after school to finding a job is depending on their types of work of their selection, it is general things that graduates maybe feel unable to apply their skill acquired for work. Some of the graduates may work well but some are not.

(TVC graduates)

At the same time, some of the graduates also mention that it is depending on job areas of graduates acquires, some of them maybe feel unable to utilize their skill acquired from the school, all of the graduates have to have a flexibility in the reality because at school life student can learn a multiple of skills, it is not only their major subject of study. Other respondents are also discussed as the following point:

In terms of the level of apply skill acquired to the actual work, I think, it depends on job acquired. Some of my friends, even though he acquires a job which is not matches with his graduated subject of study, however,

he presently gest on well with his job. This means that at schools you can learn a lot of things as communicating, networking, living with other people and others, these are very important that student can learn and can apply in the real- life.

(TVC graduates)

Table 5.1 Distribution Subject of Studied Skills Acquired Impact on Daily work

Contents	Construction (%)	Electricity (%)	Automotive (%)	Total
Very poor	4(7.3)	13(19.7)	4(7.0)	21
Poor	10(18.2)	25(37.9)	19(33.3)	54
Moderate	24(43.6)	13(19.7)	9(15.8)	46
High	15(27.3)	11(16.7)	18(31.6)	43
Very high	3(5.5)	4(6.1)	7(12.3)	14
Total	55	66	57	178

Created by Author
Note: percentage in parentheses ( )

This table shows the difference in skills acquired impact on daily life work in different subjects of study. Most of the graduates' rates that skills acquired impact on daily life works as the highest percent is 43.6 percent of graduated in construction, 25 percent electricity rates as poor followed by 19 percent of automotive technology rates as poor. Furthermore. There are 31.3 percent of automotive technology rates as high impact, 27.3 percent of construction and followed by 16.7 percent of electricity. Therefore, this illustrates that skills acquired mostly influence on daily life work of TVC graduates.

Above mention, there are various discussions from the interviews. The schooling experience assists student improves their practical skill for the future work tasks. After graduated, the student maybe feels not able to apply their skill acquires to work. However, educational level acquires given more opportunity for work, since the schooling life student can learn a multiple of skills. Therefore, this becomes the most challenge task and a very important educational sector. Since, Vocational education

Base on this result as to responses to sub-research question 1.2. How is skills acquired through TVC institutions impact on daily life work? The result mainly answer the hypothesis.

Hypothesis # 2: Practical training and skills acquired by TVC graduates are insufficient for their actual work. In term of practical training graduates state that skill acquire from school is insufficient and general of work, need more practical training and feel unable to apply their skill acquired for work. This illustrates that skills acquired through TVC institutions have a significantly impact on daily life work.

(TVE) is mainly a set for preparing students with a skillful workers, especially for construction, manufacturing, service and similar jobs that require skilled labor.

5.1.3 Subjects of Study Impact on Employability of TVC Graduates

This finding relates to the relevance of training, regarding its quality and whether it answers sub-research question 1.3. the subjects of study impact on the employability of TVC graduates. The searcher examines the determinants of subjects of study of TVC graduates in terms of success and status in jobs related by examining the extent that the subject of study has an effect on the employment of TVC graduates. There are differentiates and debating on labor market demand and employers' satisfaction. In addition, the selection of the graduated subjects of study may be influenced on employment opportunities for graduated students. Next respondents also point out that:

> *Based on my experience, the selection of the subject of study is very important for the student to think about. Choosing the subject of study is influent for your future. For example my case I study electricity I spent over 2 years to get my first job with very low wage, I try to apply a work*

which matches with the subject of study I graduated but it was rejected, therefore, I decided to work as general staff at private company to collect money to continue my study.

(TVC graduates in automotive technology and construction)

As the respondents above mention, it illustrates that graduated subject of study has significant impacts/relationship for the types of employment or sectors. Furthermore, there are various views of the employability of graduates after graduation. Many graduates student face difficulty finding a job and adaptable in the workplace. Another respondents give us more explanation of their experience:

In my case, I got a scholarship from the government to study at TVC school on automotive technology, I agree that selection of the subject of study is very important for everyone but for me, I don't have more choice like the other students since I came from the rural area, my family quite poor. Therefore, during studying at TVC stay at the dormitory provide by the school. I graduated at medium level; I spent 1 year to apply to work at the government sector but was rejected. At the same, I also open small fixing bicycles and motorcycles. I think my experience at school give me a job and help me to collect money to continue my studies and present life.

(TVC graduates in automotive technology)

In other word, there is widespread discussion or comment based on graduates interviews. There would have both negative and positive points. As respondents below state that:

There are some of us, which graduated in different subjects of study and work with the government. Even though we got a job, which is a mismatch with theirs professionalizes, but we can apply and use in diary activities and it's also one very important step that giving us an opportunity of learning.

(TVC graduates in electricity and construction)

Therefore, the subject of the study may have an impact on the employment of TVC graduates. There are various discussions on the miss-match on the employability of graduates. This illustrates that to ensure the employability of graduates, it is important to consider the divers information. Base on this result as to responses to sub-research question 1.3. What is the difference of skills mismatch of TVC graduates in different subjects of study? The result mainly answer the hypothesis:

Hypothesis #3: subjects of study have positive influence on graduates for seeking jobs. Most graduates mention that the selection of the subject of study is very important for the student to think about and choosing the subject of study is influent for the future employment. This indicates that subjects of study have a significantly influences for graduates in seeking job employment.

5.2 Differences of Success and Skills Mismatch of TVC Graduates (RQ: 2)

5.2.1 Differences of Success on Employability of TVC Graduates in Different Subjects of Study

This finding relates to the knowledge and skills of TVC graduates' impact on job performance, which connects to and answers sub-research question 2.1. What are the differences in success on the employability of TVC graduates in different subjects of

study?. In order to get in-depth information on the impact of the use of the knowledge and skills on employability of TVC graduates, we used an open - ended question about the graduates' experience of their actual work, in which most of them express the sentiment that,

> *We faced a lot of problems searching for a job, because, in reality, the employer needs a high quality of professional skills. TVC certificates cannot guarantee work opportunities for us. For regular or long term employment, most employers require students to hold at least a bachelor's degree.*
>
> (Graduates in electricity and construction)

Following the comment above, TVC graduates faced difficulty in searching for a job. In terms of the likable impact on knowledge and skill acquired, many graduates state that,

> *Our knowledge and skills acquired from TVC are insufficient for the actual work. We are unable to apply our skills to work because the TVC School mostly offered the theoretical rather than real piratical training. We obtained 2-4 hours per week fieldwork or practical training in school, which was conducted by a teacher.*
>
> (TVC graduates)

The graduates' comments illustrate their knowledge and skill acquired from TVC School has an impact on actual work. This means that practical training in TVC schools for students remains low, which students cannot adopt or use in their daily work. A comment below shows one student's experience**.**

I graduated in construction. I got a job in the public sector. My works are as general staff, with no fixed position. I feel uncomfortable for current working duty because it is not related to my graduated field of study or professional skill acquired from school. But, I cannot reject this job.

(Graduates in construction)

Although TVC graduates received employment, some of them received jobs, which are a mismatch with their professional skill or graduated subject of study. This means that job employment is limited for TVC graduates, especially at the middle-level certificate. Education level is major deciding factor for employers. As graduates comment below state that,

Presently, I am not satisfied with my work acquired; this work is the first employment after graduation. If I leave this job, it will be a big issue and a challenge to find a new job. In my opinion, TVC School does not well prepare graduates students for the workplace. There is limited communication or relationship between TVC schools and external or private sectors. There are a small number of TVC students that directly go into fieldwork or practical training in a private company. Most are practiced or trained in the public sector and school.

(TVC graduates)

According to the above comments of graduates indicates that TVC needs to incorporate with many factors. This means to respond and cope with the needs of labor market demand as the same as socio-economic development. Based on this statement the TVC highly needs to resolve or improve the educational system in terms of quality and relevance. Especially, the educational curriculum has to match the real needs of society by catering to different capacities. Graduates students be able to adapt to the workplace.

As the other respondents mention about their experience of receiving the first job. Current situation TVC student after graduating.

> *Another TVC graduates note his first seeking job experience after graduation: I graduated with a middle-level certificates, it was a big challenge to find my first job. I spent over a year to obtain causal work, which is a high risk of unemployment. However, I could not turn it down. I will try to collecting money for further study, which would have more opportunities for employment and more income.*
>
> (TVC graduates in automotive technology and construction)

From the discussion above, the knowledge and skill acquired from TVC School have strong influence on actual work, as well as the education level, are also one major point of criteria for selection worker of employers. Certificated from is only one step forward for continues their study, because there are many TVC graduates continues their study with the new subject of study. Base on this result as to responses to sub-research question 2.1. What is the differences of success on employability of TVC graduates in different subjects of study? The result mainly answer the hypothesis:

Hypothesis # 4: Graduates subject of study may have different opportunity for employability. Most of graduates received job with mismatched with graduated subject. they are unable to apply their skills to work, in reality, the employer needs a high quality of professional skills and for regular or long term employment, most employers require students to hold at least a bachelor's degree. This illustrates that graduated subject and education have differences opportunities and have significant impact on graduates employability.

5.2.2 Differences of Success on Employability of TVC Graduates in Different Groups

This finding relates to the knowledge and skills of TVC graduates acquired impact on employability with different groups, it connects to and answers sub-research question 2.2. What are the differences in success on the employability of TVC graduates in different subjects of study?. In order to get in-depth information on the impact of the use of knowledge and skills on employability of TVC graduates, I used an open - ended question about the graduates' experience of their receiving the employment, in which most of them express the sentiment that,

> *In my case, I graduated in construction and I lived in the downtown of Champasack province, I think, there are no differences in term of employability. I got a job my first job as a general staff at a government officials. Everyone faced the same problem of seeking a job, which matches their graduated subjects.*
>
> (TVC Graduates)

In other word, there is widespread discussion or comment based on graduates interviews. There would have both negative and positive points. As another respondents mention about their experience of receiving the first job.

> *Based on my experiences, I got a scholarship from the government to study at TVC, I lived in rural which quite far from downtown after I graduated, there is a big problem for me to find any job. I spent more than 2 years seeking a job. If I return to my hometown, there was no job available for me, so I decided to work as a labourer and collecting money to upgrade my degree. For a person who is living in urban I think*

they have more opportunities for employment that rural areas, Since, they have more relationships with other employers and connections.

(TVC Graduates)

Another TVC graduates note his first seeking job experience after graduation, there are not many differences between groups of people on employment opportunity. I think on major, which we must be considered for more opportunity, that is an education level, since, most of the employers are strongly need a person who gets a high degree.

(TVC Graduates)

Following the feedback from others graduate there have differences in the point of view in terms of graduate's success in job employment. In addition. The table shows the successes of the employment of TVC graduates by different locations.

Table 5.2 Distribution of Graduates Employed by Location

Contents	Employed (%)	Unemployed (%)
Urban	93(52.2)	63(36.8)
Rural	61(34.3)	58(33.7)
Other	24(13.5)	23(13.4)
Total	178(100)	172(100)

Created by Author
Note: percentage in parentheses ( )

Table 5.2 shows the difference in the employment status of TVC graduates by location. There is disparity in terms of accessibility to work in the percentage of graduates employed between urban and rural. There is 52.2 percent of urban graduates were employed, however, there 34 percent of rural graduates were employed and followed by 13 percent are graduates who from other province. This result illustrates that there

remains a difference in working opportunities between graduates who come from urban and rural.

Table 5.3 Distribution of Graduates Employment Sectors by Location

Employment sectors	Urban (%)	Rural (%)	Others (%)	Total
Government	26(28.6)	15(24.2)	14(56.0)	55
State Enterprise	44(48.4)	25(56.5)	6(24.0)	85
Private company	16(17.6)	8(12.9)	4(16.0)	28
Self-employment	2(2.2)	3(4.8)	0(0.0)	5
Other	3(3.3)	1(1.6)	4(4.0)	5
Total	91	62	25	178

Created by Author
Note: percentage in parentheses ( )

Table 5.3 shows the difference in terms of success in job acquired of the employment sector by location. Graduates mostly received employment with a state enterprises. 48.4 percent of urban and 56 percent of rural graduates, followed by 28.6 percent of urban and 24.2 percent of rural graduates work with the government. There is 17.6 percent of urban and 12.9 percent of rural graduates work with private companies. This result illustrates that both urban and rural graduates trend to work with state enterprises and government.

Overall, the TVC graduates' comments reveal that there remain differences in the employability of graduates. Graduates who were originally in urban have more opportunities for employment. Therefore, there is very important for everyone to a selection of the subject of study and education level. Base on this result as to responses to sub-research question 2.2. How is the differences of success on employability of TVC graduates in different groups?. The result mainly answer the hypothesis:

Hypothesis # 5: Employability of TVC graduates have negative impact among the different groups. Some of graduates state that, there are not many differences between groups of people on employment opportunity, however, table 5.2 shows that

there is 52.2 percent of urban graduates were employed, however, there 34 percent of rural graduates were employed. This indicates that there remains a gaps and have a significant impact among groups in terms of success of employability.

5.2.3 Skills Mis-match and Missing of TVC Graduates in Different Subjects of Study

Currently, there are a lot of discussion in terms of skills mis-match. Therefore, This finding relates to the relevance of training, regarding its quality and whether it answers sub-research question 2.3. Therefore, the difference of skills mismatch of TVC graduates in different subjects of study. the researcher evaluates the level of skill training of graduates to analyze the relevance of graduates' skills applied to their current work in different subjects. As respondents below point out the skill acquired and the level of apply skills to work, it related to graduated subjects.

> *Since, we got a job, which is not our graduated subjects, There is one major issue for us to utilize our knowledge and skills.*
>
> (TVC Graduates)

> *I got a job in a small company (construction company). For me, There is normally that after graduates, we can't work immediately in actual work. School life and workplace may different as expectation.*
>
> (TVC Graduates)

In the different point of views by another graduate point out that;

To utilize our knowledge and skills acquired from school, there may have differences in different graduated subjects and different job tasks. For example, In my understanding, As my present job, I feel like, work with a private company more pro-active than others.

(TVC Graduates)

Regarding the mismatch and missing skills, this issue become a priority of educational institution and widely discussion. The most challenges is to produce the student, graduates and provide them with the needs of labour market demand. Furthermore, it is more important that graduates must receive a job which match with their professionalized. Because of the mismatch graduates are unable to utilized their skills acquired from educational institution.

Table 5.4 Distribution of Graduates Subjects and Job Duty

Contents	construction(%)	Electricity(%)	Automotive(%)	Total
Headman/Head working unit	6(11.1)	8(12.1)	5(8.9)	19
General Staffs	32(59.3)	43(65.2)	23(41.1)	98
Technical Staffs	12(22.29)	12(18.2)	22(39.3)	46
Self-employed	4(7.4)	3(4.5)	6(10.7)	13
Did not respond	0	0	0	2
Total	54(100)	66(100)	56(100)	178

Created by Author
Note: percentage in parentheses ( )

Table 5.4 shows the distribution of graduates with their job duty. It is very interesting that most of the graduates are obtained job duty as general staff which results show that 59.3 percent of graduates in construction, 65.2 percent of electricity and followed by 41.1 percent of automotive technology. There are 22.9 percent of construction, 18.2 percent of electricity and follow by 39.3 percent of automotive technology received a job duty as technical staff. To compare the percent of job duty between TVC graduates

in different majors such as construction, electricity and automotive technology. There is remaining a gap among the percentage since there is a small percentage of TVC graduates acquired duty as technical staff. Therefore, this may a result that TVC graduates could not utilize their skills acquired from TVC institutions.

Table 5.5 Distribution of Graduated Subject Skills needs Improvement

Contents	Construction (%)	Electricity (%)	Automotive (%)	Total
Technique	50(56.8)	22(62.9)	68(81.9)	140
Theory	11(12.5)	6(17.1)	6(7.2)	23
Administration	25(28.4)	7(20)	9(10.8)	41
Other	2(2.3)	0	0	2
Total	88(100)	35(100)	83(100)	206

Created by Author
Note: percentage in parentheses ( )

Table 5.5 shows the distribution of the graduates' skills needs improvement. This means to investigate the missing skills which need to improve which TVC institution could not equip the students in properly and need more attention. The result shows that most TVC graduates strongly need to improvement in terms of techniques with 81.9 percent of automotive technology, 62.9 percent of electricity and followed by 56.8 percent of construction. There 28.4 percent of construction, 20 percent of electricity and followed by 10.8 percent of automotive technology need to improve their management and administrative skills. In addition, there is a small percentage need improved in terms of theory. This illustrates that TVC institution provides with insufficient practice. This is very important that missed from TVC especially for graduates who attended and selected to study in core skills or hard skills learning.

Base on this result as to responses to sub-research question 2.3. What is the difference of skills mismatch of TVC graduates in different subjects of study? The result mainly answer the hypothesis:

Hypothesis # 6: Among the graduates subjects of study to access the actual working , there is strongly differences in term of skills mis-match. The result shows that graduates got a job, which is not their graduated subjects, There is one major issue for us to utilize our knowledge and skills since, most of the graduates are obtained job duty as general staff which results show that 59.3 percent of graduates in construction, 65.2 percent of electricity and followed by 41.1 percent of automotive technology. This illustrates that graduates subjects of study have strongly difference in a skills mismatch .

5.3 Perspective of Employers and TVC Graduates for the Curriculum Development (RQ:3)

5.3.1 Employers' Perception of Working Quality of TVC Graduates

In order to enhance the quality and relevance of TVCs, as to reflexes and reveals a basis where the delivery of training is weak in the management process in terms of relevance to today's job market regarding improving the effectiveness, efficiency, and quality of TVC in Laos. The employers' perspective or satisfaction of work competencies and skills of graduates in actual work also highlights the improvement to consider for further improving the TVC curriculum. The below discussion is an employer explanation about the employment situation of a private company.

> *I have 13 employees in my company, there are only four people graduated from TVC School, 3 graduated with a high diploma and 1 middle level. For the regular work or official staff, presently we have a sufficiency number of staff. However, in fieldwork, we sometimes need a lot of workers, because it depends on the project received. We hire individuals who can immediately work in fieldwork with specific areas.*

(Private employers)

Following the discussion above, most private employers highly require laborers, with a skillful graduate, which can immediately work in the actual work. Since the laborer demand is fluctuating, it regular work or permanent jobs seem to be limited. As the following discussion shows all employers state that,

> *Most of the private companies or employers including small, medium and large companies states that we highly need laborers who can immediately work in actual work or fields. We do not need to train them again, because, our work is a kind of contractual project for 2 -3 years projects or over, which is a limited time. For technical work in a specific field, we do not classify by certificate.*
>
> (Private employers)

Another discussion of public employers, in terms of laborer demand in annual years, we heard a similar statement in the interview session, as one employer states: in the government sector.

> *We actually need about 1-3 people, but we cannot hire according to our requirement, because, we have to obtain permission from the government (annual quota). Criteria selection depends on work vacancy.*
>
> (Public employers)

According to employer discussions, there is a fluctuating demand for laborers and regular work is limited. However, technical work in a specific field is needed; but it depends on the competency and skills of students (determined during job interviews).

Base on this result as to responses to sub-research question 3.1. What is the employers' perception of working quality of TVC graduates ? The result mainly answer the hypothesis:

Hypothesis # 7: Eemployer' expectation of TVC graduates has a positive impact. Some of the employers state they are highly need laborers who can immediately and hire individuals who can immediately work in fieldwork with specific areas. This indicates that graduates training quality have significantly impact on employers expectation

5.3.2 Graduates' Perception of Training Quality of Current TVC Curriculum

In terms of curriculum development is highly discussion among the quality and relevant. Thus this section, the researcher examines further need improvement of TVC curricula, by investing the graduate student feedback or perception, views of their knowledge and skill acquired from TVC dealing with their working experience. The further improvement of TVC curriculum development, there are factors that TVC school needs to consider and pay more attention, as others graduates feedback based on their experience, for example,

> *In my opinion, I think that TVC institution is highly needed to improve learning material, practical training equipment. Especially for the subject of automotive technology, because the type of this study is mostly needed student more practices.*
>
> (Graduates in automotive technology)

Following the feedback above, this illustrated that the TVC School's administrators need to consider the condition of teaching–learning material. The practical training

material, which provides by the school in the present time maybe not fulfill with requirement teaching and learning process. Next graduates also highlight some very interesting points, which would more concrete and possibilities factors or pathway to improve the TVC curriculum.

> *One very important to improve the TVC curriculum is that the TVC institution needs more pay attention to cooperates with multiple sectors, for example, private, international donors and neighboring country's TVC school to exchange in academic as well both academic staff and student.*
>
> (Graduates in construction and electricity)

According to the comments, this referred to the TVC is remaining limited cooperation with other external sectors. This depending more on government support, there may have only a small number cooperate with private or other international organizations. Furthermore, the graduate's bellow also comments that very helpful to ensure the task in term of a mismatch for curriculum development on producing laborer to the labor market.

> *I myself, I think that policymaker or curriculum developers need to consider in term of the labor market demand, and promoting the academic researcher to emphasis on TVC issue, especially for the producing labor and quality of TVC graduates.*
>
> (Graduates in construction, electricity and automotive technology)

The above discussion and comments explain that TVC needs more cooperation and other assistance from may stakeholders. There is high needs for promoting,

motivating both internal and external academic researchers to study more. With the diverse research study, we can see more actual issues. Base on this result as to responses to sub-research question 3.2. What is the graduates' perception of training quality of current TVC curriculum? The result mainly answer the hypothesis:

Hypothesis # 8: TVC course/curricula programs do not reflect the professional development of the students .the result shows graduates' perception about TVC curricula programs. There highly needed to improve learning material, practical training equipment, TVC curriculum is that the TVC institution needs more pay attention to cooperates with multiple sectors. This present that course/curricula programs have a strongly positive impact on student achievement.

5.3.3 Potential Skills Needed from Graduates and Employers on Development of TVC Curriculum

This finding examines TVC graduates, based on their experience in actual work, in order to provide an in-depth analysis of the missing skills of TVC graduates needed for their actual work. The graduates' feedback on the skill and knowledge acquired from TVC issued to show improvement require in terms of the training quality.

In terms of teaching – the learning process of TVC School needs to highly concentrate or focus on practical training rather than provide the student with theoretical learning. Additionally, for the missing skill or weakness, we heard similar comments in the interviews with graduates. One comment explained:

> *I do not receive sufficiency practical training, so we cannot immediately work in the filed as employers expected. Practical training hours in school are insufficient, as well as the TVC school curriculum should focus*

on providing students with more practical training rather than theoretical learning.

(Graduates in Construction and electricity)

This comment indicates that the graduates are unable to applied skill and knowledge acquired from the TVC in their actual work. This means that TVC schools highly need to improve the quality of practical training for students, for example, TVC curriculum must be focused on practical training rather than theoretical. While another graduates also comments on the teaching process in a TVC school.

In terms of the teaching process, teachers should be required to have a high qualifications. In my experience at school, some teachers were not professionalized in the field or subject. They also lacked experience in actual work, and could not manage or solve some of the problems faced during teaching sessions. Many teachers graduated from a TVC school and lack of actual experience. We highly need trainers or conductors who have more work experience, for example, TVC School should have cooperated with the external sector to invite workers or the company's staff to give a lecture or conduct students in school practical hours.

(Graduates in construction and electricity)

According to many comments, many teacher's qualifications remains low. This may result in TVC Schools not providing high-quality practical training for the student. This would be effective for graduate's student such as they are unable to use skills in their daily working. Furthermore, the graduates highlight a comment, which is very interesting and important sectors that TVC School missed, as comments below:

One significant problem that, we faced in TVC schools is that the facilities are not fulfilling for students; such as the school library lacks books. The teaching method and materials are not updated. In my opinion, TVC School did not well organize fieldwork plans for students. There is no communication between school and employers or stakeholders, and has an unclear purpose, as a result, students received insufficient experience from fieldwork.

(Graduates in electricity, automotive technology and construction)

According to the graduates' comments, the schools do not have a clear plan for fieldwork for students. Another the important issue is TVC School does not provide a good facility for students, such as a lack of books in the library and laboratory tools or practical training equipment. Another comment on their fieldwork experience is shown below:

Even though, some of us directly obtained intensive fieldwork for a month including at private companies, private enterprise and public sector, most of the employers provided us to work as a general things or service sectors, which is not technical work and very limited or several times to observe actual work.

(Graduates in construction and electricity)

Overall, the TVC graduates' comments reveal that TVC schools need improvement in terms of quality and relevance, especially, in providing practical training for students, teacher qualifications, school facilities and organizing with a clear plan or target. Furthermore, TVC School needs to create or build more relationships and cooperation with the external sector such as private and accepted parent participation. Moreover,

the research examines the employer's perspective and expectations with TVC graduates and its curriculum development. To investigate the need for further improvement in practical skills and TVC curricula, it aims to contribute to enrich the situational analysis of the quality and relevance of Technical Vocational Colleges in Laos and to provide evidence for policy dialogues/educators for improving TVC curriculum assistance policies in the Technical Vocational education sector in Laos PDR.

5.3.3.1 Administrators and Teachers Perspective on TVC situation

In order to understand the issue and challenges of the current situation of TVC deeply, this study explores the perception of administrators and teachers by using closed and opened questions interviews based on their actual experience. Especially, the teaching process and other influence factors to the development of TVC.

In terms of the quality and relevance of TVC in producing the laborer to labors market as to support the social demand. The question was direct to interviews with TVC administrators with ' what difficulties or obstacles are facing for the development of TVC?

> *There have been many factors, which influence development for our colleges, for example, our colleges have not received sufficient budget, especially, for buying laboratory tool to enhance the teaching-learning process. The laboratory tools is high cost, in particular, equipment for automotive technology and electricity. In addition, the government could not fulfill this sector. Our laboratory is out of date.*
>
> (TVC Administrator).

These notions indicate that major issue or obstacle of the development for TVC is a lack of investment budget. Respondents believe that budget is a big issue for the development process of their colleges. These results indicate TVC receive an

insufficient budget from the central government. The communication between colleges and government authority remains weak. Moreover, the interviewer begins to ask a question in terms of teaching quality of the TVC, the respondent also address that,

> *One very important is that many of our teaching staff remains too, young (new). Some of them are our graduates student, which is lack of teaching experiences. Even though, some of the teacher received short terms training or workshops provided by the government and international organization. Some of the most teachers are holding a high diploma level. The government quota to enhancing or upgrade teacher education is limited to both internal and external countries.*
>
> (TVC Administrator).

Form the notion of college's administrator; these indicate that the quality of the teaching process in colleges remaining low, since, the teacher qualification or teacher standard is low. Nearly 50 percent of their teaching staff is holding an only a high diploma and lower. A very small number has a master degree. This would be one major that TVC graduates acquire insufficiency knowledge and skills to fulfill their world of work life. As following respondent state that,

> *We accepted that our colleges could not fulfill and provides all students with skillful labors, however, at least we could equip and helps them to have more opportunities in society. For example, after graduation, a graduate able to decide whether they need to continue with higher education or hunting jobs.*
>
> (TVC Administrator).

Another respondent have given the very interesting perception that the reason why the TVC has a mall relationship with a private company and the colleges could not fulfill observation and monitoring their student in fieldwork.

> *In terms of the relationships to the private sectors, we also have some contact and incorporated with a private company, for example, car and construction companies to accept our student to do fieldwork training. However, in some case, we can go directly to observe or monitoring in the fields, since, we have limited budgets.*
>
> (TVC Administrator).

Further evidence from teaching staff, the researchers' interviews concerning the teaching issues or faced in their teaching process based on their actual experience. As well as, how do they resolving the problem? and other perspectives.

> *I am three years of teaching experience at TVC and I got one time participated in a training project, which organized by the organization. In reality, teaching students is a challenges task for me. In my teaching process, in terms the theoretical side is going be fine, even though, the textbook is derived from senior teachers, which used many years ago (out of date). We can find and resolve the problem in many other ways, especially in searching for information from an internet source and discuss with others who have more experience, however, for practical or laboratory we strongly need sufficiency tools.*
>
> (TVC teacher)

Therefore, according to the respondents, this indicates that teacher maybe not the main issues of the teaching process in terms of theoretical learning, however, most of the respondents are considered and require for laboratory equipment or tool for using during the practical training in school.

> *For the teaching process during the practical training in school, some of the equipment is broken and unable to use the equipment at any time we need for teaching. We lack of teachers who specializes with a specific subjects. One teacher teaches more than one subject.*
>
> (TVC teacher)

> *Since, the school is not fulfilling for equipment for our teaching process, especially for practical training, we try provided strongly in terms of theoretical, with the hope that it would be a benefit for the students. Besides that, some of the equipment we incorporated with the student to create a tool by ourselves.*
>
> (TVC teacher)

The next respondent mention, when the researcher asked the teaching staff in terms of further requirement and development. They present and expressed a similar perceptions. TVC needs to strongly improve in many sectors.

> *In my opinion, TVC requires strong support from the multilaterally, especially the government to fulfill supports for the education budget. Even though we have a policy for the people who live in rural with a scholarship for study in TVC, these just provide a learning opportunity, however, it is insecure for the employability.*
>
> (TVC teacher)

In terms of further improvement, we highly recommend that TVC have to improve the curriculum standard, teacher education level, facility and teacher standard. Those are mainly linked to the educational budget.

(TVC teacher)

Therefore, these results indicate that the government not just provides a policy to enhance student enrollment to TVC. However, the education level or qualification of teachers must be recognized and prioritize as one very important for improvement. In another word, the school facility and make a relationship to the external sector are highly needed to fulfill the development of TVC. Providing quality and relevance education It needs cooperating with many others partnering as an international organization to establish regulation and institutions to enhance TVC.

Base on this result as to responses to sub-research question 3.3. What is the potential skills needed from graduates and employers on development of TVC curriculum? The result mainly answer the hypothesis:

Hypothesis # 9: Employers expected TVC institutes provide a variety of subjects of study for trainees. This may have a positive impact working quality of graduates. Most of employers states that TVC should focus on providing students with more practical training, needs teachers who professionalized in the field or subject, TVC School should have cooperated with the external sector to invite workers or the company's staff to give a lecture or conduct students in school practical hours and TVC School should have cooperated with the external sector to invite workers or the company's staff to give a lecture or conduct students in school practical hours. This provide a variety of subjects of study have more influences for student.

- **TVC further development involvement and reflections**.

In general contexts, technical vocational education and training are specific that provides both academic education and initial vocational training. Therefore, there has been extensively debated and discussed the quality of TVET. In the case of Laos; there is a huge challenge in terms of quality and relevance especially for miss-match, quality of training, curricula, employability, teachers' qualification and school facilities. Those become a very significant point that needs to be resolved by multiple-educational administrators. This study also on of research that attempts to investigate in term of quality and relevance of technical vocation colleges. This study mainly emphasized training quality as skills acquired, skills miss-match and course curriculum built on graduates' feedback and employers' perception.

Based on researchers' reviews and observations, this section focuses on school facilities, teachers' qualification, and training quality. These are significantly feedback from many sectors that related the quality of TVC. In term of teachers qualification, as in the previous section, there is a lot of feedback from graduates and other stakeholders. Presently, TVC is strongly needed more qualified teachers. Since it is still insufficient in professionalized or well-trained vocational teachers with a specific areas or major subjects. Because of teachers is a person who participates, provides an alternative learning environment to motivate the student in doing activities and duty both inside and outside the classroom. As an interview in the previous section, most of the graduates and employers are state quality of teaching and teachers' qualification is mainly influenced by teaching practical skill. Table 5.6 shows the distribution of education levels of Champasack and Vientiane technical Vocational Colleges.

Table 5.6 Distribution of Educational Level (2018-2019)

Education Level	CPS TVC (%)	VT TVC (%)
Doctor	1(0.6)	0
Master	30(19.3)	17(10.6)
Bachelor	79(26.4)	85(53.1)
High Diploma	41(51.0)	39(24.3)
Medium level	4(2.5)	2(1.2)
Certificated	0	0
Volunteers	0	17(10.6)
Total	155	160

Created by Author
Note: percentage in parentheses ( )

Currently, Champasack and Vientiane TVC are remaining faced with the lack of qualified teachers. There are 155 peoples in total numbers of teachers at Champasack TVC. In addition, there 51.0% were high diplomas, 26.4% were bachelor, 19.3% were master, 2,5 % were medium level certificated and has only 1 person was holding a doctoral degree. To compare with Vientiane Province TVC, there are 160 peoples in total numbers of teachers. there 53.1% were bachelor, 24.3% were high diploma, 10.6% were master, 10% were volunteers teacher, 1,2 % were medium level certificated. This illustrates that there is remaining higher percentage of high diploma level. However, for a bachelor's degree about 50.0% percent of them are used to take a continues course program provided by the government. Some of them are graduated in different field of their major. Particular, for teachers who are holding master's degrees mostly not graduates in technical vocational areas. They are mostly graduated in general education and educational management; This situation is occurring in both technical vocational institution. One observed that Vientiane Province TVC still have volunteer teachers, although, the government has not to allow accepted volunteer teachers.

Furthermore, this study found that most of the TVC teachers have to work overtime to generate income. since the salary received from the government is insufficient for their living. As one other respondent state that,

> *I was functioning as a teacher in TVC for around 10 years. I am currently holding a Bachelor degree. At the first, I graduated at high diploma level. I was seeking and applied for any kind of job including a job that matched and miss-matched with my major subject. I was rejected by employers. So, I decided to apply to be a teacher. At that time, the government has provided more quota for teachers. I was a volunteer teacher for two years. Before that I feel the education level is the main consideration of the employers. Lately, I take a continues course to obtain a bachelor degree. Become a teacher is my last choice for me. if I compared to other different jobs in terms of income. Teachers' income is lower than in other jobs. I have to find another's extra-job to generate our higher income. I have a limited time to prepare for the lesson. I recommend that if we think about the quality of TVC. TVC Institution or the government should provide more social welfare and incentive for teachers at all education levels.*
>
> (Teachers)

Based on this result, TVC in Laos faced a lot of changes, there is not just insufficient teachers qualification, however, teachers incentive is also one major that affected to teaching quality. Although, TVC institutions are the remaining demand for the teachers. Currently, the government has a limited quota for teachers. Current teachers are looking for a part-time job for generating income. As a result, teachers will not much pay attention to prepare for their teaching process. In addition, one very important which

searcher found in observed the real situation of TVC institutions. Although, the TVC curriculum has provided sufficient practical hours following the national curriculum standard. However, TVC institution could not provide students the actual practical training as much as possible, since the institution still lacks equipment, particularly hard skills subjects. Practical hours mostly did another activities and some just look at teachers demonstration. Although, TVC institution has received government budgets in annual years, but most of the budgets use for administration. There are very limited numbers for laboratory equipment, and machines, Since, this kind of equipment is very high cost, especially automotive technology, electricity, and construction. Therefore, most of the laboratory equipment, textbook, and other facilities were received from international organization aid.

CHAPTER VI

DISCUSSION AND CONCLUSION

According to the human theoretical framework, this research study considers the unemployability of TVC graduates. While the socio-economic growth, the government is enhancing the private sector to play a broader role to create and expand further employment opportunities for graduates and following the expansion of labor market demand. Therefore, this research summarizes the essential difficulty or obstacle to human capital development, derived from skills and knowledge of an individual in Laos. TVC graduates experience in their education and employability faces the problem of seeking a job (job hunting). This became a barrier to human and social capital development and failed in human capital strategies. This thesis comes up with the requirement of social capital innovation as part of labor market approaches for improving or increasing graduate employability dealing with changes in economic conditions.

6.1 Discussion

The discussed and the meaning of employability proposed, which is interlinking with graduates' employment and affects the TVC curriculum development. In the case of Laos, the government is progressively encouraging human resource development in the country to meet the increasing demand from the national and international labor markets, for skillful labor.

The results of this study are presenting, the data interpretation concerning TVC graduates' employment situation, by following the research question and

research objectives of the study is examining the connection between the ideas and methods of a handful of studies. Some of the most exciting findings from this study give us insights into aspects of the employability of TVC graduates. This study also assists to measure the extent of professional work pursued by graduates after-acquired knowledge and skill through TVC institutions. However, Drawing from the literature reviewed indicates that there is not just an only single aspect which led to understanding the quality and relevance of Technical Vocational education, but this research presenting the finding as following or drawing the attention of academicians, researchers and others scholars to be more understandable of quality and relevance in Technical vocational education.

This study revealed the following points. First, to discuss the training quality and skill impact of the TVC graduates. Under this objective, the study explores whether the skills acquired from TVC institutions impact on the graduates' employment status, actual working situation, and employability. Second, the study investigates the issues related to the skills mismatch of TVC graduates from different majors. Under this objective, the study further explores differences in elements of success on employability among TVC graduates in different subjects of study. It also investigates the differences in elements of success on employability among TVC graduates in different groups and investigates the skills mismatch of TVC graduates in different subjects of study. Finally, this investigates issues related to the perspective of employers to the graduates in current employment and the development of the TVC curriculum. Under this objective, the study further explores the graduates' perception of training quality of current TVC curriculum. It also investigates the graduates' perception of training quality of the current TVC curriculum and investigates the potential skills needed from graduates and employers on the development of TVC curriculum

6.1.1 Training quality and Skills impact of the Employment of TVCs Graduates

The relationship between skills acquired and skills required impact on employment situation. A graduate might not be acquired and fulfilling practical training during the schooling (Kivinen and Ahola, 999). Benjamin (2006) claim that the graduates must be flexible and accommodate to the change in the real working situation First, the study reveals the role of education and training for an employment opportunity. Based on interviews, TVC' graduates face difficulty to obtain a job. Even though, the number of the requirement of laborers in each province, the demand for labor would be increased, since, the rapidly changing socio-economic context of Laos. As well, the government of Laos has promoted the expansion of foreign investment sectors such as agriculture, construction, hotel and restaurant, industry and handicraft, trading, wood industry, electricity and mining, followed the law on promotion of foreign investment. However, the labor market in Laos is remaining limited, especially for those who graduated in electricity, construction and automotive technology. In addition, the annual number of graduates is increasing; Job available seems to be limited in private sectors. This would be a result that most of graduates is highly needed to continue their study and changes to the new subject of study. Therefore, TVC education is not fulfilling the role to graduates in employability. TVC training quality through TVC graduates work competency in the actual work. The employer's perception or views regarding the TVC training quality through TVC graduates work competency in the actual work. Employers state that the training quality at TVC by rated the level of satisfaction, such as the quality of training, teacher qualification, reputable training institution and curriculum relevance to current job demand are mostly rated at moderate and fair. There are generally and happening in regarding the mismatched employers'

demand and graduates skills acquired (Asma & Lim 2000; Yogeswaran, 2005 and Wong & Hamali, 2006).

Presently, in Laos society there is an oversupply and popular among the young generation as mention in problem statement, particularly who graduated in accountant, banking English for business and computer. Because of this kind of subject of study, they have more opportunities to work at the office both in public and private. However, for three major subjects of study such as construction, electricity and automotive technology is rather unattractive for the young generation especially for females. Because of this kind of study is highly needed skillful graduates. Employer is looking for graduates who hold a significant skill and knowledge which be able to utilize to the workplace especially the additional academic qualification (Lau & Pang, 2000)

Base on the result, there is the difference between the percentage of male and female graduated at TVC. The highest percentage of graduates is from an urban areas. This indicated that there are differences in accessibility to TVC. The graduates are tend to work in the public sector, as well, they are a higher risk for unemployed because the results show that there remains a large percentage of TVC graduates is unemployed. According to the labor market condition, The Laos government has promoted the private sector to invest in any sectors, however, there is still not a widely open accept at all for the graduates to work. As a result indicates that most the graduates state that they faced very difficult for seeking jobs and job available seems to be limited in private sector. These results supported the several researchers such as Cinar, Dongel, & Sogutlu, (2009) note that, employers are highly demanding for many different kinds of skills from their employees. As well, Mohd Yusof, Mustafa, Syed Mohamed, & Bunian, 2012 claim that. There

are many research has been discussed in term of employability skills as for increasing work-related to the outcome, improving job opportunities and people adaptation with the changes of globalization. In addition, The technical advanced of globalization are strong needs professional technical skill and advanced improved employability skills (Singh & Singh, 2008)

Second, in terms of TVC graduates skills acquired relevance or matching to the current work requirement, the graduates' competency and quality of skill acquired applying to actual work and how to work, acquired was irrelevant to their professional or field of study. As mention above, the labor market condition in Laos is limited for private sectors. This may a result that TVC graduates tended to work in public sectors. As well, they do not have various choices. This may be one a result that graduates try to get the first job. As a result show that graduates obtained regular work in government sectors as general staff, which is not technical work as they're professional or field of the subject of study. Skills acquired and mismatched employers requirement has been discussed in many periods of the educational issue especially in technical vocational education, therefore, graduates students entering the workforce in labor market are like to think about an available job opportunity that select jobs (Robert, 1977). Similar to Takase, Nakayoshi, & Teraoka (2012) research on mismatched between jobs and differing degrees in the course of jobs. Despite, there are more opportunities to access education and jobs, graduates are remaining experience on jobs transitions during working lives (Savickas et al., 2009)

Third, the result reveals the knowledge and skills of TVC graduates' impact on job performance or daily life work. There are a lot of comments, feedback in terms of education quality, particularly in producing graduates' to respond to labor

market demand. As well, the knowledge and skills are strongly influent of job performance. As an employer state that they strongly need workers who are skillful. From the interviews, some graduates are unable to work in the actual working. Schooling life maybe not fulfill the needs of student or provided limit practical training. Therefore, they comment that they acquired insufficient practical training in school. This supported Mustapha (2002) and Yusof (2004) researches found teaching and learning in technical vocational training was not been fulfilling the students' sufficiency skills and ready for the jobs market. Skill mismatch to the job acquired are major considered and becomes a result that graduates are unable to utilizes their skill acquired Green & McIntosh, 2007).

Another feedback on a linkable impact is that fieldwork study also seems to be limited to the private sector, for example, a very small number for TVC students directly received fieldwork study in the private sector. TVC graduates also faced a lot of problems seeking a job, and the TVC certificate cannot provide a good opportunity or guarantee for employment. Graduates mostly comment that the TVC needs more practical training and continues their study. Several researchers as Sapp & Zhang (2009) and Raelin (2011) note that the gaps between education and the requirement of employment are widely discussed in educational research recently. Therefore, to fulfill the gaps educational institutions need to emphasize the contributions of internships. Internship are aspect that provided the students learning opportunities to improve their skills in a workplace, develop students of their initiative stage, maturity, self-confident and reach into the employers' expectation. Therefore, those results are mainly linked to the TVC that highly need to improve and pay more attention to involving multiple- stakeholders to develop and resolve the problem in the future.

6.1.2 Differences in Success and Skills Mismatch of TVC Graduates

The economic development have continuously changes in annual of globalization and industrialization regimes. This required a different perspective and demand of the workforce (Barret et al. 2005). Zaharim (2009a) mention that employability of graduates are strongly needed the different set of skills. This study reveal d the extent of the subject of study effect on employment of TVC graduates in terms of success and status. Firstly, the study reveals that the subject of study has significant effect on the employment of TVC graduates. Because the changes in the economic conditions have always changed annually. Every academic year, many graduates student face difficulty finding a job and adaptable in the workplace. The graduates have to adaptable to the new life after school. There is widely perspective on employability. Graduated subjects maybe one important consideration for employers in hiring employees. In regards to employability, it is generally included technical skills and non-technical skills competency needs for a kind of job performance (Ju, Zhang, & Pacha, 2012). However, graduates should not only rely on their major or graduated subjects, but graduates must be carried on a multiple and variety of skills. As Robinson (2000) has been recognized that the employability skill is necessary needed and involved in curriculum design as a basic skill for keeping, managing and practicing well on job performance.

Second, this study reveals the graduates' feedback on the skill and knowledge acquired from TVC issued to show improvement require in terms of the training quality. Training quality was recognized and difficult to measure and assessed, it included many factors that are involving such as service quality, teaching quality, curriculum standards, and …etc. (Abili, Thani, Mokhtaian, &

Rashidi, 2011). Another researchers also mention that educational quality is unique when compared to another different sector (Quinn, Lemay, & Johnson, 2009). This study also found that training quality strongly requires the incorporation with multiple-stakeholders to share the concrete their perspective and conduct the training. Based on the result, TVC strongly needs exclusive practical training both in school and outer fieldwork with private sectors or companies. As well, most of the graduates recommended improving training quality; TVC School needs trainers or conductors who have more work experience. There are three main factors which are very affected by student' learning experience such as teachers performance, the process of delivers service and facilities (Maimunah Sapri, Kaka, & Finch, 2009).

As well, some of the graduates also mentions that currently the school library is remaining lacks of books. The teaching method and materials are not updated. In my opinion, TVC School have to be more clear organized fieldwork plans for students. There would consist of many factors improve TVC for example, teacher qualifications, school facilities, and organizing. TVC colleges have to incorporate with multiple sectors and accepts or considerate the feedback of both the internal and external sectors. This indicated that the TVC system needs urgent improvement, especially the learning material, school facility, fieldwork management and quality of conductors. Teaching quality is mostly affected by student achievement (Hill, Lomas, & MacGregor, 2003). Furthermore, Service quality is highly recommended to be addressed for education and training to provides and ensure the customer in a positives impression. Customers' and stakeholders' feedback is very significantly to evaluated and improved the course study. (Mohd Zuhdi Ibrahim et al., 2012).

Third, the result from the interviews the graduate student feedback or perception, views of their knowledge and skill acquired from TVCs. Curriculum

development is also a crucial component in all education sectors. The curriculum design is most important as this study reveals the important point that highly needs improvement of TVC is curricula development. Based on the result the respondent notes that the highest needs improvement in TVCs most is textbooks, followed by laboratory equipment or tool, library facility, factory intensive study and teacher qualifications. The educational institution strongly needs to considered the development, utilization and appropriated learning instruments to updated learning and technology in term of preparing graduates for future the world of work (Kamsah, 2004; Gretar, 2006; Lau & Pang, 2000; Nguyen, 2005).

Furthermore, TVC needs more on government support, there may have only small number cooperated with private or other international organization And promoting the academic researcher to emphasis on TVC issue, this becomes a major issue in the reality. School curriculum needs to be considered and focused on employability skills, not just focused on hard skills. The employability skills are generally prepared students in various pathways to adapted and successful employment (Cotton, 2008).

6.1.3 Perspective of Employers and TVC Graduates for the Curriculum Development

Ellis(2003) define curriculum design are fundamental tool which could equip and preparing student to the workplace.Curriculum design must be considered to meet the requirement of industry; in order to meet employers and labor market demand (Kasa, 2006). This study reveals the employers' explanation about the employment situation of a company. Especially, the employer views satisfaction of work competencies and skills of graduates in actual work, there would highly be

concerning and relates to the improvement of TVC of Laos. For example, this study found that,

Criteria of hiring employees for regular work, students should have at least a bachelor's degree, however, in fieldwork with specific areas, some employers state that they are not passed qualified by certificate level. Ahmed Zaini (2005) found in his research, the unemployed graduates are relying on their academic qualifications. As well, Employers highly need graduates' with skills that can immediately work in actual work. The satisfaction of employers on TVC graduates work competencies remaining poor. Most employers rated that TVC provided suitable and good skills in terms of communication skills, human relations skills, and information technology skills. And other skills, such as entrepreneurial skills and critical thinking skill were also good. Presently, employers are looking for graduates who skillful and holding at least a bachelor level. Especially, a worker who has more experience, and specialized with a specific work task and be able to adaptable in an actual situation. However, Harvey and Green (1993) claim that it is quite hard to divide the employers' perception of graduates' training quality.

The overall discussion describes the data presentation of the differentiations issue faced, and feedback of TVC graduates, furthermore, employer's views or perception regarding the quality of TVCs on providing student practical training. This study mainly discusses the relationship between skill acquired and skill requirement in the current employment situation, as the relevance between skills acquired to actual work receiving of graduates, as well as in-depth information to investigate the linkable impact of skills acquired on employment status. Furthermore, this study highlights the extent of the subject effect on employment in terms of success and status, and the needed or missing skill and weakness based on actual working experience. Additionally, regarding

further improvement with the discussion on employers' satisfaction and expectation.

6. 2 Limitation of Study

This study will clarify the findings of empirical research concerning the appropriate curriculum design for technical vocational colleges in three majors/ subjects of study: construction, electricity automotive technology at middle certificate and diploma level. This focuses on the real needs analysis of graduates, and employers that affect structured curriculum based on their working experience. The study is limited, and therefore time and resources might be restricted to access the entire target group. Also, the study is not fully field's visits for primary information and data collection because of time limitation.

According to educational statistics, there are 22 TVET public schools under the Ministry of Education and Sports. In that, there are five colleges, however, this study focuses on two Technical Vocational College. The sample selection is mainly for graduates students and employers. The interview for graduates was done by phone called interviews 50 percent of respondents and 50 percent's fields visited interviews. Researcher has informed or explained to them about my position, the anonymity of respondents and confidentially data from them. At firstly of the interviews, some respondents were not interested in giving more detail, since the question was some critical issues of TVC Colleges. As well, some respondents may felt hesitate to provide their perception.

The research does not include long-term statistical data, Furthermore, researcher has acknowledged that there are some areas, which needs for further study such as the critical analysis on employment issue and private participation, the role of TVCs on providing laborers to market demand. In order to measure and

reveals the impact of practical training as the quality of TVCs.

6.3 Conclusion

Over the past decades, many countries including Lao PDR have used various terms to define technical vocational education and training (TVET). The government of Laos acknowledges the importance of TVET in producing sufficient labor force for the labor market. It is therefore cooperating with other countries and collaborating with international organizations to establish regulations and institutions to enhance TVET in Laos. In addition, responding to the needs and coping with socio-economic development, including the industrialization and modernization of the nation, which is a huge challenges for TVET in Laos. It has been widely criticized and debate on the educational system, in particularly, its quality and relevance. Providing quality and relevance of TVET is an ongoing discussion.

Previous study by Asian Development Bank (ADB, 2010), employers and trade association, TVET in Laos have very strongly negative image, in addition, TVET graduates at all level could not utilize their skills acquired, Most of graduates have to re-trained by economic sectors. Since , TVET institution has provided more theoretical than practice. Many teachers are lack of working experiences (real practice), some of teachers are graduates student from TVET. (Bohlmann 2010). Bohlmann (2010) also finds that current TVET program limit jobs opportunity in the private sector and irrelevance to labor market demand (DVV 2011; cited in UNESCO 2013). There is a small percentage of private companies that employed worker directly from TVET, There are very small number of company have relationship with TVET institutions. ADB (2010) confirm that some of subjects of study in TVET such as furniture, construction,

construction sub-trade (masonry, carpentry, electricity, plumbing), tourist and hospitality, mechanic and car repair. The numbers of enrollment of those subject of study were decreased.

This study focuses mainly on Technical Vocational Colleges (TVC) in Lao PDR, which is supervised by the TVET Department in the Ministry of Education and Sports (MoES). The study intends to filling the gaps of previous literature with focus in Laos by investigated the following research questions. First, How does the training quality of skills acquired of TVC graduates impact on employment status and daily life work? Second, what are the differences of success and skills mismatch of TVC graduates by different majors? Third, what are the perspective of employers to the graduates in current employment and the development of TVC curriculum?

Objectives of this study. First, to analyze the training quality and skills impact of the TVC graduates' employment in Lao PDR. Under this objective, the study explores whether the skills acquired from TVC institutions impact on the graduates' employment status, actual working situation, and employability. Second, the study investigates the issues related to skills mismatch of TVC graduates by different majors. Under this objective, the study further explores differences in elements of success on employability among TVC graduates in different subjects of study. It also investigates the differences in elements of success on employability among TVC graduates in different groups and investigates the skills mismatch of TVC graduates in different subjects of study. Finally, this investigates issue related to the perspective of employers to the graduates in current employment and the development of TVC curriculum. Under this objective, the study further explores the graduates' perception of training quality of current TVC curriculum. It also investigates the graduates' perception

of training quality of current TVC curriculum and investigates the potential skills needed from graduates and employers on development of TVC curriculum.

Significance of the study is outlined as to filling the knowledge gaps in the literature. The study contributes in providing empirical evidence in understanding the role of TVCs in producing graduates to labor market, the relationship between the subjects of study of TVC graduates and workplace success. This study also reveals the impact of graduate's acquired skills and further improvement. Beddingfield (2005) notes that the mismatched expectations and lack of preparation for graduates are realities of the work place, it seems to be higher among graduate groups. The employers are mainly focused on transferable skills and personality (Branine 2008).

The second significance is that this study investigates the relationship between the subjects of study of TVC graduates in term of relevance of skills mismatch and workplace success. Graduates' skills acquired become a serious issue and widely discussed, since skillful workers are highly demanded in labor market. As recent research by ADB (2013) finds that the skill based among the workforce in Lao PDR is remaining low. Bohlmann (2010) also finds that TVET teacher qualification has remained low and job opportunities is limited. This study focuses on the major (course subjects).

This study reveals the changing situation of the current socio-economic development in adding to the literature. Previous studies have pointed out the issues which interlinked to the technical vocational education' roles in economic development (Alam 2007; Colin 1999; Zymeman 1976, Paschorpoulos 1987; Tilak 1998, Benell 1996 and Arriagada 1992). Fagerlin & Shah (1989) criticized the human capital theory , education and training equipped labor productivness, and lifetime income competency. However, there is no any previous study focusing on the equality and relevance of TVC. Thus, this study is meaningful.

This study uses the qualitative research method with document review, interview and survey, and classroom observation. This study also adopted sampling techniques for data collection. The study sample is constituted of TCV graduates of medium and high-level diploma and majored in electricity, construction and automotive technology in Vientiane Technical Vocational College (TVC) and Champasack Technical Vocational College (TVC). The study also conducted surveys with the employers (business owners), and administrators and teachers of the two TVCs.

This study finds that TVCs could not fulfill the role of providing or preparing students for better employment opportunities, since there are many of TVCs graduates who remain unemployed. Some of the graduates have a higher risk of being unemployed and jobs available are in public sector, but limited in private sector. In term of accessibility to TVCs, there is a wide difference between percentages of male and female graduating from TVCs, and there is a wide gap of students' access to TVCs between urban and rural areas and students from other provinces. TVC graduates tend to work in public sectors, additionally; graduates of TVC remain at risk for unemployment, since there are many of graduates remaining unemployed. Even though some obtained a job or employment, most spent quite a long time for finding their first job. Moreover, job availability for the TVC graduates seem to be limited in the private sector because there is small percentage of TVC graduates obtaining jobs in the private sector. Thus, TVC graduates face difficulty in seeking jobs; and this illustrates that TVCs could not fulfill the role of providing or preparing a better employment opportunity for TVC students.

Regarding the relevance of skills acquired matching the work requirement, TVC graduates acquired jobs with the mismatch of their professions or graduated subject of study. Graduates cannot apply their knowledge and skills acquired from

TVCs as effectively as possible; as a result, they mostly obtained work position as general staffs. Currently, TVC graduates do not have various choices of the job selection, and are unsatisfied with their current jobs. This means that graduates in electricity, construction and automotive technology are limited. Most TVC graduates are required to continue for further study, however, they preferred to study with new different subjects. They believe that new subjects of study would provide them more choices or opportunities for the better jobs.

Regarding to knowledge skills impact on employment status or a linkable impact on the current job performance, graduates faced difficulties on the actual work. They are highly seeking for jobs. Most of them state that there is a higher impact of skills acquired on their actual work. A TVC certificate graduate is at higher risk of unemployment because TVC certificates cannot provide the good opportunity or guarantee for employment. Furthermore, graduates are unable to apply the skills to actual work; it is because practical training acquired at TVC is not fulfilling for graduates. Education level is a major considerable of employers for hiring employees, especially holding middle level certificates has a high risk of unemployment.

Based on the findings, the subject of study is mainly affected by employment of graduates, as there are a small number of TVC graduates immediately receiving employment after their graduation. To compare between the three major subjects of study (construction, electricity and automotive technology), the highest risk for unemployment is construction, followed by automotive technology. Regarding the income or monthly earning, graduates in electricity earn higher than construction and automotive technology. A very small percentage of the TVC graduates in construction and automotive technology are needed to study their old or completed subject of study. Skills requirements and missing of TVC graduates' needs for actual work are: Practical training is highly needed

particularly the extensive-practical training in both school and external fieldwork study with private sectors. Teacher qualification is low, and they lack actual experience, and also the providing of practical training for students remains low. The TVC teaching methods or pedagogy provides extensive theoretical learning and TVC school facilities are not fulfilling for student. TVC schools do not organize fieldwork plans for students. Moreover, there is limited communication between schools and employers.

For further improvement of TVC curriculum, graduates' feedback or perception are needed to be considered. Currently, TVC curriculum does not match with job demand, in terms of theoretical and practical training of TVCs, graduates state that theoretical learning is rather good or higher than practical training. There is a need to improve TVCs text books, followed by laboratory equipment or tool, library facility, factory intensive study and teacher qualifications and reputable training of TVC institutions remains low.

Regarding the employer's explanation about the employment situation, especially, the employer views and satisfaction of work competencies and skills of graduates in actual work: for regular work, employers need higher certificate level. Most employers indicate that, the quality of practical skills of TVC graduates acquired remains lower than theory. Employers are unsatisfied with graduates working quality. As well, the satisfaction of employers with TVC graduates work competencies and tactics or skills at solving problems they faced in actual work, rated as moderated by employers. Most employers rated that TVCs provide a suitable and good skills in terms of communication skill, human relations skill, and information technology skills

The employer's views regarding the TVC training quality through TVC graduates work competency based on the actual work: to compare the satisfaction rate of employers for the quality of practical skills and theoretical skills. The

quality of practical skill remains lower than theoretical. Furthermore, the quality of training, teacher qualification, and reputable training institution and curriculum relevant to current job demand is mostly rated as moderate and fair. In additionally, TVC curriculum needs to be highly improved as following the information of the differentiations faced, and feedback of TVC graduates and employers.

In conclusion, this study undertook to analyses of quality and relevance of TVC in Lao PDR. Finding indicates a relationship between the curriculum, teaching standard, practical training, jobs advice and work experience. However, the lack of initiative of student and graduates is reflected in form of research finding and following the human capital dimension. This study relates to the curriculum, teaching standard, practical training, jobs advice and work experience. However, the student and graduates are also lack of initiative, this may a result that leading to the unemployment. The findings suggest that educational institutions can reduce this phenomenon as to engaging with society and other external sectors such as community and private sector.

REFERENCE

Asian Development Bank: Report and Recommendation of the President to the Board of Directors; Proposed Grant Lao People's Democratic Republic: Strengthening Technical and Vocational Education and Training Project; June 2010, page 4-5

Ahmad Zaini (2005). Students and Employers as Customers of Multimedia College. Proceedings of National Seminar "The development of Technology And Technical-Vocational Education And Training In An Era of Globalization: Trend and Issues". Kuala Lumpur

Archer, W. and Davison J. (2008) Graduate employability: What do employers think and want? London, the Council for Industry and Higher Education (CIHE)

Adelman, C.,Jenkins, D., & Kemmis, S. (1976). Rethinking Case Study: Notes from the Second Cambridge Conference. Cambridge Journal of Education, 139-150

Atchoarena, D., & Delluc, A. (2002). Revisiting Technical and Vocational Education in Sub-Saharan Africa. Paris: UNESCO

Aida, B., Norailis, A., & Rozaini, R. (2015). Critical Success Factor of Graduate Employability Programs. *Journal of Economics, Business and Management*, *3*(8).

Atchoarena, D., Delluc, A., 2001. Revisiting Technical and Vocational Education in sub-Saharan Africa: an Update on Trends, Innovations and Challenges. UNESCO, IIEP, Paris.

Anderson, D., 2009. Productivism and ecologism: changing dis/courses in TVET. In: Fien, J., Maclean, R., Park, M.-G. (Eds.), Work, Learning and Sustainable Development. Springer, Dordrecht

Ahola, S., Kivinen, O. & Rinne, R. 1992. Transition from Secondary to Higher Education in O. Kivinen & R. Rinne (eds.) *Educational Strategies in Finland in the 1990s,* Research Reports 8, pp 17–36, University of Turku, Vattenborgsvägen, Finland.

Alam, G.M. (2007). Private HE in Bangladesh: the impact on HE governance & legislation. Unpublished PhD thesis, University of Nottingham, United Kingdom

Allen, J., & Egbert De Weert (2007). What do education mismatches tell us about skill mis- matches? A cross-county analysis. *European Journal of Education*, *42*(I), 59-73.

Allen, J. and van der Velden, R. (2001). Educational Mismatches Versus Skill Mismatches: Eects on Wages, Job Satisfaction, and On-The-Job Search. *Oxford Economic Papers*, 53(3):434–452.

Arriagada, A., & Ziderman, J.(1992).Vocational Secondary Schooling, occupational choices and earnings in Brazil. Washington DC: World Bank.

Argyris,C. (1977) Double-loop learning in organizations. Harvard Business Review, September-October, 115-125

Australian Bureau of Statistics, 2002, S*ocial Capital and Social Wellbeing*, Discussion Paper, Canberra.

Asma, A. and Lim, L. (2000), "Cultural Dimensions of Anglos, Australians and Malaysians". Malaysian Management Review, 36(2), 1-17.

Atchoarena, D., Delluc, A., 2001. Revisiting Technical and Vocational Education in Sub-Saharan Africa: An Update on Trends, Innovations, and Challenges. IIEP/Prg.DA/ 01.320. International Institute for Educational Planning, Paris.

Blakwell, A., Bowes, L., Harvey, L.,Hesketh, A.J. & Knight, PT. (2001), Transforming work experience in higher education, Bristish Research Journal, 27(23), 269-85.

Barrie, S.C. 2004, A Research-based Approach to Generic Graduate Attributes Policy, Higher Education Research & Development, Vol.23, No.3, pp.261-275

Barrett, S., Burgess, J. & Campbell, I. (2005) The Australian Labor Market in 2004, Journal of Industrial Relations, 47 (2), 133-150

Beddingfield, C. (2005) 'Transforming the ROI of your graduate scheme', *Industrial and Commercial Training,* Vol 37, No 4, pp. 199-203.

Bennett, N., Dunne, E. & Carre, C. (2000), Skills Development in Higher Education and Employment, Open University Press, Buckingham. http://www.sev.org. gr/online/viewPosNews.aspx?cat=23&mid621&lang=gr&Code=editions

Branine, M. (2008) Graduate recruitment and selection in the UK. A study of recent

changes in methods and expectations, *Career Development International*, Vol 13, No. 6, pp. 497–513.

Borjas, G.J. (2010) *Labor Economics* (5th Edition). US: McGraw-Hill International Edition.

Bennell, P. (1996). General versus vocational secondary education in developing Country: A review of rates of return evidence. The Journal of Development Studies, 33(2), 230-247

Becker, G. S.1993, *Human Capital: A Theoretical and Empirical Analysis with Special Reference to Education* (3rd ed.), The University of Chicago Press, Chicago, IL

Beckett, D.& Hager, P. 2002, *Life, Work and Learning: Practice in Postmodernity*, Routledge International Studies in the Philosophy of Education, Routledge, London, U.K

Becker,G. S.1965, A Theory of the Allocation of Time, *Economics Journal,* Vol.75 No.299, pp.493–517.

Bell, J. (1999). Doing your Research Project. Buckingham: Open University Press.

Brown, P. & Lauder, H. 2000, Human Capital, Social Capital, and Collective Intelligence, in S. Baron, J. Field & T. Schuller, (eds.), *Social capital: Critical perspectives*, Oxford University Press, Oxford, U.K.

Bloom, D. & Canning, D. 2003, The Health and Poverty of Nations: From Theory to Practice, *Journal of Human Development*, Vol.4, No.1, pp.47–71.

Blaug, M.1970, *An Introduction to the Economics of Education*, Penguin Books, Harmondsworth Middlesex.

Bouchard, P. 1998, Training and work: Myths About Human Capital, In S. M. Scott, B. Spencer, & A. M. Thomas (eds.), *Learning for Life: Canadian Readings in Adult Education* (pp. 128-139), Thompson Educational, Toronto ON.

Boud, D. & N. Solomon, (eds.), 2001, *Work-Based Learning: A New Higher Education?* Society for Research into Higher Education & Open University Press, Buckingham, U.K.

Boud, D., Solomon, N. & Symes, C. 2001, New Practices for New Times, In D. Boud & N. Solomon (eds.), *Work-based Learning: A New Higher Education?,* pp.3-17, The Society for Research into Higher Education & Open University Press,

Buckingham, U.K

Boud, D. 1998, How Can University Work-based Courses Contribute to Lifelong Learning? In J. Holford, P. Jarvis & C. Griffin, C. (eds.), *International Perspectives on Lifelong Learning*, pp.213-223, Kogan Page, London, U.K.

Bowles, S. & Gintis, H. 1975, The Problem with Human Capital Theory - A Marxian Critique, *American Economic Review*, Vol.65, No.2, pp.74-82.

Boisot, M. 1995, *Information Space: A Framework for Learning in Organisations, Institutions and Culture*, Routledge, London, UK.

Bowles, S., Gintis,H. & Osborne. M. 2001, The Determinants of Earnings: A Behavioral Approach, *Journal of Economic Literature,* Vol.34, No.4, pp.1137–1176.

Belfield, C., & Harris, R. (2002). How well do theories of job matching explain variation in job satisfaction across education levels? Evidence for U.K. graduates. *Applied Economics*, *34*, 535-548.

Bryant, C. & Norris, D.2002, *Measurement of Social Capital: Canadian Experience.* Prepared for OECD – U.K. O.N.S. International Conference on Social Capital Measurement, 25-27 September, London, U.K.

Becker, G. S. 1962, Investment in Human Capital: A Theoretical Analysis, *Journal of Political Economy*, Vol.70 No.S5. pp.9-49.

Boland, R. & Tensaki, R. 1995, Perspective Making and Perspective Taking in Communities of Knowing, *Organization Science*.Vol.6, No.4, pp.350-372.

Bourdieu, P. 1986. 'The Forms of Capital' in *Handbook of Theory and Research for the Sociology of Education,* pp.241-258 in J.G. Richardson, ed., Greenwood Press, Westport, CT.

Brown, P., Hesketh, A., & Williams, S. (2003). Employability in a knowledge-driven economy. *Journal of Education and Work.16* (2), 107-126.

Branine, M. (2008). Graduate recruitment and selection in the UK: A study of the recent changes in methods and expectations. *Career Development International*, *13*(6), 497-513.

Bu¨chel, F. (2002). The Eects of Overeducation on Productivity in Germany–the Firms' Viewpoint. *Economics of Education Review*, 21(3):263–275.

Butterwick, S., & Benjamin, A.(2006). The road to employability through

personal development: A critical analysis of the silences and ambiguities of the British Columbia (Canada) life skills curriculum. *International Journal of Lifelong Learning*, *25*(1), 75-86. http://dx.doi.org/10.1080/02601370 500309543

Caputo, R.K., 2002 (June), Discrimination and Human Capital: A Challenge to Economic Theory and Social Justice, *Journal of Sociology and Social Welfare*, Vol.29, No2, pp.105-284.

Candy, P.C, & Crebert, R.G. 1991, Lifelong Learning: An Enduring Mandate for Higher Education, *Higher Education Research & Development,* Vol.10, No.1, pp.3-17.

Candy, P.C. 2000, Knowledge Navigators and Lifelong Learners: Producing Graduates for the Information Society, *Journal of Higher Education Research and Development*, Vol.19, No.3, pp.261-277.

Cinar, Dongel, & Sogutlu, (2009). As well, Mohd Yusof, Mustafha, Syed Mohamed, & Bunian, 2012

Crebert G., Bates M., Bell B., Patrick C-J.& Cragnolini V. 2004, Developing Generic Skills at University, During Work Placement and in Employment: Graduates' Perceptions, *Higher Education Research & Development*, Vol.23, NO.2, pp.147- 165.

Crebert, G., Bates, M., Bell, B., Patrick, C.J. and Cragnolini, V. (2004). Developing Generic Skills at University, during Work Placement and in Employment: Graduates' Perceptions. *Higher Education Research and Development,* 23(2), pp.147-165.

Clarke, M. (2008). Understanding and managing employability in changing career contexts. *Journal of European Industrial Training*, *32*(4), 258-284.

Cohen, L., & Manion, L. (1994). Research Methods in Education. London: Routledge

Chookhampaeng, C. (2003). Curriculum development. Maha Sarakham: Maha Sarakham University press

Colin, N.P. (1999). Technical and vocational education for the twenty first century. Prospect, 29(1), 29-36

Common Wealth of Australia, (2002). Employability Skills for Small and Medium Size Enterprises: Common Wealth of Australia

Commission of the European Communities, (2000). *A Memorandum on Lifelong Learning*, SEC 1832,Author, Brussels, Belgium.

Conway, M. (2000) what's in a name? Issues for ATEM and administrators. Journal of Higher Education Policy and Management,

Chevalier, A. (2003). Measuring Over-Education. *Economica*, 70(279):509–531.

Coleman, J.S. 1988, Social Capital in the Creation of Human Capital. *American Journal of Sociology,* Vol. 94, Supplement, p.S95-S120.

Crosnoe, R. 2004, Social Capital and the Interplay of Families and Schools, *Journal of Marriage and Family*, Vol.66, No.22, pp.267-280.

Coleman, J. S. 1990, *Foundations of Social Theory*, Belknap Press of Harvard University Press, Cambridge, MA.

Coleman, J.S. 1994, Social Capital, Human Capital, and Investment in Youth, in A.C. Petersen & J.T. Mortimer, (eds.), *Youth, Unemployment and Society*, Cambridge University Press, Cambridge, UK.

Development Technical Vocational Education (DTVE), MOES, Lao PDR 2007

Department of Measurement and Evaluation, Ministry of Education and Sport, Lao PDR

Department of Statistic, Ministry of Education and Sport, Lao PDR

Divanna, J. &Rogers, J. 2005, *People: The New Asset on the Balance Sheet*, Palgrave McMillan, London.

Di Pietro, G., & Urwin, P. (2006). Education and skills mismatch in the Italian graduate labour market. *Applied Economics, Taylor and Francis Journals*, *38*(1), 79-93.

Daniel, B.,Schwier, R. & McCalla, G. 2003, 'Social Capital in Virtual Learning Communities and Distributed Communities of Practice', *Canadian Journal of Learning and Technology*, Vol. 29, No.3, pp.113-139.

Davies, J. 2003,*Empirical Evidence on Human Capital Externalities*, Working Paper 2003-11, Department of Finance Canada, Ottawa, Ont.

Deaton, A. 2004, Health in an Age of Globalization, Working Paper No.W10669, National Bureau of Economic Research, Princeton University. Available at SSRN: http://ssrn.com/abstract=579815.

Doouglas, J., Douglas, A., & Barnes, B. (2006). Measuring student satisfaction at a UK university. Quality Assurance in Education, 4(3), 251-267.

Duniform, R., Duncan, G. J. & Brooks-Gunn, J. 2000. *As Ye Clean, so Shall Ye Glean:*

Some Impacts of "Non-Cognitive" Characteristics Within and Across Generations, Prepared for Annual Meeting of American Economic Association, January 4-7 2001, New Orleans, LA.

Dunne, E. and Rowlins, M. (2000). Bridging the Gap between Industry and Higher Education: Training Academics to Promote Student Teamwork. *Innovation in Education and Training International*, 37(4), pp.361-371.

Dunne, E. 1999, Change in Higher Education: A Learning Society and the Role of Core Skills, in E. Dunne (ed.), *The Learning Society: International Perspectives on Core Skills in Higher Education,* Kogan Page, London.

Ermisch, J. & Marco, F.1997, *Family Matters*, CEPR Discussion Paper No. 1591, Centre for Economic Policy Research, London, U.K.

Ellis, Tessika (2003) What are the Advantages of a Vocational Curriculum?, Conjecture Corporation.

Evers, F. T., Rush, J. C., & Berdrow, I.(1998). The bases of competence: Skills for lifelong learning and employability. San Francisco, Ca: Jossey-Bass.

Evers, F.T., Rush, J.C. and Berdrow, I. (1998). The Bases of Competence: Skills for Lifelong Learning and Employability. San Francisco, CA: Jossey Bass Publishers.

ESCWA 2003, *Responding to Globalization: Skill Formation and Unemployment Reduction Policies*, Author, Beirut, Lebanon.

Field, J (2003) *Social Capital*, Routledge, New York, N.Y.

Foster, P.J (1965).The vocational school fallacy in development planning. In J. Karabel & H. Hasey (Eds.), Power and ideology in education (pp. 142-166). Pennsylvania, PA: Oxford University Press.

Fielden,J.(1998) Higher education staff development: A continuing mission: Thematic debate. World Conference on Higher Education: Higher Education in the Twenty-first Century, Retrieved March 200 from:http://www.unesco.org/ Education /educprog/wche /principal /misssion.htl

Fagerlind, I., & Saha, L.J.(1989). Education and national development: A comparative perspective. Oxford, UK: Pergamon

Firestone, W. A. (1987). Meaning in Method: The Rhetoric of Quantitative and Qualitative Research. *Educational research*, 16(7), 16-21

Francois, P. & Zabojnik, J.2005, Trust, Social Capital, and Economic Development,

Journal of the European Economic Association, Vol.3. No.1, pp.51-94.

Feast, V. & Bretag, T.2005, Responding to Crises in Transnational Education: New Challenges for Higher Education, *Journal of Higher Education Research and Development*, Vol.24, No.1, pp.63-77.

Fukuyama, F. 1995, *Trust: the Social Virtues and the Creation of Prosperity,* The Free Press, New York, N.Y.

Fukuyama, F. 1999, *Social Capital and Civil Society*, Prepared for delivery at the IMF conference on second generation reforms. Accessed on 10 December 2006 at https://www.imf.org/external/pubs/ft/seminar/1999/reforms/ fukuyama.htm Fukuyama, F. 2001, 'Social Capital, Civil Society and Development', *Third World Quarterly*, Vol.22, No1, pp7–20.

Garrick, J. 1999, Dominant Discourses of Learning at Work, In D. Boud & J. Garrick, *Understanding Learning at Work,* pp.216-231, Routledge, London, U.K.

Gibbs, T. 2000, isn't higher education employability? *Journal of Vocational Education and Training*, Vol.52, No.4, pp.559-571

Gibbons, M., Limonges, C., Nowotny, H., Schwartzman, S., Scott, P. & Trow, M. 1994, *The New Productions of Knowledge: The Dynamics of Science and Research in Contemporary Societies*, Sage, London, U.K.

Green, F. and Zhu, Y. (2010). Overqualification, Job Dissatisfaction, and Increasing Dispersion in the Returns to Graduate Education. *Oxford Economic Papers*, 62(4):740– 763.

Green, F. and McIntosh, S. (2007). Is There a Genuine Under-Utilization of Skills Amongst the Over-Qualified? *Applied Economics*, 39(4):427–439.

Green, A., J. Preston & Sabates, R. 2003, Education, Equity and Social Cohesion: A Distributional Approach, *Compare*, Vol.33, No.4, pp.453-470.

Green, A., Hodgson, A., Sakamoto, A., 2000. Financing vocational education and training. In: Descy, P., Tessaring, M. (Eds.), Training in Europe. Second Report on Vocational Training Research in Europe 2000, vol. 1. Office for Official Publications of the European Communities, Luxembourg Cede for Reference series

Green, F., & McIntosh, S. (2007). Is There a Genuine Underutilization of Skills Amongst the Over-Quali ed? *Applied Economics, 39*(4), *427-439.*

Gilbert, R., Balatti, J., Turner, P. & Whitehouse, H. 2004, 'The Generic Skills Debate in Research Higher Degrees', *Higher Education Research & Development*, Vol.23, No.3, pp.375-388

Grootaert, C. 1998, *Social Capital: The Missing Link?,* Social Capital Initiative Working Paper No 3, The World Bank, Washington, DC.

Grosmann, M. and Naanda, R. (2006), Back to the Future? The Challenges of Reforming Vocational Education and Training. ESPC funded centre on Skills, knowledge and Organizational Performance, Oxford and Warwick Universities (SKOPE Publication).

Guzman, A.B. and de Costa, B.V. (2008), Employment and employability profile of a select group of Filipino college graduates, KJEP 5: 1(2008) p. 63-81

Heidi, H. (2004). Methods of Educational Enquiry. University of Bath

Halai, A. (2006).*Ethics in Quality Research: Issues and Challenges*. Paper Prepare for the Multi- Disciplinary Research in Developing Countries in Karachi, November 2006

Hanifan, L. J. 1916, The Rural School Community Center, *American Academy of Political and Social Science*, Vol.67, September, pp.130-138.

Hazleton, V. & Kennan, W. 2000. Social Capital: Reconceptualizing the Bottom Line. *Corporate Communications: An International Journal,* Vol.5, No.2, pp.81-87.

Harvey, L. and Green, D. (1993) Defining quality. *Assessment & Evaluation in Higher Education*, *18*, 9–34.

Harrison, R.(2003) Learning for professional development.In L. Kydd, L. Anderson & W. Newton (eds.) Leading people and teams in education (pp. 11-26).London, Sage Publications.

Hawes, H. and D. Stephens. (1990). Questions of quality: primary education and development. Harlow: Longman.

Harwood, J., Harwood, D. & Lamble, K. 1999, Perceptions of the Importance of Skills for Employment, In E. Dunne, (ed.) *The Learning Society: International Perspectives on Core Skills in Higher Education* (pp.21-29), Kogan Page, London, U.K.

Harvey, L. (2001) Defining and Measuring Employability, Quality in Higher Education, 7 (2), 97-109

Harris, A. & Chapman, C. 2002, *Effective Leadership in Schools Facing Challenging Circumstances,* National College for School Leadership, Nottingham, U.K. Available at www.ncsl.org.uk

Hewitt, D.P.L. (2005). *Conflicts and Harmonies among Different Aspects of Mathematical Activity*. In Challenging Perspectives on Mathematics Classroom Communication, pp.205-233, Chronaki A, Christiansen IM (Editors). Connecticut: Information Age Publishing.

Helliwell, J. & Putnam,R. 1999, *Education and Social Capital*, Working Paper No. 7121, National Bureau of Economic Research, New York, N.Y.

Haveman, R. H. & Wolfe, B. L. 1994. *Succeeding Generations: On the Effects of Investments in Children,* Russell Sage Foundation, New York, N.Y.

Hawley, J.D (2003), Comparing the pay-off to vocational and academic credentials in Thailand over time. International Journal of Educational Development 23, 607–625.

Harvey, L. & Contributors (2003) *Transitions from higher education to work,* Briefing Paper: Centre for Research and Evaluation, Sheffield Hallam University (with advice from Enhancing Student Employability Co-ordination Team and Learning and Teaching Support Network Generic Centre colleagues) Available from: http://www.Qualityreserch international. com/ese /relatedubs/Transition%20from %20HE%20into %20work.doc.

Healy, T. 2002, From Human Capital to Social Capital, In D. Istance, H.G. Schuetze & T. Schuller,(eds.), *International Perspectives on Lifelong Learning: From Recurrent Education to the Knowledge Society*, (pp. 76-88), Open University Press, Buckingham, U.K.

Hill, Y., Lomas, L., & MacGrego, J. (2003). Student's perception of quality in higher education. Quality Assurance in Education, 11(1), 15-20

Holford, J., Jarvis, P. & Griffin C. (eds.), 1998, *International Perspectives on Lifelong Learning*, Routledge, London, U.K.

Hunter, B.H, 2004,*Social Exclusion, Social Capital and Indigenous Australians:*

Measuring the Social Costs of Unemployment, Discussion Paper No. 204, Centre for Aboriginal Economic Policy Research, The Australian National University, Canberra, A.C.T

Huggins, R. & Harries, S.2004, 'The Skills Economy and Workforce Development: A Regional Approach to Policy Intervention', *European Journal of Education*, Vol.39, No.1, pp.47-68.

International Labor Organization (ILO), 2001, *World Employment Report 2001: Life at Work in the Information Economy*, Author, Geneva, Switzerland.

International Monetary Fund (IMF) World Economic Outlook (WEO) database, October 2014 (https://www.gfmag.com/global-data/country-data/laos-gdp-country-report)

Idris, A. and Rajuddin, M. R. (2012). An Assessment of Employability Skills among Technical and Vocational Education Students in Nigeria. *Archives Des Science 65*(7), pp. 392-400.

International Labor Organization (ILO), United Nations Educational, Scientific and Cultural Organisation (UNESCO), 2002, *Technical and Vocational Education and Training for the Twenty-first Century*, UNESCO and ILO Recommendations, París. Available at http://www.ilo.org/public/english/region/ampro/cinterfor/news/un_oit.htm

Ikegwu Emmanuel, M., Ajiboye, Y. O., Aromolaran, A. D., Ayodeji, A. A., & Okorafor, U. Human Empowerment through Skills Acquisition: Issues, Impacts and Consequences-A Non-Parametric View. Journal of Poverty, Investment and Development - An Open Access International Journal Vol.5 2014

Johanson, R. and Adams, A.V. 2003. Skills development in sub-Saharan Africa. Human Development Africa Region, World Bank.

Jalali, A., Islam, M.A., & Ariffin, K.H.K. (20011). Service Satisfaction: The Case of Higher Learning Institution of Malaysia.International Education Studies, 4(1), pp.182-192

Wengraf, T. (2001). *Qualitative research interviewing: Biographic narrative and semi-structured methods*. Sage.

Kasa, Z. (2006). Sustainable curriculum in TVET. *Proceedings International Conference on Technical and Vocational education and training*. Batu Pahat, MALAYSIA.

King, K., Martin, C., 2002. The vocational school fallacy revisited: education aspiration and work in Ghana 1959–2000. International Journal of Educational Development 22 (1), 5–26.

Kivinen, O. & Ahola, S. 1999. Higher Education as Human Risk Capital, *Journal of Higher Education*, Vol.38, No.2, pp.191–208.

Kivinen, O. & Silvennoinen, H. (2002). Changing relations between education and work on the mechanisms and outcomes of the educational system. *International Journal of Lifelong Education*, 21(1), 44-54.

Knight, P. & Yorke, M.2003, *Assessment, Learning and Employability*, The Society for Research into Higher Education & Open University Press, Buckingham, U.K.

King, K., & McGrath, S. (2004*). Knowledge for development? Comparing British, Japanese, Swedish and World Bank aid.* London, UK: Zed Books

Lestrelin Guillaume (2007) "Land degradation in Laos: materiality and discourses" University of Durham, Durham, UK, and Vientiane, Lao PDR; Available date August 6, 2009: *catsea1.caac.umontreal.ca/.../ChATSEA-WP-Lestrelin-200702.pdf*

Lloyd, C. & Payne, J. (2004) The Political Economy of Skill: A Theoretical Approach to Developing a High Skills Strategy in the UK, in C. Warhurst, I. Grugulis, E. Keep (eds.), The Skills That Matter, London, Palgrave Macmillan

Lauglo, J.(2009). Research for TVET Policy Development. NORRAG Conference on Policy Transfer or Policy Learning: Interactions between International and National Skills Development Approaches for Policy Making, Geneva: NORRAG

Lin, N. (2001), Building a Netwrok Theory of Social Capital in N. Lin, K. Cook & R. Burt, (eds.), *Social Capital: Theory and Research,* Aldine de Gruyter, New York, NY.

Lindsay, C. (2002). Long-term unemployment and the "employability gap": Priorities for renewing Britain's New Deal. *Journal of European Industrial Training*, *26*(9), 411-419.

Lowden, K., Hall, S., Elliot, D., & Lewin, J. (2011). Employers' perceptions of the employability skills of new graduates. *London: Edge Foundation*.

Lips-Wiersma & M., Wright, S. (2012) Measuring the Meaning of Meaningful Work: Development and Validation of the Comprehensive Meaningful Work Scale (CMWS), Group & Organization Management, 37 (5), 655-685

Lundberg, S.J. & Startz, J. (1983), Private Discrimination and Social Intervention in Competitive Labor Markets, *The American Economic Review*, Vol.73, No.3, pp.340-347.

Marton, F. & Booth, S. 1997, *Learning and Awareness*, L. Erlbaum Associates, Mahwah, NJ

McGuinness, S. (2006). Over education in the labour market. *Journal of Economic Surveys*. *20*(3), 387-418.

Mahapatra, S. S., & Khan, M. S. (2007). A neural network approach for assessing quality in technical education: and empirical study. Intenational Journal of productivity and quality management Deision, 2(3), pp.287-3306

Mustapha, R. and Greenan, J. P. (2002). The role of vocational education in economic development in Malaysia: educators' and employers' perspectives. *Journal of Industrial Teacher Vocational*. 2(39): 58-73.

McIntosh, S. & Steedman, H. (2002), Increasing the Supply of Skills. *European Journal of Education,* Vol. 37, No. 3, pp.281-299

Mouzakitis George S.,(2010), The role of vocational education and training curricula in economic development, Educational Organization e-DEKA, Aghioi Theodoroi (Almyrra), Korinth, 200 03 Greece

Mohd Xuhdi Ibrahim et al., (2012) Assessing Students Perceptions of Service quality in Technical Eduction and Vocational Training (TVET) Institution in Malaysia. Procedia-Social and Behavioral Science, 56(2012)2727-283

Morley, L. (2001). Producing new workers: quality, equality and employability in higher education. *Quarterly in Higher Education*, 7(2), 131-138.

Ministry of Agriculture and Forestry (MAF 2005)

Mincer, J 1961). Investment in Human Capital and Personal Income Distribution, *Journal of Political Economy*, Vol.66, No.4, p.281.

Master Plan Development of Technical Vocational Education and Training (TVET) (2008-2015)

Maclean, R.et al.(2013). Skills Development for Inclusive and Sustainable Growth in Developing Asia-Pacific, Technical and Vocational Education and Training: Issues, Concerns and Prospects, Asian Development Bank

Maimunah Sapi, Kaka, A., & finch, E. (2009). Factors that Influence Student's Level of Satisfaction with regards to Higher Education Facilities Services. Malaysia Real Estate 4(1)

Malhi, R. S. (2009). The hard truth about graduate employability and soft skills. ADEPT: Higher Education Leadership Research Bulletin, 3, 45 – 56. Higher Education Leadership Academy, Ministry of Higher Education.

Marginson, S, 2003, *Markets in Higher Education: National and Global Competition,* Prepared for New Zealand Association for Research in Education/Australian Association for Research in Education Joint Conference, 29 November to 3 December, Auckland, New Zealand.

Martin, A.J., Milne-Home, J., Barrett,J., Spalding, E. & Jones, G. 2000, 'Graduate Satisfaction with University and Perceived Employment Preparation', *Journal of Education and Work*, Vol.13, No.2, pp.199-213

Maxwell, J. A. (2005) *Qualitative Research Design: An Interactive Approach*. 2nd Edition. Sage Publication

Merriam, S.B.(2001). *Quality Research and Case Study Application in Education*. San Francisco: Jossey-Bass Publishers.

Miles, M.B.& Huberman, A.M. (1994*). Quality Data Analysis: An Expanded Sourcebook. 2nd Edition*. Sage Publication

Ministry of Education and Sports (2006) National education strategy plan 2006-2015. Vientiane, MOES.

Middleton, J., Ziderman, A.,Adams, V.A., 1993. Skills for productivity: vocational education and training in developing countries, World Bank. Oxford University Press, New York

Mohamed, S., & Hamzah,R. (2013). An Assessment of Workplace Skills Acquired by Students of Vocational and Technical Education Institutions. *International Education Studies*, *6*(11), 15.

Moenjak, T., Worswick, C, 2003. Vocational education in Thailand: a study of choice and returns. Economics of Education Review 22, 99–107.

Neuman, S., Ziderman, A., 2003. Can vocational education improve the wages of minorities and disadvantaged groups? Economics of Education Review 22, 421–432

Murgor, T. K. (2013).Relationship between Technical and Vocational Acquired Skills and Skills Required in Job Market; Evidence from TVET Institutions, Using Gishu County, Kenya. *Journal of Education and Practice*, *4*(19).

Nahapiet, J. & Ghoshal, S. 1998, 'Social Capital, Intellectual Capital and the Organizational Advantage', *Academy of Management Review*, Vol.23, No.2, pp.242–266.

Narayan, Deepa. 1999, forthcoming. A Dimensional Approach to Measuring Social Capital. Washington, DC: World Bank.

OECD 1996, *Measuring What People Know: Human Capital Accounting for the Knowledge Economic*, Author, Paris.

Oldroyd, D.,& Hall, V.(1997) Identifying needs and priorities in professional development. In L.Kydd, M. Crawford & C. Riches (eds.) Professional development for educational management. Buckingham, Open University Press

Ono, Y. 1991. *Shakai Chosa no Houhou* [Social Survey Methods] In *Yokuwakaru Shakai Chosa no Jissen* [Better Understanding of Social Survey Practice], eds, F, Inoue, K. Inoue, and Y. Ono. Kyoto: Minerva Text Library.

Osei, I. (1996) Professional staff development in academic libraries. Librarian Career Development. The University of Science and Technology Library, Kumasi

Oketch, M.O. (2007) To vocationalize or not to vocationalize? Perspectives on current trends and issues in technical and vocational education and training (TVET) in Africa. International Journal of Educational Development, 27, 220-234

Oliva, P. F. (1992). Developing the curriculum (3rd ed.). New York: Harper Collins.

Olivier, D., Freeman, B., Young, C., Yu, S., & Verma, G. (2014) *Employer Satisfaction Survey*. Australia: The University of Sydney Business School, Report for the Department of Education

Quek A.H. (2005), "Learning for the workplace: A case study in graduate employees' generic competencies". Journal of Workplace Learning, Bradford Volume 17, No. 3/4, pp 231-243

Quintini, G. (2011). Right for the Job: Over-Qualified or Under-Skilled? Working paper, OECD Social, Employment and Migration Working Papers.

Oresanya, T.O., Omudewa, O.S.. Kolade, T.T. and Fashedemi, A.O. (2014). Vocational Education and Employability: The Nigerian Situation. Journal of Poverty, Investment and Development- An Open Access International Journal, Volume 3, pp. 158-160.

Outsa,.N. (2012)Information from Acting Director General of the Department of Higher Education, Ministry of Education and Sports. Unpublished.

Osuala, E.C. (1999). A Handbook on Vocational- Technical Education for Nigeria. Nigeria: [44] Pacific Publisher Wrouuba Close

Palmer, R.,2009. Skills development, employment and sustained growth in Ghana: sustainability challenges. International Journal of Educational Development 29(2), 133–139.

Psacharopulos, G.(1987). To vocationalize or not to vocationalize? That is curriculum questions. International Review of Education, 33(2), 583-97

Promchun,S.(2007). Didactic for Technical Course. Retrieved from http://home.dsd.go.th/kamphaengphet/km/information/Didactic/Didactic.htm

Partington, P., &Stainton, C. (2003) Managing staff development. Buckingham, Open University Press

Portes A. 1998, Social Capital: Its Origins and Applications in Modern Sociology, *Annual Review of Sociology*, Vol.24, pp.1-24.

Print, M. & Coleman, D. 2003, Towards Understanding of Social Capital and Citizenship Education, *Cambridge Journal of Education*, Vol.33, No.1, pp. 123-149.

Putnam, R. 2000. *Bowling Alone: The Collapse and Revival of American Community*, Simon and Schuster, New York

Putnam, R. 1993, The Prosperous Community, *The American Prospect,* Vol.4, No.13, pp.35-42

Putnam, R. 1995, Tuning In, Tuning Out: The Strange Disappearance of Social Capital in America, *PS: Political Science & Politics,* Vol.28, No.4, pp.664-683

Quality Assurance Manual for TVET Institution, the Committee for the Quality Standard in Technical Vocational Education and Training (TVET) Institutions, Ministry of Education Lao PDR 2011

Quek A.H. (2005), Learning for the workplace: A case study in graduate employees' generic competencies. Journal of Workplace Learning, Bradford Volume 17, No. 3/4, pp 231-243

Raelin J. (2011) Work-based learning in US higher education policy, Higher Education, Skills and Work-Based Learning, 1 (1), 10-15

Reddan, G., & Harrison, G. (2010). Restructuring the bachelor of exercise science degree to meet industry needs. *Asia-Pacific Journal of Cooperative Education, 11*(1), 13-25.

Ranasinghe, S.W. (1992). Human resource development in Sri Lanka: Present trends and future Perspectives. In Salleh, S. and Gurung, S.B. (Eds.), *Human Resource Development in South Asia.* Asian and Pacific Development Centre, Malaysia.

Raelin, J.A. 2 000, *Work-Based Learning: The New Frontier of Management Development,* Prentice Hall, Upper Saddle River, N.J.

Resnick, L. B. 1987.*Education and Learning to Think.* National Academy Press, Washington, DC:

Robinson, J.S. and Garton, B.L. (2007). An Assessment of the Employability Skills Needed by Graduates in the College of Agriculture, Food and Natural Resources at the University of Missouri. Journal of Agricultural Education, 49(4), pp. 96-105

Rasul, M.S; Ismail, M.Y; Ismail, N; Rajuddin, M.R. and Abdu Rauf, R.A. (2010). Development of employability skills assessment tool for manufacturing industry. Jurnal Mekanikal, No. 30, pp. 48-61.

Raybould, J., & Sheedy, V. (2005). Are Graduates Equipped With The Right Skills In The Employability Stakes? Industrial and Commercial Training, 37(5), 259-263

Roy, A. and Raymond, L. (2008) Meeting the Training Needs of SMEs: Is e-Learning a Solution? The Electronic Journal of e-Learning, Vol. 6, issue 2

Sapp, D. & Zhang,Q.(2009 Trend on Industry Supervisors' Feedback on Business Communication Internships, Business Communication Quarterly, 72,(3), 274-288

Sakthivel, P.B., Rajendran, G., &Raju, R. (2005). TQM implementation and student' satisfaction of academic performance. The TQM Magazine, 17(6), 573-589.

Schomburg, H. (2007), The Professional Success of Higher Education Graduates. European Journal of Education, 42: 35–57.doi: 10.1111/j.1465-3435. 2007.00286.x

Schomburg, H., 2003. Handbook for Graduate Tracer Studies. Kassel, Germany. (Available at: http://www.uni kassel.de/wz1/proj/edwork/mat/hand book _v2.pdf)

Sofia Asonitou (2004) Employability Skills in Higher Education and The Case of Greece, International Conference on Strategic innovation Marketing, IC-SIM, September1-4, 2014, Madrid Spain, Procedia-Social and Behavioral Science 175 (2015) 283-290

Suangsuwan, J. (1998). The use of cross-impact analysis for developing elementary students' achievement: A case study of bandorn –khoi "kongsom-oad-ras-bam-rung" school. (Unpublished doctoral dissertation). Chulalongkorn University, Thailand.

Strategic Plan for the Development of TVET from 2006 up to 2020 April 2007)

SNSEDP, Seventh National Socio-Economic Development Plan (2011-2015), page 12

Schuller, T. & Field, J. 998, Social Capital, Human Capital and the Learning Society, *International Journal of Lifelong Education*, Vol.17, No.4, pp.226-235.

Schultz, T. W. 1961, Investment in Human Capital. *American Economic Review,* Vol.51, No.5, pp.1–17.

Stone, W., Grey, M. & Hughes, J.2003, *Social Capital at Work: How Family, Friends and Civic Ties Relate to Labor Market Outcomes,* Australian Institute of Family

Studies, Melbourne, Vic.

Stone, W. & Hughes, J. 2002, *Social Capital: Empirical Meaning and Measurement Validity*, Research Paper No. 27, Australian Institute of Family Studies, Melbourne, Vic.

Spellerberg, A. 2001, *Framework for the Measurement of Social Capital in New Zealand*, Research and Analytical Report No.14, Statistics New Zealand, Wellington, N.Z.

Sunstein, C.R. 1997, *Free Markets and Social Justice* Oxford University Press, New York.

Shivpuri, S., & Kim, B. (2004). Do employers and colleges see eye-to-eye? College student development and assessment. *NACE Journal*, *65*(1), 37-44

Taylor P., & Fransman J. 2004, *Learning and Teaching Participation: Exploring the Role of Higher Learning Institutions as Agents of Development and Social Change*, Working Paper 219, Institute of Development Studies, University of Sussex, Brighton, U.K.

Taba, H. (1962) Curriculum Development: Theory and practice, New York: Harcourt Brace and World.

Tailak, J.(1998). Economics of vocationalization: A review of the evidence. Canadian and International Education, 17(1), 227-236.

Teichler, U. & Kehm, B.M. 1995, Towards a New Understanding Between Higher Education and Employment, *European Journal of Education*, Vol.30, No.2, pp.115-132.

Thomas Bohlmann.(2013) Current situation of the TVET sector in Lao PDR with special emphasis on the education of vocational teachers, Faculty of Engineering, National University of Laos

Tight, M. 1998, Lifelong Learning: Opportunity or Compulsion?. *British Journal of Educational Studies*, Vol.46, No.3, pp.251-263.

Tranch, B. & Quinn, G. 2003, Online News and Changing Models of Journalism, *Irish Communications Review*, Vol.9, Available online at http:/ /www .icr.dit.ie/.

UNESCO, (2013), Policy reviews of Technical Vocational Education and Training (TVET) in Lao PDR

UNESCO, (2009) the Worldwide Resource Pack for Capacity Building in Curriculum Development, an IBE Project

Vitouladiti, Ou. (2013) The performance of the tourism service personnel as a determinant for the evaluation of the overall experience, Marketing, Management and Planning implications, In Proceedings of the 5th International Scientific Conference, Tourism Trends and Advances in the 21st Century, 30 May-2 June, Rhodes, Paper 45, ISBN 978-960-89485-4-9

Vitouladiti, Ou.(2014) Combining primary destination image with acquired experience for effective Marketing in tourism and tour operating, South-Eastern Europe Journal of Economics, 12 (1), 107-133.

Verhaest, D. and Omey, E. (2006). The Impact of Overeducation and its Measurement. *Social Indicators Research*, 77(3):419–448.

Veen, W. & OECD, 2003, *Homo Zappiens and the Need for New Education Systems.* Availabale at http://www.oecd.org/dataoecd/0/5/38360892.pdf.

Vongpaphanh Manivong 2007, The Economic Potential for Smallholder Rubber Production in Northern Laos, Master thesis; School of Natural and Rural Systems management, The University of Queensland

Wong, M., & Hamali, J. (2006). Higher Education and Employment in Malaysia. International Journal of Business and Society, 7 (1), 102- 119

Wengraf, T. (2001). *Qualitative research interviewing: Biographic narrative and semi-structured methods*. Sage.

Winch, C. 2000,*Education, Work and Social Capital: Towards a New conception of Vocational Education*, Routledge, London, U.K.

Washer, P. (2007) Revisiting key skills: a practical framework for higher education. *Quality in Higher Education*, *13*, 57–67.

West, P. 2000, *Organizational Learning in the Automotive Sector*, Routledge, London, U.K.

Welch, Anthony R. (Ed). (2000). Third World Education: Quality and Equality. New York, Garland.

Wolf, A., 2002. Does education eater? Myths about Education and Economic Growth, Penguin, London

Weert, T.J. van 2004, New Higher Education for Lifelong Learning, in *Lifelong Learning in the Digital Age,* International Federation for Information Processing, Vol. 137, pp. 51-66, Springer, Boston, MA.

Wongwanich, S.(2005). Needs assessment research. Bangkok: Chulalongkorn University Press.

World Bank (1998), *The Initiative on Defining, Monitoring and Measuring Social Capital: Text of Proposals Approved for Funding*, Report No. 29280, and Author, Washington, D.C.

Woodall, J., & Winstanley, D. (1998) Management development: Strategy and practice. Oxford, Paul Chapman

Woolcock, M. 2000. Managing Risk and Opportunity in Developing Countries: The Role of Social Capital, in G. Ranis (ed.), *The Dimensions of Development*, Center for International and Area Studies, Yale University, New Haven, CT.

Woolcock, M. 2001, The Place of Social Capital in Understanding Social and Economic Outcomes. *ISUMA- Canadian Journal of Policy Research*, Vol.2, No.1, pp.12-22.

Wilkinson, R.G. 1996, *Unhealthy Societies: The Afflictions of Inequality*, Routledge. London.

Zymelman, M. (1976). The economic evaluation of vocational training programs; Baltimore: Johns Hopkins University Press

Yorke, M. 2003a Formative Assessment in Higher Education: Moves Towards Theory and the Enhancement of Pedagogic Practice, *Higher Education*, Vol.45, No.4, pp. 477-501.

Yokoyama, S. 2002. The Livelihood System of the Population of a Mountainous Area in Northern Laos, (Official Research Report of Asian Studies Program in fiscal year 2000), Vientiane: National University of Laos

Yogeswaran, K. (2005). Regional Conference on Investment Climate and Competitiveness in East Asia (pp. 31-41). Economic Plan Unit Malaysia.

Yusof, K. M. (2004). Problem-based Learning: A Universities Teknologi Malaysia Experience. Paper presented in Seminar On Problem Based Learning at KUTTHO.

Zaharim, A., Yusoff, Y.M., Omar, M.Z; Mohammed, A., Muhammad, N. (2009a). Engineering employability skills required by employers in Asia. *Proceedings*

of the Asia 6th WSEAS, International Conference on Engineering Education Rodos, Greece, July 22-24, 2009 pp.195-201.

Zaharim, A., Yusoff, Y.M., Muhammed, A., Omar, M. Z., Muhammad, N. and Mustapha R. (2009b). Practical Framework of Employability, skill for Engineering Graduate in Malaysia. IEE EDUCON Education Engineering 2010 – the Future of Global Learning Engineering Education, Madrid Spain on April 14-16, 2010, pp.921 – 927.

APPENDIX

Appendix1 Questionnaire for Graduated students

Pat 1: Personal Information

1. Sex:

   ☐ Male ☐ Female

2. Age:……..

3. Civil status

   ☐Single ☐married ☐separated ☐widow(er)

4. If married, please write the number of

   children……

5. Present

   Address……..……..

6. Current employment status

   ☐ Employed ☐unemployed ☐ Finding work ☐self-employed

   ☐other…….

7. If unemployed, please tell reason

   why…….

8. If working, workplace.

   ☐Government ☐state enterprise ☐private ☐self-employed

   ☐Other…….

9. What's your job? .....

Part II: Education Background

10. Education level before study at TVC

    ☐Primary school ☐secondary school☐ upper-secondary school

11. Education level graduated from TVC

    ☐Certificated ☐medium Level ☐ high Diploma ☐ Bachelor

12. Graduation Year.

……

13. Institution/ School

graduation…….

14. Branch……

☐Electricity ☐Construction ☐Automotive technology

Part III: Social Status

15. Accommodation

☐Living with parent ☐living with relative ☐rent room with friend

☐rent the room alone ☐ factory dormitory ☐ own house

16. Income per month/ monthly earning..…….

…… ……

17. Expenditure per

week…….

Part IV: Employment Situation

18. Did you immediately get a job after graduation? ☐Yes

☐No

19. Presently, Is it your first job after your graduated? ☐ Yes ☐No

20. Is your job related to vocational training? ☐ Yes ☐No

21. How long did you spend finding this Job?

☐1-3 months ☐3-6 months ☐6 months -1 year ☐Over 1-1.6 years

☐others……..

22. Did you face any problem while finding a job? ☐Yes ☐No

2.1.1 if yes, please check in boxes

☐ Very high ☐high ☐ moderate ☐Poor ☐ Very Poor

23. What is your current responsibility/ position? .....

24. What type is your current job?

☐ Temporary ☐casual ☐regular/ permanent ☐contractual ☐other…

25. Usage of Skill or Knowledge acquired from TVC: were you able to apply it in your work

☐ Very high ☐high ☐ moderate ☐Poor ☐ Very Poor

26. Do think that your vocational skill acquired made a linkable impact to your current job?

☐ Very high ☐high ☐ moderate ☐Poor ☐ Very Poor

27. Is your vocational skill acquired from TVC related to current employment?

☐ Very high ☐high ☐ moderate ☐Poor ☐ Very Poor

28. What type of teaching-learning method do your prefer and is useful for your job please tell……..

29. For your current Job, Have you learnt this skill before in school?

☐Yes ☐No

30. Before starting work, did you receive any training form the employer?

☐Yes ☐No

Part V: Skill improvement

31. Presently, have you studies any other subject for improving your skill for work?

☐Yes ☐No

32. For your current work, do you need additional study to improve your skill?

☐Yes ☐No

33. If yes, please write down…….

34. Did you want to study your old graduated subject of study?

☐Yes ☐No

35. Do you want to study a new subject? ☐Yes ☐No

35.1 If yes, please write down reason……

35.2 what subject? ……..……

36. Do you agree that TVC curriculum is relevant and appropriate to the current job demand?

☐ Very high ☐high ☐ moderate ☐Poor ☐ Very Poor

37. Does TVC curriculum need urgent improvement?

☐ Very high ☐high ☐ moderate ☐Poor ☐ Very Poor

38. Please consider the teaching quality in TVC College by classified between theoretical and Practical?

38.1. Theoretical

☐ Very high ☐high ☐ moderate ☐Poor ☐ Very Poor

38.2. Practical

☐ Very high ☐high ☐ moderate ☐Poor ☐ Very Poor

39. In your opinion, what is the highest need of improvement?

☐ Learning materials (books, etc.) ☐Teachers' didactic qualification

☐Equipment's (machines, tools, etc.) ☐ Internship / practical in school

☐Facilities (class rooms, library etc.) ☐Teachers' practical teaching skill in his/her field

☐ Internship / practical in-company training ☐other……

Thank you very much for your kindly cooperation!

ແບບສອບຖາມນັກສຶກສາ

ຂ້າພະເຈົ້າ ທ. ແສງສຸລິຍາ ຈັນທະນາຄອນ ພະນັກງານ ຫ້ອງການ ຄົ້ນຄ້ວາວິທຍາສາດ ແລະ ບໍລິການວິຊາການ ມະຫາວິທະຍາ ໄລຈຳປາສັກ, ປະຈຸບັນແມ່ນເປັນນັກສຶກສາຈາກ ມະຫາວິທະຍາໄລໂກເບ, ປະເທດຍີປຸ່ນ ເຊິ່ງປະຈຸບັນກຳລັງຂຽນບົດປະລິນຍານິພົນ ພາຍໃຕ້ຫົວຂໍ້ *“* ***ຄຸນະພາບ ແລະ ຄວາມ ສອດຄ່ອງ ຂອງ ວິທະຍາໄລ ອາຊີວະສຶກສາ ໃນ ສປປ ລາວ***”, ສະນັ້ນ ຈຶ່ງຂໍຄວາມຮ່ວມມືຈາກທ່ານ ແລະ ຫວັງຢ່າງຍິ່ງວ່າທ່ານຈະຊ່ວຍຕອບແບບສອບຖາມລຸ່ມນີ້ຕາມສະພາບຄວາມເປັນຈິງທີ່ສຸດ. ສຳລັບຂໍ້ມູນທີ່ໄດ້ຈາກການສຳຫຼວດຄັ້ງນີ້ ແມ່ນຈະໃຊ້ເຮັດການຄົ້ນຄວ້າວິໄຈທາງດ້ານວິຊາການໂດຍສະເພາະແມ່ນຈະໃຊ້ເຂົ້າໃນການຂຽນບົດໂຄງການຂຽນບົດປະລິນຍານິພົນ ຂອງການສຶກສາເທົ່ານັ້ນ. ທຸກໆຂໍ້ຄວາມທີ່ທ່ານຕອບຈະຖືກເກັບຮັກສາໄວ້ເປັນຄວາມລັບ ແລະ ຂໍຮັບ ປະກັນວ່າຈະບໍ່ມີຜົນກະທົບທາງລົບໃດໆ ຕໍ່ຕົວທ່ານ ແຕ່ຈະເປັນການຊ່ວຍເຫຼືອເຮັດໃຫ້ບົດຂອງພວກຂ້າພະເຈົ້າປະ ສົບຜົນສຳເລັດ.

ສຳລັບວິທີການຕອບແບບສອບຖາມແມ່ນກະລຸນາໃຊ້ເຄື່ອງໝາຍຕິກ (✓) ເອົາຄຳຕອບທີ່ເໝາະສົມ ແລະ ຂຽນຄຳຕອບທີ່ເປັນຄວາມຈິ່ງທີ່ສຸດໃສ່ບ່ອນຫວ່າງ (.....) ທີ່ກຳນົດໄວ້.

ແບບສອບຖາມ			ຄຳຕອບ
I. ຂໍ້ມູນທົ່ວໄປ			
Q1	ເພດ		
		1. ຍິງ	
		2. ຊາຍ	
Q2	ອາຍຸ Age	ລະບຸ.....ປີ	
Q3	ສະຖານະພາບ		
		1. ໂສດ	
		2. ແຕ່ງງານ	

		3. ມ້າຍ	
		4. ຢ່າຮ້າງ	
Q4	ຖ້າແຕ່ງງານ, ມີລູກຈັກຄົນ number of	ລະບຸ……..	
Q5	ທີ່ຢູ່ປະຈຸບັນ	ລະບຸ……..	
			1. ຕົວເມືອງ
			2.ຊົນນະບົດ
			3. ຕ່າງແຂວງ
Q6	ສະຖານະພາບປະຈຸບັນ Current	1. ເຮັດວຽກ	
		2. ວ່າງງານ	
Q7	ຖ້າວ່າງງານບອກສາຍເຫດ	ລະບຸ……..	
			1.ກຳລັງຊອກວຽກ
			2.ຮຽນຕໍ່
			3.ລໍຖ້າວຽກ(ສະໝັກແລ້ວ)
			4.ບໍ່ທັນສະໝັກ (ບໍ່ໄດ້ຊອກ)
Q8	ຖ້າເຮັດວຽກ, ໃຫ້ບອກເຮັດນຳພາກສ່ວນໃດ		
		1. ລັດ	
		2. ລັດວິຊາຫາກິດ	
		3. ເອກະຊົນ	
		4. ສ່ວນຕົວ	
		5. ອື່ນໆ…..	
Q9	ອາຊີບຫັຍໆ	ລະບຸ……..	
			1.ຄູສອນ
			2.ພະນັກງານວິຊາການ(ລັດ)

			3.ພະນັກງານວິຊາ ການ(ລັດວິຊາຫາກິດ ແລະ ເອກະຊົນ)
			4.ຄ້າຂ້າຍ (ວຽກສອ່ນຕົວ, ຮ້ານສ້ອມແປງ.....)
2. ການສຶກສາ			
Q10	ລະດັບການສຶກສາກ່ອນມາຮຽນອາຊີວະ		
		1. ປະຖົມ	
		2. ມັດທະຍົມຕົ້ນ	
		3. ມັດທະຍົມປາຍ	
Q11	ລະດັບການສຶກສາທີ່ຈົບຈາກອາຊີວະ		
		1. ຊັ້ນຕົ້ນ	
		2. ຊັ້ນກາງ	
		3. ຊັ້ນສູງ	
		4. ປະລິນຍາຕຼີ	
		5. ອື່ນໆ ທີ່ບໍ່ແມ່ນອະຊີວະ	
Q12	ປີຈົບ	ລະບຸ.....ປີ	
			1.2007-08
			2.2008-09
			3.2009-2010
			4.2010-2011
			5.2011-2012
			6.2012-2013
Q13	ຈົບຈາກສະຖາບັນໃດ,ໂຮງຮຽນໃດ		
			1.ວິທະຍາໄລເຕັກອາ ຊີວະແຂວງວຽງຈັນ

			2.ວິທະຍາໄລ ເຕັກນິກອາຊີວະ ແຂວງຈໍາ ປາສັກ
Q14	ທ່ານຈົບສາຂາໃດ		
		1. ກໍ່ສ້າງ	
		2. ໄຟຟ້າ	
		3. ກົນຈັກ	
3.ສະຖານະພາບ			
Q15	ສະພາບທີ່ຢູ່ອາໃສ		
		1. ຢູ່ນໍາພໍ່ແມ່	
		2. ຢູ່ນໍາພີ່ນ້ອງ	
		3. ເຊົ່າຫ້ອງຢູ່ກັບໝູ່	
		4. ເຊົ່າຫ້ອງຢູ່ຄົນດຽວ	
		5.ຢູ່ຫໍພັກຄົນງານ	
		6. ອື່ນໆ.....	
			ເຮືອນຕົນເອງ
Q16	ລາຍຮັບຕໍ່ເດືອນ	ລະບຸ……..	
Q17	ລາຍຈ່າຍຕໍ່ອາທິດ	ລະບຸ……..	
4. ສະພາບການ ຈ້າງງານ			
Q18	ທ່ານໄດ້ເຮັດວຽກທັນທີທີ່ຮຽນຈົບເລີຍບໍ		
		1. ໄດ້ເລີຍ	
		2. ບໍ່	
Q19	ວຽກປະຈຸບັນເປັນວຽກທໍາອິດຂອງທ່ານຫຼັງຈາກ ຮຽນຈົບບໍ		
		1. ແມ່ນ	
		2. ບໍ່	

Q20	ວຽກຂອງທ່ານແມ່ນວຽກທີ່ກ່ຽວຂ້ອງກັບອະຊີ ອະ		
	?	1.ກ່ຽວຂ້ອງ	
		2.ບໍ່ກ່ຽວຂ້ອງ	
Q21	ທ່ານໄດ້ໃຊ້ເວລາດົນປານໃດໃນການຊອກວຽກ		
		1. 1-3 ເດືອນ	
		2. 3-6 ເດືອນ	
		3. 6-1 ປີ	
		4. 1 -1.5 ປີ ຂຶ້ນໄປ	
		5. ຫຼາຍກວ່າ, ລະບຸ.....	
Q22	ທ່ານໄດ້ພົບບັນຫາໃນການຊອກວຽກບໍ່ນ້ອຍ, ຫຼາຍປານໃດ		
		1. ນ້ອຍທີ່ສຸດ	
	please ticak.....	2. ນ້ອຍ	
		3. ບາງພາກສ່ວນ	
		4. ຫຼາຍ	
		5. ຫຼາຍທີ່ສຸດ	
Q23	ໜ້າທີຮັບຜິດຊອບຂອງທ່ານແມ່ນຫຍັງ	ລະບຸ.....	
			1.ຫ້ອໜ້າໜ່ວຍງານ
			2.ພະນັກງານທົ່ວໄປ
			3.ພະນັກງານເຕັກນິກ (ສະເພາະທາງ)
			4.ເຈົ້!ຂອງຮ້ານ(ຖ້ລະ ກິດສ່ວນຕົວ, ຮ້ານ ສ້ອມແປງ....)
Q24	ວຽກປະຈຸບັນເປັນວຽກປະເພດໃດ		5. ອື່ນໆ.....

		1. ຊໍ່ຄາວ	
		2. ບໍ່ທາງການ	
		3. ຖາວອນ	
		4. ສັນຍາຈ້າງເປັນໄລຍະ	
		5. ອື່ນໆ.....	
Q25	ທ່ານໄດ້ໃຊ້ຄວາມຮູ້ທີ່ຮຽນມາເຂົ້າໃນການເຮັດວຽກປະຈຸບັນ		
		1. ນ້ອຍທີ່ສຸດ	
		2. ນ້ອຍ	
		3. ບາງພາກສ່ວນ	
		4. ຫຼາຍ	
		5. ຫຼາຍທີ່ສຸດ	
Q26	ທ່ານຄິດວິຊີບທີ່ທ່ານຮຽນມາແມ່ນມີຜົນກະທົບຕໍ່ກັບວຽກປະຈຸບັນຂອງທ່ານຫຼາຍປານໃດ		
		1. ນ້ອຍທີ່ສຸດ	
		2. ນ້ອຍ	
		3. ບາງພາກສ່ວນ	
		4. ຫຼາຍ	
		5. ຫຼາຍທີ່ສຸດ	
Q27	ທ່ານຄິດວ່າວິຊີບທີ່ທ່ານຮຽນມາກ່ຽວຂ້ອງກັບອາຊີບການຈ້າງງານໃນປະຈຸບັນຫຼາຍປານໃດ		
		1. ນ້ອຍທີ່ສຸດ	
		2. ນ້ອຍ	
		3. ບາງພາກສ່ວນ	
		4. ຫຼາຍ	
		5. ຫຼາຍທີ່ສຸດ	

Q28	ການຮຽນການສອນ ແບບໃດທີ່ທ່ານຄິດວ່າ ເປັນປະໂຫຍດ ແລະ ສຳຄັນທີ່ສຸດ ຕໍ່ກັບວຽກ	ລະບຸ.....	
			1.ເຝິກງານຕົວຈິງໃນຊົ່ວໂມງ ຮຽນ(ຄູນຳພາ)
			2.ເຝິກງານຕົວຈິງພາກສະໜາມ (ລົງເຝິກງານ)
Q29	ວຽກປະຈຸບັນທີ່ທ່ານກຳລັງເຮັດ, ທ່ານໄດ້ເຄີຍຮຽນມາກ່ອນບໍ່ໃນຫຼັກສູດອະຊີວະສຶກສາ		
		1. ເຄີຍຮຽນ	
		2. ບໍ່ເຄີຍຮຽນ	
Q30	ກ່ອນການເຮັດວຽກ, ທ່ານໄດ້ຮັບການຝຶກອົບຮົມຈາກເຈົ້າຂອງ ຫຼືລະກິດບໍ່		
		1. ເຄີຍຮຽນ	
		2. ບໍ່ເຄີຍຮຽນ	
ການປັບປຸງ			
Q31	ປະຈຸບັນທ່ານໄດ້ຮຽນຫຍັງເພີ່ມບໍ		
		1. ຮຽນ	
		2. ບໍ່ໄດ້ຮຽນ	
Q32	ສໍລັບໜ້າວຽກປະຈຸບັນ,ທ່ານຕ້ອງການຢາກຮຽນເພື່ອປັບປຸງສີມືເພີ່ມຕື່ມບໍ່		
		1. ຕ້ອງການ	
		2. ບໍ່ຕ້ອງການ	
Q33	ຖ້າຕ້ອງການ, ທ່ານຄິດວ່າຢາກຮຽນເສີ່ມເລື້ອງໃດທາງດ້ານໃດ	ລະບຸ.....	

			1.ເຕັກນິກວິຊາ ສະເພາະຄວາມສຳ ນານງານ
			2. ທາງດ້ານທິສະດີ
			3.ດ້ານການບໍລິຫານ. 4. ອື່ນໆ.....
Q34	ທ່ານຕ້ອງການສຶກສາຕໍ່ວິຊາສະເພາະເດີມທີ່ ຮຽນມາບໍ		
		1. ບໍ່	
		2. ຮຽນ	
Q35	ທ່ານຕ້ອງການຮຽນວິຊາສະເພາະອັນໃໝ່ບໍ		
		1. ບໍ່ຕ້ອງການ	
		2. ຕ້ອງການຮຽນ	
Q35.1	ຖ້າຕ້ອງການຮຽນ, ຍ້ອນຫຍັງ	ລະບຸ…….……	
			1.ເພື່ອຫາໂອກາດ ຊອກຫາວຽກໃໝ່ທີ່ ດີກວ່າ ແລະຕົວເອງ ໝັກ
			2.ເຮັດວຽກບໍກົງ ກັບຮຽນມາ
			3.ຍົກລະດັບ
Q35.2	ຮຽນວິຊາຫຍັງ	ລະບຸ……..…	
			1.ໄຟ້າເຕັກນິກ
			2.ບັນຊີ-ການເງິນ
			3.ການເງິນ-ການ ທະນາຄານ

			4.ບໍ່ລິຫານຖ້ລະກິດ
Q36	ທ່ານຄິດວ່າຫຼັກສູດໃນການສອນຢູ່ອະຊີວະສຶກສາ ພຽງພໍ,ເໝາະສົມແລະສອດຄ່ອງກັບການເຮັດ ວຽກໃນປະຈຸບັນຫຼາຍປານໃດ		
		1. ນ້ອຍທີ່ສຸດ	
		2. ນ້ອຍ	
		3. ບາງພາກສ່ວນ	
		4. ຫຼາຍ	
		5. ຫຼາຍທີ່ສຸດ	
Q37	ທ່ານຄິດວ່າຫຼັກສູດການຮຽນ-ສອນຂອງໂຮງຮຽນ ອາຊີວະຄວນຕ້ອງໄດ້ຮັບການປັບປຸງເພື່ອໃຫ້ ສອດຄອງກັບສະພາບຄາມຕ້ອງການຂອງປະຈຸ ບັນບໍ		
		1. ນ້ອຍທີ່ສຸດ	
		2. ນ້ອຍ	
		3. ປານກາງ	
		4. ຫຼາຍ	
		5. ຫຼາຍທີ່ສຸດ	
Q38	ກະລຸນາສະແດງຄວາມຄິດວ່າເຫັນເພື່ອສະແດງ ໃຫ້ເຫັນຄຸນະພາບຂອງການສອນຂອງໂຮງຮຽນ ອາຊີວະໂດຍການແຍກເປັນພາກທິດສະດີ ແລະ ພາກເຝິກຫັດ		
Q38.1	ພາກທິດສະດີ		
		1. ນ້ອຍທີ່ສຸດ	
		2. ນ້ອຍ	
		3. ປານກາງ	
		4. ດີ	

		5. ດີທີ່ສຸດ	
Q38.2	ພາກເຝິກຫັດ		
		1. ນ້ອຍທີ່ສຸດ	
		2. ນ້ອຍ	
		3. ປານກາງ	
		4. ດີ	
		5. ດີທີ່ສຸດ	
Q39	ໃນຄວາມຄິດເຫັນຂອງທ່ານ, ທ່ານຄິດວ່າ ໂຮງຮຽນອາຊີວະຄວນຈະປັບປຸງດ້ານໃດສຳຄັນ ຫຼາຍທີ່ສຸດ		
		1. ອຸປະກອນການຮຽນ(ປຶ້ມ....)	
		2. ເຄື່ອງມື(ເຄື່ອງຈັກ,ອຸປະກອນ.....)	
		3. ສິ່ງອຳນວຍຄວາມສະດວກ(ຫ້ອງຮຽນ , ຫສະໝຸດ.....)	
		4. ການເຝິກງານໃນໂຮງງານ	
		5.ລະດັບຄວາມຮູ້ຄວາມສາມາດຂອງ ຄູ(ວຸດການສຶກສາ)	
		6.ທັກສະທາງທິດສະດີຂອງຄູໃນວິຊາທີ ສອນ	
		7.ທັກສະທາງການເຝິກຫັດຂອງຄູໃນວິຊາ ທີ່ສອນ	
		8.ລະບຸ.....	

Appendix 2 Questionnaire for Employers

1. Type of business
2. Number of total employees
3. Employees that graduated from TVC
4. Laborer demand from TVC graduated by year
5. Criteria employees selection
6. Further Skill improvement of TVC graduates
7. How much do you agree to the following statements regarding the training quality at

   TVC College

   1- Strongly disagree 2- disagree 3- somewhat agree 4- agree 5- strongly agree

Contents	1	2	3	4	5
Satisfied with the quality of training					
Teaching staff of the vocational training institute was qualified and up to the training requirements					
The vocational training institute is a reputable training institution					
The curriculum subjects are relevant for present employment					
Practical courses					
Theoretical courses					

8. In your opinion, to what extent is the following statement that you are satisfied with the competency and skills of TVC graduates:

1 – Very Poor 2 – Poor 3 – moderate 4 – high 5 – very high

Contents	1	2	3	4	5
Working capacity / quality					
Communication skills					
Information technology skills					
Problem-solving skills/tactic					
Entrepreneurial skill					
Critical thinking skills					
Human relations skills					
Others Specify:					

9. In your opinion, what is the highest need of improvement?

……

……

……

……

10. Other opinions regarding TVC curriculum development

……

……

……

……

Thank you very much for your kind cooperation!

ແບບສອບຖາມສຳລັບນາຍຈ້າງ

ຂ້າພະເຈົ້າ ທ. ແສງສຸລິຍາ ຈັນທະນາຄອນ ພະນັກງານຫ້ອງການ ຄົ້ນຄ້ວາວິທຍາສາດ ແລະ ບໍລິການວິຊາ ການ ມະຫາວິທະຍາ ໄລຈຳປາສັກ, ປະຈຸບັນແມ່ນເປັນນັກສຶກສາຈາກ ມະຫາວິທະຍາໄລໂກເບ, ປະເທດຍີປຸ່ນ ເຊິ່ງປະຈຸບັນກຳລັງຂຽນບົດປະລິນຍານິພົນ ພາຍໃຕ້ຫົວຂໍ້ *“* ***ຄຸນະພາບ ແລະ ຄວາມ ສອດຄ່ອງ ຂອງ ວິທະຍາໄລ ອາຊີວະສຶກສາ ໃນ ສປປ ລາວ***”, ສະນັ້ນ ຈຶ່ງຂໍຄວາມຮ່ວມມືຈາກທ່ານ ແລະ ຫວັງຢ່າງຍິ່ງວ່າທ່ານຈະຊ່ວຍຕອບແບບສອບຖາມລຸ່ມນີ້ຕາມສະພາບຄວາມເປັນຈິງທີ່ສຸດ. ສຳລັບຂໍ້ມູນທີ່ ໄດ້ຈາກການສຳຫຼວດຄັ້ງນີ້ ແມ່ນຈະໃຊ້ເຮັດການຄົ້ນຄວ້າວິໄຈທາງດ້ານວິຊາການໂດຍສະເພາະແມ່ນຈະໃຊ້ ເຂົ້າໃນການຂຽນບົດໂຄງການຂຽນບົດປະລິນຍານິພົນ ຂອງການສຶກສາເທົ່ານັ້ນ. ທຸກໆຂໍ້ຄວາມທີ່ທ່ານ ຕອບຈະຖືກເກັບຮັກສາໄວ້ເປັນຄວາມລັບ ແລະ ຂໍຮັບ ປະກັນວ່າຈະບໍ່ມີຜົນກະທົບທາງລົບໃດໆ ຕໍ່ຕົວ ທ່ານ ແຕ່ຈະເປັນການຊ່ວຍເຫຼືອເຮັດໃຫ້ບົດຂອງພວກຂ້າພະເຈົ້າປະ ສົບຜົນສຳເລັດ.

ສຳລັບວິທີການຕອບແບບສອບຖາມແມ່ນກະລຸນາໃຊ້ເຄື່ອງໝາຍຕິກ (✓) ເອົາຄຳຕອບທີ່ເໝາະສົມ ແລະ ຂຽນຄຳຕອບທີ່ເປັນຄວາມຈິ່ງທີ່ສຸດໃສ່ບ່ອນຫວ່າງ (.....) ທີ່ກຳນົດໄວ້.

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1. ປະເພດທຸລະກິດ……..

2. ຈຳນວນພະນັກງານທັງຫມົດ……..…….

3. ພະນັກງານທີ່ຈົບການສຶກສາຈາກ TVC……...…….

4. ຄວາມຕ້ອງການຂອງຜູ້ອອກແຮງງານຈາກ TVC ຈົບໃນແຕ່ລະປີ……

5. ການຄັດເລືອກພະນັກງານມາດຕະຖານ……..

6. ການປັບປຸງທັກສະຂອງນັກຮຽນຈົບຈາກ TVC……..……

7. ທ່ານເຫັນດີກັບຄຳເວົ້າຕໍ່ໄປນີ້ກ່ຽວກັບຄຸນນະພາບຂອງການຝຶກອົບຮົມຂອງວິທະຍາໄລ ອາຊີວະ

1- ຫຼາຍທີ່ສຸດ 2- ຫຼາຍ 3- ປານກາງ 4- ໜ້ອຍ 5- ໜ້ອຍທີ່ສຸດ

ເນື້ອໃນ	1	2	3	4	5
ພໍໃຈກັບຄຸນນະພາບຂອງການຝຶກອົບຮົມ					
ພະນັກງານຄູນສອນຂອງສະຖາບັນຝຶກອົບຮົມດ້ານວິຊາຊີບມີຄຸນສົມບັດ ແລະ ຜ່ານມາດຕະຖານຄວາມຕ້ອງການການຝຶກອົບຮົມ					
ສະຖາບັນການຝຶກອົບຮົມວິຊາຊີບແມ່ນສະຖາບັນການຝຶກອົບຮົມຊື່ສຽງ					
ຫຼັກສູດແມ່ນມີຄວາມກ່ຽວຂ້ອງສອດຄ່ອງກັບການຈ້າງງານໃນ ປະຈຸບັນ					
ຫຼັດສູການເຝິກຫັດ					
ທິດສະດີ					

8. ໃນຄວາມຄິດເຫັນຂອງທ່ານ, ທ່ານມີຄວາມເພິ່ງພໍໃຈກັບຄວາມສາມາດຂອງນັກຮຽນທີ່ຈົບຈາກ TVC ແນວໃດ

1- ຫຼາຍທີ່ສຸດ 2- ຫຼາຍ 3- ປານກາງ 4- ໜ້ອຍ 5- ໜ້ອຍທີ່ສຸດ

ເນື້ອໃນ	1	2	3	4	5
ຄວາມສາມາດໃນການເຮັດວຽກ, ຄຸນນະພາບ					
ທັກສະໃນການຕິດຕໍ່ພົວພັນ					
ທັກສະດ້ານເຕັກໂນໂລຢີ					
ທັກສະການແກ້ໄຂບັນຫາ / tactic					
ທັກສະໃນການປະກອບການ					
ທັກສະແນວຄິດວິເຄາະວິຈານ					
ມະນຸດສຳພັນ					
ອື່ນໆ:					

1. ໃນຄວາມຄິດເຫັນຂອງທ່ານ, ຄວາມຕ້ອງການທີ່ສຸດຂອງການປັບປຸງແມ່ນຫຍັງ?

   ……

   ……

   ……

   ……

10. ຄວາມຄິດເຫັນອື່ນກ່ຽວກັບການພັດທະນາຫຼັກສູດຂອງ TVC

    ……

    ……

    ……

ຂອບໃຈຫຼາຍໆທ່ານສຳລັບການຮ່ວມມືຂອງທ່ານ!

Appendix 3 Administrators and Teacher's Questionnaire

Pat 1: Personal Information

1. Sex:

☐ Male ☐ Female

2. Marital Status

☐ Single ☐ Married ☐ widow

3. Age:

☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60…..

4. Education Level:

☐Doctoral

☐Master

☐ Bachelor

☐ Diploma

☐ Certificate

☐ Other

5. Years of experience: ……

6. Department:…….

7. What is your current position?

☐Teacher, ☐ trainer, ☐ head of department, ☐ deputy, ☐ other

Part II General Situation of College

8. Have you participate to any training?.....
9. What difficulties/obstacles are facing on your teaching process?
10. Does TVC provide sufficient equipment for your teaching process?
11. Does TVC have a sufficient budget?

12. Please describing the issue on the implementation on management and Administration of the quality of your TVC
13. Please describing the way how to resolve the problem of the implementation on management and administration of the quality for your TVC
14. Do think that your college provides a sufficiency facility for student?
15. Do think that your college produces high quality of skill for student?
16. Are there any disadvantage and advantage of your college?
17. Others…….

Thank You Very Much for Your Information!

ແບບສອບຖາມຜູ້ບໍລິຫານ ແລະ ຄູ

ຂ້າພະເຈົ້າ ທ. ແສງສຸລິຍາ ຈັນທະນາຄອນ ພະນັກງານຫ້ອງການ ຄົ້ນຄ້ວາວິທຍາສາດ ແລະ ບໍລິການວິຊາການ ມະຫາວິທະຍາ ໄລຈຳປາສັກ, ປະຈຸບັນແມ່ນເປັນນັກສຶກສາຈາກ ມະຫາວິທະຍາໄລໂກເບ, ປະເທດຍີປຸ່ນ ເຊິ່ງປະຈຸບັນກຳລັງຂຽນບົດປະລິນຍານິພົນ ພາຍໃຕ້ຫົວຂໍ້ *“* ***ຄຸນະພາບ ແລະ ຄວາມ ສອດຄ່ອງ ຂອງ ວິທະຍາໄລ ອາຊີວະສຶກສາ ໃນ ສປປ ລາວ***”, ສະນັ້ນ ຈຶ່ງຂໍຄວາມຮ່ວມມືຈາກທ່ານ ແລະ ຫວັງຢ່າງຍິ່ງວ່າທ່ານຈະຊ່ວຍຕອບແບບສອບຖາມລຸ່ມນີ້ຕາມສະພາບຄວາມເປັນຈິງທີ່ສຸດ. ສຳລັບຂໍ້ມູນທີ່ໄດ້ຈາກການສຳຫຼວດຄັ້ງນີ້ ແມ່ນຈະໃຊ້ເຮັດການຄົ້ນຄວ້າວິໄຈທາງດ້ານວິຊາການໂດຍສະເພາະແມ່ນຈະໃຊ້ເຂົ້າໃນການຂຽນບົດໂຄງການຂຽນບົດປະລິນຍານິພົນ ຂອງການສຶກສາເທົ່ານັ້ນ. ທຸກໆຂໍ້ຄວາມທີ່ທ່ານຕອບຈະຖືກເກັບຮັກສາໄວ້ເປັນຄວາມລັບ ແລະ ຂໍຮັບ ປະກັນວ່າຈະບໍ່ມີຜົນກະທົບທາງລົບໃດໆ ຕໍ່ຕົວທ່ານ ແຕ່ຈະເປັນການຊ່ວຍເຫຼືອເຮັດໃຫ້ບົດຂອງພວກຂ້າພະເຈົ້າປະ ສົບຜົນສຳເລັດ.

ພາດທີ 1: ຂໍ້ມູນສ່ວນຕົວ

1. ເພດ:

☐ ຊາຍ ☐ ຍິງ

2. ສະຖານະພາບ

☐ ໂສດ ☐ ແຕ່ງງານ ☐ ຢ່າຮ້າງ

3. ອາຍຸ:

☐ 20-29 ☐ 30-39 ☐ 40-49 ☐ 50-59 ☐ 60…..

4. ລະດັບການສຶກສາ:

☐ປະລິນຍາເອກ ☐ ປ ໂທ ☐ ປ ຕີ ☐ ຊັ້ນສູງ ☐ ຊັ້ນກາງ

☐ ຊັ້ນຕົ້ນ ☐ ອື່ນໆ

5. ປະສົບການຈັກປີ: ……

6. ພາກວິຊາ:…….

7. ຕຳແໜ່ງປະຈຸບັນ?

☐ຄູສອນ, ☐ ຄູເຝິກ, ☐ ຫົວໜ້າພາກ, ☐ ຮອງພາກ,

☐ ອື່ນໆ…….

ພາກ II ສະຖານະພາບທົ່ວໄປຂອງວິທະຍາໄລ

8. ທ່ານໄດ້ເຂົ້າຮ່ວມການຝຶກອົບຮົມໃດບໍ? **……**

9. ຄວາມຫຍຸ້ງຍາກ / ອຸປະສັກທີ່ກຳລັງປະເຊີນຢູ່ໃນຂະບວນການສອນຂອງທ່ານແນວໃດ?

10. TVC ມີອຸປະກອນທີ່ພຽງພໍສຳລັບການສິດສອນຂອງທ່ານບໍ?

11. TVC ມີງົບປະມານພຽງພໍບໍ?

12.ກະລຸນາອະທິບາຍບັນຫາກ່ຽວກັບການຈັດການກັບການຄຸ້ມຄອງແລະການຄຸ້ມຄອງຄຸນນະພາບຂອງ TVC ຂອງທ່ານ

13. ກະລຸນາອະທິບາຍວິທີການແກ້ໄຂບັນຫາຂອງການປະຕິບັດໃນການຄຸ້ມຄອງແລະການຄຸ້ມຄອງຄຸນນະພາບຂອງ TVC ຂອງທ່ານ

14. ທ່ານຄິດວ່າວິທະຍາໄລຂອງທ່ານໃຫ້ສະຖານທີ່ໃຫ້ນັກຮຽນມີຄວາມພໍໃຈບໍ?

15. ທ່ານຄິດວ່າວິທະຍາໄລຂອງທ່ານຜະລິດນັກສຶກສາທີ່ມີຄຸນນະພາບສູງຫຼືບໍ່?

15. ຈຸດດີ ແລະ ຈຸດອ່ອນຂອງ ວິທະຍາໄລຂອງທ່ານບໍ?

16. ອື່ນໆ…….

ຂອບໃຈຫຼາຍໆທ່ານສຳລັບການຮ່ວມມືຂອງທ່ານ!

Appendix 4 Distribution of Subject of Study divided by Semesters (Electricity at high diploma level)

Year 1 (semester I)						
Subject	Total hours	Hours/ week	Theory	Lab	Practice	Credit
Basic commerce	64	4	1	0	3	2
Drawing model 1	64	4	1	0	3	2
Security	32	2	2	0	0	2
Introduction electrician theory	48	3	1	2	0	2
Introduction electronic 1	48	3	1	2	0	2
Machine 1	64	4	1	2	0	2
Lao language	32	2	2	0	0	2
Electrician mathematic1	32	2	2	0	0	2
Politic 1	32	2	2	0	0	2
Englishlangauge1	32	2	2	0	0	2
Mathematic 1	48	3	1	2	0	2
Physic 1	48	3	1	2	0	2
Year 1 (semester II)						
Subject	Total hours	Hours/ week	Theory	Lab	Practice	Credit
Mathematic 2	64	4	1	0	3	2
Introduction electrical theory2	48	3	1	2	0	2
Installation in building1	64	4	1	0	3	2

Electrician mathematic 2	32	2	2	0	0	2
Electrical design 1	64	4	1	0	3	2
Electrical measurement 1	48	3	1	0	2	2
Physic 1	48	3	1	2	0	2
Human relation	32	2	2	0	0	2
Computer 1	64	4	1	0	3	2
Mathematic 2	32	2	2	0	0	2

Year 2 (semester I)

Subject	Total hours	Hours/ week	Theory	Lab	Practice	Credit
Electrical measurement 2	45	3	1	2	0	2
Electrical Design 2	64	4	1	0	3	2
Installation 2	64	4	1	0	3	2
Electrical machine 2	48	3	1	2	0	2
Electrician mathematic 3	32	2	2	0	0	2
Motor repair 1	48	3	1	0	2	2
Network 1	64	4	1	0	3	2
Computer 2	64	4	1	0	3	2
Political theory 2	32	2	2	0	0	2
English language 2	32	2	2	0	0	2
Organizing lab	32	2	2	0	0	2

Year 2 (semester II)

Subject	Total hours	Hours/ week	Theory	Lab	Practice	Credit
Machinery control 1	64	4	1	0	3	2
Introduction business	32	2	2	0	0	2
Computer 3	64	4	1	0	3	2
Cold system	64	4	1	0	3	2
Introduction electronic	32	2	2	0	0	2
PLC1	32	2	2	0	0	2
Factory intensive/out school	320	8		0		2

Year 3 (semester I)

Subject	Total hours	Hours/ week	Theory	Lab	Practice	Credit
Cold system 1	64	4	1	0	3	2
Network 2	64	4	1	0	3	2
Machine 3	64	4	1	0	3	2
Introduction theory dam and station	32	2	2	0	0	2
Standard technical electricity	32	2	2	0	0	2
Electrical Design 3	64	4	1	0	3	2
Machine control 2	64	4	1	0	3	2
English language 3	32	2	2	0	0	2
Political theory 3	32	2	2	0	0	2

Year 3 (semester II)

Subject	Total hours	Hours/ week	Theory	Lab	Practice	Credit
PLC 2	64	4	1	0	3	2
Cold system 2	64	4	1	0	3	2
Organizing lab	32	2	2	0	0	2
Electrician mathematic 4	32	2	2	0	0	2
Introduction theory dam and station 2	32	2	2	0	0	2
Control System	32	2	2	0	0	2
Auto CAD	64	4	2	0	3	2
Factory intensive/out school	320	8	-	-	-	2

Distribution of Subject Study of Automotive Technology at High Diploma Level

Common Subject

Subject	Theory	Lab	Practice	Credit
Mathematic	2	0	0	2
Lao Study 2	2	0	0	2
Politics	2	0	0	2
Environment	2	0	0	2
Interpersonal relationships	2	0	0	2

Core Subject

Subject	Theory	Lab	Practice	Credit
Control technic	1	0	3	2
Material Testing	1	0	3	2

Thermo-dynamic	2	0	0	2
Hydraulic	2	0	0	2
Engineering material	2	0	0	2
Small, Medium enterprise	2	0	5	2
Apply English 1	2	0	0	2
Apply English 2	1	2	0	2
Electronic	2	4	0	2
Basic of electronic	1	3	0	2
Computer using 2	1	2	0	2
Technic of production	2	0	0	2

Major Subject

Subject	Theory	Lab	Practice	Credit
Engine 3	1	0	3	2
Engine 4	1	0	3	2
Engine 4	1	0	3	2
Automotive electric	1	0	3	2
Theory of automobile	1	0	0	2
Electronic control 1	1	2	0	2
Electronic control 2	1	0	0	2
Maintenance 1	1	0	0	2
Maintenance 2	1	0	3	2
Motor tester 1	1	0	3	2
Motor tester 2	1	0	3	2
Automotive mechanic	2	0	0	2
Design	2	0	0	2

Computer add design	2	0	0	2
Fieldwork (intensive)	-	-	-	2
Final report	2	0	0	2

Elective Subjects

Subject	Theory	Lab	Practice	Credit
Power point	1	0	3	2
Driving	-	-	-	-
Welding (Gas/EL)	-	-	-	-

Curriculum for Construction (12+3). High Diploma Level

Certificate Level 5

No	Academic Year	1				2				3				Total hours	Credits
	Semesters	1		2		1		2		1		2			
	Week	20		20		20		20		20		20			
	Subjects	T	P	T	P	T	P	T	P	T	P	T	P		
General Subjects															
1	Politic	2		2										64	4
2	General English	1	3											64	2
3	Humanities	2												32	2
Total		5	3	2	0	0	0	0	0	0	0	0	0	160	8
Basic Vocational Subjects															

1	Physic & Experiments	1	3	1	3									128	4
2	English for Construction			1	3									64	2
3	SYB									2				32	2
4	Computer(Microsoft Office)			1	3	1	3							128	4
5	Building Electric Systems					2								32	2
6	Material tolerance					2								32	2
7	Geology					2								32	2
8	Design Building Systems									2				32	2
9	Land Mechanic			2										32	2
10	Construction Law									2				32	2
11	Welding	1	3											64	2
12	Writing project									1	3			64	2
13	Tool & Construction Machine	1	3											64	2
Total		3	9	5	9	7	3	0	0	7	3	0	0	736	30

Core Subjects															
1	Steel Reinforce Concrete					1	3	1	3	1	3	1	3	192	6
2	Construction Drawing Model	1	3	1	3									128	4
3	Construction Science					1	3	1	3					128	4
4	Survey & Designed							1	3	1	3			128	4
5	Environmental Engineers									1	2			48	2
6	Auto- CAD					1	3	1	3					128	4
7	Cost-Evaluation					1	2	1	2					96	4
8	Plumbing Science					1	2							48	2
9	Design Plumbing System			2										32	2
10	Roofing System (Wood & Steel)					1	3	1	3					128	4
11	Designed Structure (Wood & Steel)					1	2	1	2	2	4			192	6

12	Construction Management			1	3	1	3	1	3					192	6
13	Basic Engineering	1	2	1	2									96	4
14	Analyzed Structure						3	2	5					176	4
Total															
Selective Subjects															
1	Basic Accountancy									2				32	2
2	Statistic													0	0
Total															
Intensive & Final Report															
1	Intensive													640	4
2	National Defense and Security													0	0

Note: T= Theory, P= Practice

Construction Certificate Level 9+3

No	Academic Year	1		2		3		Total hours	Credits
	Semesters	1	2	1	2	1	2		
	Week	18	18	18	18	18	6		

	Subjects	T	P	T	P	T	P	T	P	T	P	T	P		
	General Subjects														
1	Politic	1	1	1	1	1	1	1	1	1	1	1	1	96	6
2	Lao Language	2	2	1	1	1	1	1	1	1	1	1	1	128	8
3	English Language	2		2		2		2		2		2		192	12
4	Mathematic	2		2		2		2						128	8
5	Physic	2		2										64	4
6	Chemistry	2		2										64	4
7	Sport	1		1		1								48	2
	Total	12	0	12	0	7	0	6	0	4	0	4	0	720	44
	Basic Vocational Subjects														
1	Tools & Machine	1		1										32	2
2	Mathematic for construction	1		2		2		2		2		2		176	9
3	Material tolerance					2								32	2
4	Basic Electricity	2												32	2
5	Basic Design Model	2												32	2
6	Design Model			2		3		3		2		2		192	12

7	Management									2				32	2
8	Vehicle	1		1		1		2		3		2		160	10
9	Equipment Construction	1		2										48	3
10	Security							2						32	2
Total		8	0	8	0	8	0	9	0	9	0	6	0	768	46
Selective Subjects															
1	Basic Accountancy											1	3	64	4
2	Garden Design													0	0
3	Indoor Decorated													0	0
Total														64	2
Intensive & Final Report															
1	Intensive													32	2
2	Extended Hours														
3	Projects Study														2

Note: T= Theory, P= Practice

Construction Certificate Level 2

No	Academic Year	1				2				Total hours	Credits
	Semesters	1		2		1		2			
	Weeks	20		20		20		20			
	Subjects	T	P	T	P	T	P	T	P		
	General Subjects										
1	Politic 1,2	2	2							64	4
2	Humanities										
3	English Language, 1,2,3	2		2		2				96	6
4	National Defense										
5	Lao Language	2								32	2
6	Mathematic1,2	2		2						64	4
7	Physic 1,2	2		2						64	4
	Total	10	0	6	0	2	0	0	0	320	20
	Basic Vocational Subjects										
1	Equipment for Construction	1	3							48	2
2	Basic Business			2						32	2
3	Basic Design Model	1	3							64	2
4	Computer1,2,3			1	3	1	3	1	3	192	6
5	Welding & Electricity	1	3							64	2
6	Security	2								32	2
7	Equipment & Machine	1	3							64	2
8	Tolerance Mechanism					2		2		64	4

9	Cost-evaluation 1,2					2		2		64	4
10	Auto-CAD										
11	Mathematic for Construction										
Total		6	12	3	3	5	3	5	3	640	26
Core Subjects											
1	Steel Reinforce Concrete					1	3	1	3	128	4
2	Design Model for Construction1,2					1	3	1	3	128	4
3	Plumbing System							1	2	32	2
4	House Construction 1,2,3			1	3	1	3	1	3	192	6
5	Structure, wood &steel					1	2	1	2	96	4
6	Theory for Projects							2		32	2
7	Construction Mechanism									0	0
8	Material tolerance									0	0
9	Survey & Measurement									0	0
10	Cost-Evaluation									0	0
Total		0	0	1	3	4	11	7	13	624	22
Selective Subjects											
1	Wood Making					2				32	2
2	Welding Oxygen									0	0
3	Basic Business									0	0
4	Construction Management									0	0
Total										32	2

	Intensive & Final Report										
1	In School Intensive									32	2
2	Extended hours/ 4 weeks									0	0
3	Final Report									0	0
4	Out School Intensive									0	0
5	Feedback &Activities									32	0

Note: T= Theory, P= Practice