CONTRIBUTION OF SKILL TEST IN EMPLOYMENT AMONG SHORT TERM VOCATIONAL TRAINING GRADUATES

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A Dissertation

Submitted to

School of Education

in Partial Fulfillment of the Requirements for the Degree of

Master of Philosophy in Education (Development Studies)

Kathmandu University

Dhulikhel, Nepal

February, 2017

This dissertation entitled *Contribution of Skill Test in Employment among Short Term Vocational Training Graduates* was presented by Bhanu Pandit on 8 February, 2017 and approved by

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DEDICATION

To my father Geha Raj Sharma Pandit and mother Bhagawata Pandit who had/have always provided me with thoughtful parenting.

DECLARATION

I hereby declare that this thesis has not been submitted for candidature for any other degree.

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AN ABSTRACT OF THE THESIS

Bhanu Pandit for the degree of Master of Philosophy in Education (Development Studies) Presented on 8 February, 2017

Title: *Contribution of Skill Test in Employment among Short Term Vocational Training Graduates*

Abstract Approved

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Dr. Bhawani Shankar Subedi

Thesis Supervisor

In the Technical and Vocational Education and Training (TVET) sector of Nepal, quality training and its role on employment has always been a controversial matter for many years (CTEVT, 2005). The National Skill Testing Board (NSTB) is a body that works autonomously for standardization and testing of skills to ensure a certification system in Nepal. Thus, national skill standardization, testing and certification have become an important function to enable skilled people to access better job opportunities. In this context, the research was designed to examine the contribution of vocational skills tests to the employment of graduates, particularly in pre-training, during-training and post-training employment stages.

The research applied the post-positivism paradigm following the quantitative research approach where analysis and interpretation were conducted in reference to some theories (e.g. human capital formation, structure and agency and economic growth theory). The survey was done with 305 sample graduates, who received skills training from private training institutes and attended the level-one skill test of NSTB.

The multistage random sampling method was applied using Krejcie and Morgan's (1970) formula with 95% confidence level.

This study has explained significant relationship between skill tests and employment of vocationally skilled graduates. The overall contribution of skill tests toward employment was measured through, descriptive analysis of data using Mean, Median and Mode of graduates' preferences rated in the 5-scale Likert scale. The result showed that most of the graduates agreed that there was the contribution of skill tests at all employment stages. Statistically, while measuring association of skill test contributions to all employment stages, it was found that overall changes due to skill tests at the pre-employment stage had further 35.5% contribution to the overall changes at the during-employment stage and 58.2% contribution to the overall changes due to skill tests at the post- employment stage. Similarly, overall changes due to skill tests at the during- employment stage had 38.5% contribution to the overall changes due to skill tests in post-employment stage.

Finally, the segregation of the overall results showed that men and women were equally benefitted by skill tests for their employment. Youths from all age groups, all ethnic groups and all educational backgrounds were found to be equally benefitted from the skill tests. The contribution of skill tests significantly differed from the marital status and the geographical origin of the graduates, implying that married and unmarried youths were not equally benefitted by the skill tests. In conclusion, the skill testing system contributed to the employment of graduates specifically by creating employment opportunities (pre-employment stage), increasing work performance (during- employment stage) and further job prosperity (post-employment).

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Bhanu Pandit, Degree Candidate

ACKNOWLEDGEMENTS

First off all I would like to acknowledge to my University who gave this platform to be an academic researcher. The thesis has become possible due to synergistic efforts of many mutual and cooperative minds who shared their conceptual, moral and technical supports during the study. I would like to express my sincere gratitude to my supervisor Dr. Bhawani Shankar Subedi for his encouraging and inspiring guidance throughout the study.

My sincere gratitude is to due Prof. Mahesh Nath Parajuli, PhD (Dean of School of Education), Dr. Mukunda Mani Khanal and Assistant Prof. Dr. Prakash Chandra Bhattarai for academic support they provided in shaping this thesis.

Sincere thanks are also due to Mr. Rajan Binayek Pasa and Mr. Sagar Mani Neupane, Mr. Laxman Acharya for their sincere academic and technical support and valuable feedback. At the same time, I am very thankful to Mr. Basu Subedi and Mr. Indra Yamphu for their critical reflection and feedback. Further, I express my deep gratitude to my parents who have always provided me with a good parenting. I am very thankful to my wife Mrs. Karuna Sharma for inspiring and supporting me throughout the period and also thankful to my loving children Swikriti, Shresica and Shresith Sharma for creating a favorable family environment for my endeavor.

Last but not the least, I would like to express my gratitude to all known and unknown well-wishers, friends and colleagues who contributed to the present research directly or indirectly.

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Bhanu Pandit 8 February, 2017

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ABBREVIATIONS AND ACRONYMS

ADB	:	Asian Development Bank
BCA	:	Business Council of Australia
CBS	:	Central Bureau of Statistics
CDC	:	Curricula Development Center
SLC	:	School Leaving Certificate
CERID	:	Center for Educational Research, Innovation and Development
CTEVT	:	Center for Technical Education and Vocational Training
TVET	:	Technical and Vocational Education and Training
DOFE	:	Department of Foreign Employment
FNCCI	:	Federation of Nepalese Chambers of Commerce and Industry
ILO	:	International Labor Organization
INGOs	:	International non-government Organizations
KU	:	Kathmandu University
MOE	:	Ministry of education
MOF	:	Ministry of Finance
MPhil	:	Master in Philosophy
NA	:	Not Available
NEP	:	National Educational Planning
NESP	:	National Education System Plan
NGOs	:	Non- Government Organizations
NHDR	:	Nepal Human Development Report
NLSS	:	Nepal Living Standard Survey

NNEPC	:	Nepal National Educational Plan Commission
NPC	:	National Planning Commission
NPC	:	National Planning Commission
NSTB	:	National Skill Testing Board
NVTC	:	National vocational training center
OJT	:	On the Job Training
OTA	:	Office of Technology Assessment
SLC	:	School Leaving Certificate
SLC	:	School Living Certificate
SPSS	:	Statistical Package for Social Science
SSRP	:	School Sector Reform Program
SSRP	:	School Sector Reform Plan
TQM	:	Total Quality Management
TSLC	:	Technical School leaving Certificate
UN	:	United Nations
UNESCO	:	United Nation Education Science and Cultural Organization
UNICEF	:	United Nations International Children Emergency Fund
USAID	:	United States Agency for International Development
VST	:	Vocational Skill Training
WHO	:	World Health Organization
WTTC	:	World Tourism and Trade Center

CHAPTER I

INTRODUCTION

Background of the Study

Human capital is the foundation for overall development of the nation. The idea of dependency only on natural resources itself is not a sustainable idea for the overall development (Gilpin, 1999) of a nation. It shows that the investment on the human capital development is crucial for the overall development of a nation. Similarly, Schumacher (1973) highlighted in his book 'Small is beautiful' that the development does not start with only materials; it starts with the level of education that people pose (Schumacher, 1973). There should be a proper educational base in every individual so that he/she can be engaged as a subject in the process of development. Thus, it can be argued that the skilled human resources and their contributions are very crucial for the overall economic growth of the country. Vocational education is one of the vital means to produce skilled human resources that benefit equally to individuals, societal and the nation (Psacharopoulos & Woodhall, 1997).

Vocational education and training can perform a really important function in the skills development process of the individual and ultimately the socio-economic development of a country. It can make a meaningful contribution to human capital formation as per the need or demand of labor market. Similarly, it is also a growing need of labor market to prepare national and international level skills human resources to make industries more productive and competitive (ILO, 2010). Reflecting upon such an idea, we can clearly see the role of vocational education to enhance the

individuals' skill development process and make a significant contribution to human capital formation to serve the labor market demand.

As Manikar (2007) said, the objectives of vocational training are; to prepare an individual with the knowledge of production methods that can also be transferable to the other fields; to equip an individual with industrial work practices and to make an individual familiar with the work community. The vocational training, as it is known today, represents the combination of practical learning in workshops and theoretical subjects in class room settings (Schaack &Tippelt, 2000). Moreover, the concept of vocational training today is to provide live work experience where an individual could develop various kinds of contemporary skill like observation skills, thinking skills, problem solving skills and decision-making skills. These kinds of experience are not possible to develop only by means of class room teaching and learning process (Jinjid, 2002).

In the Nepalese context, Council for Technical Education and Vocational Training (CTEVT) which was established in 1989 is regarded as an apex institute in the TVET sector. It was established under the Education Act, 1989 which was amended in 1993. The major function is to formulate the TVET policies and implementation of technical education and vocational training programs. It also coordinates among the different program disciplines, develops and expands technical and vocational training and regulates to ensure the quality of the training delivery. Its ultimate vision is ‘all the Nepali should be employed through an increased access to the TVET programs'. The major responsibility of this institute is to prepare skilled human resources as per the demand of the labor market (Center for Technical Education and Vocational Training [CTEVT], 2005).

At present, CTEVT has eleven divisions, and the National Skills Testing Board (NSTB) takes responsibility to conduct skill test. The skill test is being conducted at central as well as zonal level technical schools of the country (CTEVT, 2012). As mentioned in the Online Business Dictionary, the skill test is an evaluation of an employee's competencies in performing an activity or job function. The evaluation function covers a rigorous analysis of the completed or ongoing activities that determine accountability, effectiveness and efficiency. The competencies of an individual denote the bundle of related abilities, commitments, knowledge and skills that enable a person to act effectively in his/her employment period. Thus, it is clear that the acquisition of certain skills, measurement of those imparted skills and appropriate accreditation are the interconnected interventions in the sector of skill training and employment.

From the context mentioned above, it can be understood that the skill testing system is one of the vital components of vocational education and training that tries to keep abreast with the labor market trends and provides opportunities to many skilled youths. A skill test is the test based on defined occupational skill standard that should be performed by every individual to obtain the national skill certificate after meeting the requirements of a trade or occupation (National Skill Testing Board [NSTB], 2012). As Stones said, it is a system from where students learn about their strengths and weaknesses by the results of tests (Stones, 1979). However, as direct measurement of an individual's ability is not possible, skill test must be psychologically, educationally, psychometrically and instructionally sound to ensure quality results (Horne, 1984).

It can be seen that the different kinds of vocational skills can be acquired through multiple ways. Therefore, the skill testing system for short term vocations

should give the opportunities to all kinds of people acquiring skills form any means like formal, non-formal and informal. Thus, such kind of skill testing system should be accessible to skills people from the local to central level. Principally, skill testing system in Nepal gives emphasis to three different target groups: pass outs graduates of vocational education and skill development training, who are in transition to their work, experienced workers who lack official certification, and workers at the end of on-the-job training duration and seeking an additional national level certification (NSTB, 2012).

In the Nepalese context, the young people are comparatively high in number and are growing very rapidly. The size of such young population is estimated to be much bigger over the next few years. Thus, it can be supposed that the demand for skills training and its certification among the youths is increasing. However, due to poor provision and accessibility of the skill testing system for vocational trainings, most of the youths are still working without skill test certification (Kafle, 2007).

In Nepal, more than half (54%) of the population comprises productive age group i.e. 15-59 years. The adult (15 years and above) literacy rate for both male and female is 56.5% (Nepal Living Standard Survey [NLSS], 2011). Those huge masses of illiterate productive age group population have some certain types of vocational skill from informal and non-formal means. But they often encounter various problems, which include lack of awareness and knowledge on short term vocational skill training and skill testing system. These problems are often deteriorated by social and economic factors such as lack of confidence, poverty, poor skills for employability, lower access to resources etc. Many of these problems not only affect the physical and mental health of the youths but also their long-term emotional, economic and social well-being.

It is important to recognize that socio-economic problems of common youths, particularly from rural areas, are the results of unemployment. To address such a vulnerable situation, it is essential to provide them an access to vocational skills training and certification so that unemployed youths can create their skill base and get better opportunities for employment (Levine et al., 2009). The current employment market demands graduates having appropriate occupational skills and competencies that can be applicable to a wide range of employment situations. It is also proved by some of the previous studies by indicating the need of a range of skills, abilities and proficiencies (Bajracharya, 2010). Thus, the primary concern of this study is to analyze the contribution of the vocational skill testing system to the employment of trained graduates.

Rationale of the Study

In Nepal, more than half (54%) of the population comprises productive age group i.e. 15-59 years. The adult (15 years and above) literacy rate for both male and female is 56.5% (Nepal Living Standard Survey [NLSS], 2011) which indicates the illiteracy of about half of the working age population. According to Kafle (2007), about 10% of students enrolled in formal education pass the secondary level education in Nepal. One of the options for the school dropouts is to attain technical and vocational training by formal or informal means. The skill testing system is the only system for examining specific occupational skills of the individuals for employability. The employability skill can also be reflected as generic skills, individual capabilities and competencies of the employee for a vocational enterprise (Business Council of Australia [BCA], 2002). It has been assumed for years that skill testing has a positive contribution to increasing employability of the trained graduates. However, it is very difficult to find references which explain the exact relation between the two variables.

Therefore, it was essential to conduct a research study for exploring the relation between the existing skill testing practices and employment of graduates who attend vocational skill tests.

In Nepal, some of the government initiatives and foreign aids have invested in the school dropouts with the aims to provide occupational skill training to them and facilitate their entry to the gainful employment. Apart from the government initiatives, more than eleven donors are supporting to enroll about 40,000 youths every year in vocational skill training (Centre for Technical Education & Vocational Training [CTEVT], 2011). In most of these interventions, skill test of the trained graduates is a mandatory provision. Therefore, conducting research for examining the contribution of the skill test to the employment of vocational skills training graduates is inevitable.

Moreover, the self-justifiable researcher has been working in vocational education and skill development sector for more than six years. Reflecting upon researcher's experiences, researcher realized that conducting this study was a professional and moral responsibility in order to contribute to knowledge management in this sector. Thus, the study was designed to analyze the contribution of the short term vocational skill testing system in the employment of trained graduates.

Statement of the Problem

It is proven that despite the skills and knowledge, people need to have formal certificate. The formal certification not only formalize the skills that people have but it also helps people to know about the systematic manners be followed during the job performance. We witness that people have skills but they cannot prove it in broader area due to lack of 'skill test certification'. Due to which the opportunities for the people with skills but the lack of certification has been limited. This is my statement

of problem. To find the ways outs of this problem, I would like to answer the question “Does the skill test weigh a value to get employment, to perform job and to increase job proficiency?” is a vital question in the concerned sector. It is an obvious fact that the lack of employment opportunity has contributed to the slower economic development of Nepal. The formal education system, which has a very small focus on vocational training provisions, has been producing unskilled and unemployable youths throughout the country (Nepal Human Development Report, 2004). Regarding the implemented TVET programs, the quality training and its role for employment has always been a debatable issue among policy makers and its implementers for many years. The training providers and the trained graduates have been questioned about the quality of training they delivered and the graduates’ employment performance respectively (CTEVT, 2005). At the same time, industries and businesses have demanded training institutions that they should focus more on imparting vocational skills on trainees and provide appropriate career guidance to them. The problem however lies on the overall vocational educational system in Nepal (UNESCO, 1996), which still remains unaddressed.

Though there have been remarkable achievements in the educational sector in Nepal, there is a high school dropout problem. Out of eleven students enrolled in grade one, only one student passes the School Leaving Certificate (SLC) examination (Bajracharya & Sharma, 2004). In an aggregate, of the total population of Nepal, only 6.23% people pass SLC (CBS, 2012). In TVET programs nearly 25,000 graduates annually complete the technical education program from various institutes whereas it is estimated that about 40,000 participate in vocational skills training provided by various government and non-government organizations (CTEVT, 2012). In this connection, the role of vocational skill test become crucial instruments to access and

certify the trade related skills for assisting those graduates in finding gainful employment.

At the same time, the foreign employment migration is high and being increased in Nepal. This is largely because of lack of employment opportunity in the domestic labor market and the poor process of human capital formation in the country. The data shows that 70% of the youths out of 354,000 who migrated in fiscal year 2067/2068 had neither attended any skill development training nor participated in any vocational skill test. Thus, it is usually reported that they are being compelled to work in dangerous, difficult and low wage jobs (CTEVT, 2011). There is also a big opportunity of skill certification meeting the requirement of international labor market demand to make a better position of our graduates working oversees.

It can be observed that in the domestic labor market, both skilled and semi-skilled youths are working in different trade related occupational sectors. Most of the youths have acquired various occupational skills from their older generations or from other means but their skills have not yet been formally recognized due to weak mechanisms. Moreover, the value of vocational skill training with regards to the employability and productivity has been neglected by the major stakeholders in the sector. Thus, the findings from this research can be tangible evidence among vocationally skilled graduates.

The CTEVT has introduced a training certification system which has guidelines regarding certification and accreditation but this has not yet been effective (Burkthard & Baidya, 1998). For foreign employment, skill testing is needed to determine the actual level of skills possessed by the potential migrant workers. However, out of the sample of 187 migrant vocational graduates, more than 80% had not heard about the national skill testing system that is conducted by CTEVT. It must

be because of the poor mechanism for skill testing or because of worthlessness of the certification. A previous study showed that Nepali youths are interested in certification after the training (Kusago & Phuyal, 2009). The evidence discussed above reveals that Nepalese youths are working in national and international labor market without any certification recognizing their occupational skills. Even in the cases of skill-tested workforce, the aspects of efficiency and productivity due to the skill test, has not been adequately explored yet. Therefore, the statement of problem is whether the skill test weighs a value to get employment, to perform job and to increase job proficiency or not? Finally, this research gap has to be addressed by establishing the relation between the skill test and the employment of the skill-tested graduates.

Purpose of the Study

This research was initiated in the context of un-systematized practices observed in the vocational skill training delivery and the certification system. The first purpose of conducting the research was to examine the contribution of short term vocational skill tests to the employment of the skill-tested graduates especially at pre-employment, during-employment and post- employment stages. The second purpose was to compare and contrast the role of skill tests with varied age, gender, qualification, ethnicity, marital status and origin of the graduates.

Research Questions

The study aimed to analyze the relationship between the short term vocational skill testing system and its effectiveness for the employment of the graduates. Thereby, the study began with the central research question: ‘What is the relation between the skill test and the employment of the graduates under short-term vocational training they had?’ The overarching research question could be addressed

by conducting significant study on ‘In what ways does the skill testing affect the employment of the vocationally trained graduates or what is the contribution of the skill testing system?’ Based on these assumptions, some more specific research questions were drawn and used as follows.

Research Question 1: In what extend the skill test contribute personally and externally to the graduates’ pre-employment, during-employment and post-employment stages?

Research Question 2: In what extend the contribution of the skill test vary with the age, gender, qualification, ethnicity, marital status and origin of the graduates?

Working Definition of Personal and External Traits of a Graduate

To make a clear understanding of the personal and external traits of an individual that are supposed to be contributed by the skills test, the researcher has made the working definitions of the personal and external traits. The personal traits are encouragement to apply for jobs, increase level of confidence, increase efficiency, increase self-awareness in safety and security and in decent work, self-recognition, purchasing power and living standard. External traits on the other hands are increased job options, trust among the employers, recognition by other co-workers, level of income, increased career prospects, team work and increased social recognitions etc. A detailed disaggregation of personal and external traits which were covered in survey questionnaires has also been annexed (see Annex 2). The definition of youth in this research has been made on the basis of National Youth Policy 2010 which comprises the ‘women, men and third gender’ persons aged 16-40 years old.

As conclusion, this chapter described about the context of the research and rationale of it to become a matter of study. This chapter further explained about the

purpose of conducting research, the problem statement and followed with the specific research questions. At the end of this chapter, researcher defined the personal and external traits as well as different employment stages via. pre-employment, during-employment and post-employment stages which are assumed to be contributed by the skill test of the graduates.

CHAPTER II

LITERATURE REVIEW

In this chapter, a review of TVET practices and historical perspectives on TVET development covering both the global prospective as well as national prospective are dealt with. Moreover, the theoretical perspectives to interconnect the research subject with human capital formation theory, the theory of structure and agency and the theory of economic development have also been reviewed and presented in this chapter. The review of the literatures related to the TVET policies in Nepal and empirical evidences have also been covered in this chapter. As a key theme of this research, the researcher has also reviewed the skills test variables covering the typology of skills, occupational skills standard, skill testing system, certification and accreditation system and effectiveness of the skill tests. After having all the reviews and researchers own view, the conceptual framework for this research has also been presented at the end of this chapter.

A Brief History of TVET

The historical review covers how the concept of vocational training was started in the global context and how it is being institutionalized in the global labor market. At the same time, the review also gives a glimpse of the national context of Nepal. The historical perspectives before Lichhibi and Malla era and its gradual shifts after the 1950's democratic movement have been attempted in this section.

TVET Development in Global Arena

In 1815 in New York, the American prisons established an ‘Auburn’ system which capitalized the physical labor of prisoners. In this system, the prisoners worked

in groups during the day and were kept in certain confinement at night with an imposed silent environment (Stowe, 2006). This system is regarded as an initiation of group work practices during the 18th century. This system also started releasing the prisoners after delivering them occupational skills together with a personal disciplinary skill.

Similarly, this system also focused on delivering the trade related skills to fulfil the internal need of the institution and to link them to the employment after their release. Such types of vocational training system continued with the number of inmates entering the jail. After getting popularity from such kind of vocational training practices, the American government made a provision of vocational rehabilitation act in 1920 (Stowe, 2006).

Since then, vocational education and training sectors have been given high emphasis. Later the vocational training emerged as a separate discipline offering the various courses, both as full-time courses in the institutional setting and as part-time courses outside (Zumpetta, 1988).

At present, from the perspective of training and employment, there are basically two major problems in the global labor market. On one hand, millions of low skills jobs are being replaced by the application of modern technology day by day. On the other hand, thousands of youths in the world are seeking jobs without appropriate skills and knowledge (Sie, 1992). Therefore, for addressing this problem in the labor market, there must be a systematic intervention for the formation of human capital to contribute to the economic development of any country.

TVET Development in Nepal

Nepal has its long history of vocational education. In the Hindu caste system, various vocational works like metal works and leather crafts were originally

considered as the work of so called low caste ethnic groups (ADB, 2004). However, in reality the number of so called upper caste ethnic groups have been acquiring such vocational skills and performing their jobs as means of livelihood (Bista, 1991). During Lichhibi and Malla era, the tradition of handicrafts was famous and different sculptures and architectures were produced using traditional skills gained mainly through informal means. It is also seen that the work of wood craft and metal crafts reflected in the civilization of Kathmandu Valley (Jaisi, 2008). It shows that the initiation of vocational practices in Nepal originated centuries before. In general, it can commonly be observed that many of the Nepalese citizens have some sorts of skill in a particular vocation. As a tradition, it has been transferred from generation to generation.

After the abolition of Rana regime and the restoration of democracy in 1950, modern education system in Nepal has flourished in a significant way although it has given overemphasis on the theoretical education system. The educated youths and underprivileged students of Nepal are being compelled to live either unemployed or underemployed due to the lack of vocational training and certification opportunities required for improving employability skills, working efficiency and productivity (Kafle, 2007).

In Nepal, it seems that there is a significant contribution of Hinduism in the development of educational system including the TVET practices since the beginning. Hinduism is very close to education and work culture which highlights the importance of peace, gender equality, respect towards nature and social harmony in education and learning process. In Hinduism, Vidhya (education) is given a great value and the foundation of the education lying on the Veda (a holly document of the Hindus). There are four types of Veda: Rigveda which is all about the process of knowledge

diffusion; Yajurveda which highlights the application of knowledge into daily work or practice; Samaveda which is considered with the devolution of knowledge and Atharvaveda which deals with making diversified knowledge (Gyani, 1997).

It showed that education was supposed to be developed to acquire all round knowledge and skills including those for economic capital for livelihood purpose. This idea of development of knowledge and application of knowledge to the work is very close to the idea of vocational skills for the better employment and earning opportunities. Moreover, in various cases, the informal learning process in vocational skills also seems to have been pedagogical very close in relation between instructor and trainees (guru-shisyas sambhandha). In this culture trainees (shisyas) were taught in spiritual, religious and value-based curriculum. The relation between the teacher and the trainee made both of them responsible for sharing knowledge and various skills related to livelihood and betterment of their working life. Hinduism has focused on Vidhya, which is mostly perceived as value based education approach that leads to the art of living peaceful life (Yogi, 2012).

The essence of Vhagavad Gita, which is a very key book in Hinduism, has also given emphasis on knowledge, skills, action and devotion. The acquisition of that kind of knowledge can help to maintain high aspiration and determination capacity of an individual (Ghimire, 2013). This review indicates that religious beliefs can be integrated in vocational education to produce not only a person skilled for a particular task but also a morally correct human resource. This reflection also gave an insight into how Nepalese youths have been learning various occupational skills from their socio-cultural structures. Further, the review gives ideas about how the students considered the importance of education in their life transformation, how they have

been playing the role of a change agent in society and how they analyzed their socio-economic roles in their families and society.

The historical review shows that the technical and vocational education has its long history, both at global and national arenas: In Nepal, the practice of acquiring occupational skills as a part of livelihood measures started from the Lichhibi and the Malla periods, which was brought into a TVET stream only after restoration of democracy in the 1950s. The review has helped to internalize the importance of research objectives and its interconnection with the livelihood enhancement of the Nepalese youths.

TVET Practices

In this section, general TVET practices including the role of technical education and vocational training, composition of vocational skills curricula, accessibility of TVET to the targeted youth, impact of TVET in the national economy and its standardization in the global context have been reviewed.

Technical and Vocational Education and Training has been a key element in preparing a well-qualified workforce within the global economy (Frantz, 1999). Vocational education not only provides occupational skills to the youth but it simultaneously provides various life skills to them. Although the fundamental understanding of TVET talked about both core occupational skills and soft skills, in our existing training practices there is still a limited space for soft skills. The soft skills are sometimes also termed as employability skills for an individual and are regarded as the very key for the employment performances (Smith, 2003). So, it should be understood that a proper balance between the core technical and soft skills would be necessary for graduates to be easily and properly employed.

Life skills can be physical like taking the right posture, behavioral like communicating effectively or cognitive like making effective decisions (Goudas, Dermitzaki, Leondari & Danish, 2006). Similarly, imparting such types of life skill related activities are very necessary for producing physically and mentally healthy children who can significantly play a transformative role in changing the social, cultural and economic status of a society (World Health Organization [WHO], 1999). However, the course curricula developed and practiced by CTEVT in Nepal, does not reflected well about the incorporation of the life skills as highlighted above by Goudas (2006) and WHO (1999). Nevertheless, the proportion of the technical skills and life skills for a particular vocation may vary according to the trade and employment type under consideration.

In general, vocational education aims to produce lower-medium level work force and targets upon literate and illiterate youth basically from informal education. The economic growth of a nation depends upon the quality of the workforce in terms of performance and productivity. To increase the effectiveness and efficiency of the TVET interventions there should be an appropriate government mechanism through good administrative mechanism (Greenan & Lisa, 1998). In contrast, the education practice in Nepal seems to be more focused on formal education and lacks the marketable skills for all kinds of skilled workforce development through an appropriate state mechanism. In addition, the government seems less attentive on vocational education and has invested minimum in the sector. There is a very less (less than 1% of total education sector) investment in TVET sector as compared to the formal education as stated by Kafle (2007).

Dewey's philosophy has suggested that vocational training is related to the requirement of the society by providing equal opportunity, affirmative action and

multicultural attention. Lynch further argued that the role of technical education and vocational training should be to prepare students for careers rather than just preparing for a single job (Author & Lynch, 1997). Both of the above ideas argued to ensure the diversified role of vocational education to accommodate the diversified people in the program and to attain the multipurpose skills rather than a single task performer. In the reality, the focus of TVET programs as highlighted in TVTT policy 2012 seems to be directed to increase the accessibility of a wide range of people to the TVET programs. However, it is not clear about preparing students for their career having a vertical and horizontal career ladder in the national TVET system. It shows that there should be a clear state mechanism to ensure the career prosperity in the vocational education sector in Nepal.

In the global arena, as reflected by Acker, because of the technological advancement, there is a demand to develop a satisfactory TVET program ensuring the teaching, research and extension program (Acker & Taylor, 2000). Again, Dieckhoff (2008) talked about the global standardization of the system through the total quality management approach. He suggested a need for developing a program targeting the global customers and industries. He has also given emphasis to the development of ISO 9000 certification in TVET system (Dieckhoff, 2008). In the global context, some of the countries have been practicing such an idea through collective efforts from employers and state mechanisms (Trampusch, 2010).

As compared with the global context, the Nepali TVET seems at the bottom of the global standardization. It seems that there is still a question against training accessibility to those workers who are supposed to be employed outside of Nepal. The fact as per CTEVT (2011) shows that 70% of 354,000 the migrated labors in the fiscal year 2067/2068 neither attended any skill training nor participated in the skill test.

Thus, for Nepal, the accessible skill training for interested individual citizen is still within the circle of question rather than global standardization.

Additionally, in the existing global labor market, there are two different forms of vocational training: one is for entry level workers basically focusing on apprenticeship model and the second is during the job period focusing the further growth (Beck, Kabst &Walgenbach, 2009). The practices of these forms are not adequate in the Nepalese context. The evidence shows that there is less practice of the formal apprentice model and on-the-job training. However, the curriculum structured by CTEVT incorporates the requirement of OJT (On-the-Job Training) practice after completion of the training courses.

Finally, the review has helped the researcher to contextualize how technical education, the vocational training program and the skill testing system have been producing competent work force. The scenario involving different age, sex and ethnic groups in the TVET program can also be interlinked with this review. One of the significant learnings from this review was that the vocational training and skill certification provides a continuous value addition to a person's job carrier rather than one time support during the entry in the labor market. To add more, the vocational skill tested graduates working in different trade related occupations are supporting their livelihood and contributing to the national economic growth.

Theoretical Lenses

Theoretically, the studies on vocational education have found that practical ways of teaching and learning is the most effective way for the learner and it is more favorable to contextual learning. The vocational trainees need exposure to the real 'world of work' to learn at their own pace. The vocational programs need to conduct a workplace based learning environment and students need to be encouraged to be self-

learners so that they can make a good linkage between their education and work afterwards (Mitchell, Henry & Young, 2001). The researcher has reviewed the research theme from different theoretical lenses like Human Capital Formation Theory, Structure and Agency Theory and Economic Development Theory in the context of our country.

Theory of Human Capital Formation

The total capacity of the people that represents the form of wealth is a human capital. This, as a resource, can be directed to achieve the individual or national goal. As described by George Psacharopoulos, who talks about return on educational investment, the human resource contributes to the building of an important basis for national wealth by accumulating capitals, building socio-economic and political organization (Psacharopoulos & Woodhall, 1997). Human capital formation is a process of investing on people through education or training or other capacity building activities, which raises their future income by increasing their income throughout their life (Abeysinghe, 2012). From the above ideas, it can be inferred that the human capital is an essential determinant of economic growth of any country. The vocational training and skill development is one of the factors of human capital formation. It is supposed to improve the productivity and efficiency of labor for better participation in economic activities. Thus, the role of skill training and certification towards the employment and income of an individual is a matter of human capital formation.

According to Schultz, the basic components of human capital formation are the ability (acquired through any means or innate), qualifications (acquired through formal or informal education) and skills (acquired through experience or training (Schultz 1987). Moreover, he highlighted that human competence at work is seen as a

specific set of attributes such as knowledge and skills used to execute a particular task. It can be thought that training increases a worker's productivity on its completion. So, training is an investment with its initial costs and expected returns in the future course of time. However, the question is always there about who should invest it either the employee or the employer firm. The skills and work proficiency shown by the vocational graduates is a major component of the human capital formation. The vocational training which emphasizes more on the skill development objective is a process of human capital formation that can also be reflected during the performance of the graduates after training. Thus, agreeing with the idea of Schultz, the expenditure regarding the training is a source of human capital formation and the return of such expenditure can be seen in the form of enhanced labor productivity which is more than its costs.

At the same time, according to Amartya Sen (2000), an Indian economist, the human capital theory can be analyzed from human capability approach that has an intrinsic value for the well-being of people; an indirect role in influencing social change; and an indirect role in influencing economic output (Sen, 2000). In the education system, human capital theory sees the technical relationship between inputs and outputs from education. The idea reveals a fixed technical relationship between the inputs and outputs, as expressed in the form of a production function afterwards.

This theoretical review can be a useful idea to observe the TVET programs as an input and output relationship in education in the course of human capital development.

As Abeysinghe (2012) highlighted, the vocational training and employment practices can be seen as investing in the youths by means of training which raises their future income by increasing their life time earnings. An economist argued that the lower rate

of investment in human capital formation is a major reason for a slower economic growth of the developing countries. In different words, there might be a less productive use of available physical and non-physical assets if there is no proper human capital base. So, the process of acquiring vocational knowledge and skills for employment opportunities and prosperity is a process of human capital formation which is vital for the development of every nation including Nepal.

Theory of Structure and Agency

The theoretical perspective of structure and agency theory sees both individual and society as major concerns of study. However most of the social theories elaborate either the composition of society or only see daily lives of the individuals. Individual-centered views argue that society is an aggregation of individuals engaged in various interactions. Whereas other view holds that society is something more than a mere aggregation of individuals. This view argues that social structure as independent of individuals rather determines the individual's actions. The structure and agency function seems to have more explicitly applied to the vocational training and skill development of individual graduates rather than an isolated view. The overall TVET system including the skill testing system is functioning as a structure role and the individual graduates and their actions (or reactions) are performing an agency role at the broader level.

The social structure is the constitution of the social, economic, cultural and political contexts in which various institutional and individual actions occur. In every society, there are specific structures and conditions that produce human action, behavior and agency inter-relation through various means. More to this, agency relationship is one in which one or more persons engage with another person (the agent) to perform some service (Jensen, 1976). The idea exactly agrees to the

phenomena of getting trained or certified through a well-defined guideline or policy of the TVET system and producing qualified trained graduates who are supposed to perform as individual employees or entrepreneurs. The reciprocal linkages can be seen between the system and graduates in a broader frame.

Social structures produce individual action for the existing structure and at the same time social structure can also be reproduced by individuals' actions. Thus, people may become aware of a prevailing structure and struggle to change it. This suggests that individuals do not act without reasons and those reasons are in turn taken in response to structures. To the extent that human beings have agency, they may act independently and in opposition to structural constraints and may reconstitute social structures through their actions and interactions. Therefore, structure and agency theory is found to be the key understanding mechanism within social science (Giddens, 1976).

More specifically, the researcher has also reviewed Giddens structuration theory (the dualism of structure and agency) for linking these theoretical perspectives into the research issues and problems. The basic argument of this theory is that the phenomena of structure and agency are mutually dependent and internally related. The structure only exists through agency and agents have rules and resources which will facilitate or constrain their actions. These actions can lead to the reconstitution of the structure which may affect future action. From a more specific prospective an individual graduate in TVET makes an action on the basis of his/her will, ability or capability. These actions can be influenced by TVET structures or perception of society toward the vocational works or their work environment or their origin. The Giddens theory provides an account of human agency which recognizes that human

beings are purposive actors but embedded in social contexts which causally influence their original nature (Giddens, 1984).

The TVET programs and the individual graduates are interconnected with each other as structure and agency. The performance of TVET graduates with respect to the emerging need of the labor market contributes to the reconstitution of the overall structure (like in curricula development, determining occupational standard of skills etc.). The actions demonstrated by the individual graduate can lead to the reconstitution of the TVET structure; formulate the rules or policies and formation of the different TVET sub-structures, which will again affect or shape the future action of the individual graduates in the sector. In this research, the TVET system as a structure and the interacting graduates are supposed to be interconnected as an agency accordingly as described by the theories above.

Theory of Economic Development

Economic development is the process by which a nation improves the economic, political and social well-being of its peoples. It is a very common term among various economists in developed countries and comparatively a new one for developing countries. There are a number of theoretical views on economic development. The chief views are reviewed in the text below.

Lewis (1954) has presented a 'theory of economic development with unlimited supply of labor' mentioned in Lekhi 2008, p.142. He argued that economic development depends upon capital accumulation due to an unlimited supply of labor. According to this view, a capitalist sector develops by utilizing labor from a non-capitalist backward or subsistence sector. At the early stage of development, because of an unlimited supply of labor from the subsistence sector, there is no need to raise the wages by the capitalist. That means there is higher return to the capital which can

be reinvested in further capital accumulation. After all, this increase in the capital stocks with capitalists leads to the expansion of employment opportunities by utilizing further labor form the subsistence sector. As a gist, the profits can be reinvested, it does not substitute for skilled labor in production and it becomes self-sustaining and ultimately leads to economic development.

The capitalist sector operates by employing the reproducible capital and wage labor and economic growth can be achieved through the supply of surplus labor by providing more competent skilled forces through training. The theory is more relevant to the Nepalese context where still there are large sectors of economy where marginal productivity of labor is negative or negligible (Author & Lekhi, 2008). In the Nepalese context, the man land ratio is increasing every year and surplus labors are still working with subsistence wage mostly in agricultural sectors (Kafle, 2007). It seems to be continuous employment opportunities for the subsistence sectors for long without substituting existing opportunities. This view states, there are chances of re-investing the capital for an additional employment. At the same time, there might be some additional opportunities for the wage labor (from subsistence sector) to shift towards the self-employment after a certain level of professional and economic attainment of graduates (i.e. capital accumulation).

Thus, the research can be interlinked with the economic development of the nation that can be fostered through labor intensive investments or re-investments in the industries. In the earlier days, although, labor from the subsistence sector is assumed to be in surplus and mainly unskilled but the modern industries or labor market sector demands more skillful labor to perform certain vocational task. Moreover, in one hand, the unskilled labor application inhibits growth and the other hand, current technical progress necessary for growth requires skilled labor. This kind

of bottleneck can be broken through the provision of training and certification facilities focusing both on the on-farm and off-farm sectors in Nepal.

The TVET Policy Overview

The policy provisions and its implementation are very key factors to guide any development intervention. In Nepal, there has been attempts for systematic education development after the demolition of the Rana regime in 1951. It can be observed that over the past few decades, the education system has increased both in terms of access and literacy rate (CBS, 2011). At the same time, we can see the increased reflection and policy provision for vocational education and training in various national documents. With this very perspective, the researcher has tried to review the policy provisions in the overall education sector as well as the TVET system. The national policy instruments and the periodic plans of Nepal have reviewed in this chapter.

Technical and Vocational Education and Training in National Policies

The vocational education system in Nepal has been supported by various bilateral and multilateral agencies (CTEVT, 2014). In general, the education system has envisioned developing a high quality public school system through intervention in three areas: increasing access and equity; improving quality and relevancies; and strengthening the institutional capacity of the system (CTEVT, 2012). In 1954, Nepal National Education Planning Commission for the first time recommended the frame for a structured vocational education system in Nepal (MOE, 1954). The aid from the United States had started supports to establish various multipurpose high schools in Nepal. At the same time, National Vocational Training Center (NVTC) was established with the support of the United States. The aim of NVTC was to provide training opportunities to the vocational teachers in various fields before the

establishment of the Council for Technical Education and Vocational Training (CTEVT).

According to Belbase (1981), NVTC was established with these objectives: to provide facilities for training vocational teachers; to serve as the national center for in-service training for vocational teachers; to train students in basic skills courses; to provide skill improvement courses for industry based workers; to train students in various crafts courses for industries.

The new education system started in 1971 and the arrangement of vocational education in at least one subject in each secondary school was made through the National Education System Plan (MOE, 2009). This provision did not last long. The National Education System Plan (NESP) in 1971 had achieved various improvements in the education sector and established a system for its sectoral operation. It had given due emphasis on planning vocational education and diversification of vocational courses (Shrestha, 1991).

Modern technical school commenced in 1980 with an objective of developing the technical and vocational education in an effective way (MOE, 2009). The Council for Technical Education and Vocational Training (CTEVT) developed vocational educational act in 1989. The amendment of this act in 1992 further emphasized the role and responsibility of the council. The major roles as mentioned were; classification of skills, testing and certification and, verification of skill, and determination of the level of skill (CTEVT, 1994).

Technical and Vocational Education and Training in Periodic Plans

The ninth plan aimed to expand higher level technical education to develop and supply higher level skilled manpower to the national and international market. This plan has included programs related to vocational education and training. The

major areas highlighted by the plan mainly included a) a training need assessment survey to be conducted for understanding the needs and establishing training centers at the grassroots level, b) initiation of an effective coordination with private training centers for the development of skilled workers, c) setting the target to produce 5,000 skilled manpower from technical schools and set the target to provide training on various technical subjects for 20,00 persons, d) short-term trainings to be provided in coordination with I/NGOs, e) necessary supports, both technical and moral, to be provided to private sector training centers for human resource development, f) expansion of the community development and vocational training centers will be expanded throughout the country and, g) updating the Technical and Vocational Training Council's policy for effective implementation of these activities (NPC, 1997).

Similarly, Tenth Plan aimed to supply basic and mid-level skilled, technical human resources required for the country (NPC, 2002). The following were some of the important points mentioned in the Tenth Plan: a) addressing the skill development needs of the poor and disadvantaged, b) promoting access of the poor and disadvantaged to the training and employment opportunities, c) ensuring the rights of laborers and, d) raising quality and productivity of the vocational training programs. The Tenth Plan has made commitments to impart regular (full time) training to 7,000 people and short-term training to 23,000 people by establishing two additional technical institutions and two poly-technical colleges. At the same time, it is also planned to provide secondary level skill-oriented education in 75 community schools (NPC, 2002). As a gist, the tenth plan has made its efforts for upgrading quality education and increase people's access to education and training services especially form the marginalized segment of the population. Moreover, it has emphasized to give

responsibilities to local educational authorities for educational development. It has also tried to develop vocational education through schools by conducting annex programs.

Moreover, the Interim Plan has incorporated the following educational vision (NPC, 2007): a) to create awareness and develop productive citizens securing their access to education opportunities, b) to provide vocational education to the youths from the marginalized communities and make them active in economic development processes, c) to develop higher education system to make it equivalent with the international standards and. Finally, Quality Education System Nepal aimed to establish a modern, democratic, inclusive and equitable workforce development approach.

The Interim Plan has also developed some key strategies for the development of educational system in Nepal. According to the decentralization concept and local governance act, the responsibility of education plan preparation and management will be given to school management committee and an active participation of the civil society has been envisioned. There is also a provision of a new schooling structure in which class 1-8 will be known as the Basic Education and class 9-12 will be regarded as Secondary Education (general and vocational education). A new system is also designed through which students can switch their educational ladder from non-formal, technical and vocational to formal education and vice-versa (NPC, 2006).

The Ministry of Education (MOE) made change in the curricula structure of grades 9-12 grade. The objective behind the change was to increase the TVET access, to develop skilled human resources for domestic as well as oversees labor market and develop infrastructure for higher level TVET. Likewise, the curriculum center has expected to apply market oriented curricula incorporating both hard and soft skill

components. It had also been expected to make the provision of horizontal shifting between general and vocational streams in education (MOE, 2012).

Similarly, the Thirteenth Three Year Plan (2013-2015) aimed to manage human resource development through the following given objective: a) to produce skilled work force who can compete in national and international labor market and maintaining a balance between demand and supply of labor, b) to provide qualitative TVET education and link with employment opportunities and, c) to interlink all kind of education into quality and relevancy for the employability and livelihood orientation (NPC, 2013).

In 2012, Ministry of Education has enacted a new Technical and Vocational Education and Training (2012) policy. It has realized and reiterated the need for a more inclusive system of programs and courses with greater emphasis on employability and relevance. The policy has three major objectives: a) to establish inclusive and equitable approach through a wide extension of TVET, b) to provide appropriate contextual and qualitative TVET in consonance with the market demand and, c) to make maximum utilization of resources and means through a coordinated manner among TVET providers. The Council for Technical Education and Vocational Training (CTEVT), with its five years' Strategy Plan (2014-2018), is responsible to put the Ministry's policy into action. It aims at a TVET system which is market oriented, efficient, relevant and equitable (CTEVT, 2012).

As a reality of Nepal, workforces are suffering from unemployment, under-employment and unfair pay. It seems that despite a continuous expansion of the TVET sector, large part of the population has no access to the system due to poor accessibility, high opportunity costs, geographical distance and difficult learning conditions. On the other hand, industries are struggling to equip their workers with

appropriate skills and to bring their skills in line with job requirements with proper certification.

From the above policy review, what the researcher can derive is that the Nepalese education system has been giving more priority to technical education and vocational training program right from the beginning. However, still policies aimed at providing accessibility to the skill training and testing system throughout the country especially at the local level have not been able to yield the desired results. It is important because a majority of the rural youths having trade specific occupational skills must be certified by state mechanisms to increase their productivity and efficiency. It can be concluded from the review that the accessibility of quality vocational skill training and its relevancy is a major priority of most of the policies including existing TVET policy 2012. In this context, the acquisition of the quality skills training as well as its formal reorganization through skill tests and certification is a vital function within the TVET frame work. Thus, it indicates towards the adaptation of proper skill testing mechanisms in the country in the future. At the same time, it is worth exploring the relation between the skill test and employment of the trained graduates continually.

Empirical Review

After the democratic movement of 1950, it can be seen that the technical education and vocational training sector was given more priority in Nepal. Since then, different TVET programs have been scaled up in various forms (Sharma, 2003). In 1980, there was another change in the field of vocational education in Nepal. With the support of external agencies, separate technical schools were established in various parts of the county. The purpose of the rural technical school was to produce the skilled employees needed for various rural based vocational tasks whereas the urban

technical school was to produce skilled labors for medium and large industries (Sharma, 1998). At the same time, there were increased job opportunities for the vocational teachers because of the extended opportunities of teaching in various vocational disciplines. Thus, such development interventions supported by various donor agencies also created increased opportunities for trainers and instructors.

The CBS showed that 46.67 percent of population aged 15 and over (14.4 million) has never attended school in our country (CBS, 2009). Majorities of the people who do not have access to the secondary education have very limited opportunity for vocational training or have gainful employment opportunities in the country. Besides, over the past 10 years the average growth of GDP has remained in the average figure of 4% and the industrial growth rate has averaged only 0.3% because of the decade long conflict and political insurgency (MOF, 2011). In such a situation and even after the peace agreement employment opportunities shrunk. In this context, over 354,000 Nepalese youths migrated for foreign employment in 2010/2011 (DOFE, 2011). Out of those youths almost 70% migrated without taking any skill training and certification. So, they were compelled to do dangerous, difficult and dirty jobs overseas (CTEVT, 2011).

Similarly, the World Travel and Tourism Council expects a greater rise in the employment opportunities in this sector. It is estimated that the employment in the tourism sector in Nepal will increase from 293,000 in 2011 to 429,000 by 2021. The total contribution of travel and tourism to employment both directly and indirectly is expected to increase from 726,000 jobs in 2011 to 1,087,000 by 2021 (WTTC, 2011). Realizing these facts, the government has approved Technical and Vocational Education and Training Policy, 2012.Now in Nepal, it is supposed that the policy will be instrumental to more structure the TEVT sector. As per the CTEVT data, technical

SLC programs are operating in 12 public institutions and in 216 private institutions. Similarly, a technical education program is also operated in 45 community schools and the government has targeted it to expand it throughout the nation (CTEVT, 2011).

Accordingly, 16 technical education programs of diploma (certificate) level in the government sector and 162 in the private sector are being operated in Nepal. Similarly, 55 organizations affiliated to the Council for the Technical Education and Vocation Training are operating the vocational training. Up to this moment, vocational training programs are being operated in 12 centers under the Vocational Skill Development Training Directorate. Additionally, the Cottage and Small-Scale Industries Department has also been established in 27 districts. The Cottage and Small-Scale Industries Development Board has been established in 48 districts. Thus, altogether 400 private and public institutions that are operating vocational education and training programs with the support of various donor agencies. Likewise, about 25,000 people are obtaining technical education and 40,000 people are receiving short term vocational training annually from those different agencies (CTEVT, 2012). In order to fulfill the national and international markets' needs for technically skilled human resources, CTEVT is also coordinating with different development partners to produce a middle and lower level skilled workforce. Being a central level organization, CTEVT is also entrusted with the responsibility for coordinating with agencies such as FNCCI, I/NGOs, and other local organizations (MOE, 2009).

Nonetheless, clear data and information about how many agencies as well as institutes have been involved in vocational training sector is not available. In this regard, the major stakeholders have been facing difficulties to exactly know about the implemented vocational programs and about the support agencies involved. However, there is a provision of registration of vocational training institutes by various

government departments but still there is no reliable data on the status of vocational programs operating in Nepal (CTEVT, 2011). However, the data on the skill test are well maintained by the National Skills Test Board (NSTB). The data on the number of graduates who participated in the skill test are presented in Table 1 below;

Table 1

Level Wise Skill Tested Graduates of Vocational Training in Nepal (2009-2012)

SN	Level	Year			
		2009	2010	2011	2012
1	Elementary	1442	2100	2279	2267
2	Level 1	9404	13744	40082	55311
3	Level 2	1234	943	1202	3224
4	Level 3	212	230	327	803
5	Level 4	0	19	15	5
	Total	12292	17036	43905	61610

(NSTB, 2012)

Although the Technical and Vocational Education and Training has achieved quantitative progress, Nepal has yet to do very much for its qualitative improvements to lead to the sustainable employment and reasonable income of the trained youths (Bowlby & Schriver, 1973). In this context, the research has been able to identify the role of the skill certification in both the employment of the trained graduates and successfully compared the discrepancy of the role of these trainings with varied occupations and age, gender, qualification and ethnicity of the graduates.

According to Bowlby (1973), the evidence shows that an inverse relationship exists between the academic ability of a high school graduate and the rate of its return to society. It is likely to create human capital through investment in vocational training which would maximize national productivity. He proposed this idea on the

basis of these two assumptions: a) the investment in vocational training yields higher returns to students of low ability than to students of high ability, b) investment in general education yields the higher returns for high ability students. It shows greater benefits from the vocational training process to slower learners (Bowlby & Schriver, 1973). As indicated by the planners of vocational education in Nepal, several issues are responsible for the development of vocational education. The planners do not seem to have believed that vocational education is only for the benefit for less intelligent students. However, the implementers seem to have felt more strongly that vocational choices can be made by students, irrespective of their learning ability, at the age of 14 or 15years and onwards but it is too expensive for Nepal (Belbase & Jung, 1984).

As per the study report conducted by the Center for Educational Research, Innovation and Development in 1997, vocational graduates of a secondary school seldom found a job in their field of training and in reality, only a negligible number were finally employed in a job (CERID, 1979). The study also noted that a majority of the vocational graduates found to be enrolled in college usually in a field different from they were trained in. It is also reflected that there was an incompatibility problem in the curricula with the need of the labor market (CERID, 1979).

As per the discussion made by different literatures in the text above, it can be claimed that participating in any kind of training and skills development program not only plays a transformative role in individual's life but it is equally significant to organizations and overall national economic growth. The process of individual and organizational productivity thus can be regarded as an integral part of human resource development and management (ADB, 2004). Therefore, skill development can be regarded as a process of acquiring capabilities to perform various functions (Tripathi,

2003). Moreover, human capabilities can be improved through a better education system, vocational education and skill development training programs. It is helpful in enhancing employability and productivity as a whole. After all, one important way of fostering the economic development is through the execution of vocational education and training programs for unskilled work force (Mustafa, Abbas, Saeed & Anwar, 2005).

With regard to the research theme, out of a total working age population of 11 million people throughout the country, only 403,000 people who have participated in some form of skill development training program that is less than 4 % of the working population in the country (CBS, 2004). The job prospects for the students graduated from the technical schools are higher than for those who graduate from general schools. Makawanpur Technical School reveals its experience that more than 90% of the graduate students from the school are employed in jobs (Kusago & Phuyal, 2009). It suggests that a significant number of youths have been trained through the different types of skill development training, and skill certification is being a common practice among the certified vocations under the CTEVT. Thus, there is a bridge of skill certification between vocational skills training and employment. In this context, the research attempted to investigate the role of the skill test for the employment of the vocationally skilled graduates.

Review of Skill Test Variables

The evaluation of an employee's competencies in performing a job function is broadly a 'skill tests'. In this section, the researcher reviewed the typology of the skills, occupational skills standard, skills testing system of NSTB, accreditation of the skill test certificates and effectiveness of skill tests.

Typology of Skills

The Office of Technology Assessment (1994) explained two types of skills in vocational education: the academic skills related to reading, writing, and mathematics and the vocational skills related to occupation and work specific skills. It also mentions the workplace skills that encompass employability skills of the individual such as positive work attitudes, teamwork ability, effective communication among workers and; skills related to information and technology. Similarly, in the United States, core occupational skills strategies identified five different areas of skills: personal development skills, socio-economic development skills, information skills, resource management skills and technological skills (OTA,1994).

Occupational Skill Standard

An occupational skill standard is regarded as a written specification of the practical knowledge and skills and essential working experience performed by an individual in a specific occupational sector. It is clear that the vocational school must have a close working partnership with labor market requirement to keep abreast the labor market need and learning of the graduates. The vocational curriculum and school-to-work transition program will need to adapt the changing need of the labor market (CTEVT, 2012).

The work-based learning can play a vital role in vocational education and can make a significant contribution to the performance of students. Throughout the world, there have been radical changes in vocational education in the last two decades. As a work-oriented society, common realization to change from content-based learning to contextual work-based learning is inevitable to make the future workforce effective. However, the literature reveals that just providing work experience is not enough. There must be a bridge between school and work so that students can see the

relevance of their schools' activities. It is also evident that a portfolio of portable skills is now required as the notion of a job (Belbase, 2007).

Skills Testing System

There is a provision of Skill Testing Division under CTEVT that has the responsibility of certifying the skill level of individuals to know whether they have been trained appropriately or not. The Division has been conducting examinations to all basic, mid and higher-level manpower throughout the country and also conducts national skill competitions in various occupational areas. They also provide skill test opportunities to those who have acquired vocationally related skills formally from training courses or informally by any means. Similarly, the Division develops the profile of occupational classification suitable to the Nepalese context and provides an opportunity for enhancing a career of the industry workers and individuals (CTEVT, 1994).

Table 2

Requirements to Participate in Skill Test

Test Level	Requirements
LEVEL 1	▪ Literate and having minimum of one year work experience in related field. or; ▪ Successful completion of 160 hours vocational training in related field. or; ▪ Six months' work experience in the relevant occupation/trade field.
LEVEL 2	▪ Literate and having minimum of three years' work experience in related field. or; ▪ One year training (600 hours theory & 800 hours practical) in related field. or; ▪ One year work experience after level-1 passed in relevant occupation/trade
LEVEL 3	▪ Literate and having minimum five years' work experience in the related field. or; ▪ Two years' work experience after 1year training in a relevant occupation. or; ▪ One year work experience after skill level-2 passed in relevant occupation
LEVEL 4	▪ Ophthalmic Assistant, Level-3 passed with 3 years' experience /1year training. ▪ Certificate level and three years' experience/ one year training.

(NSTB, 2012)

Accreditation of Skill Testing Certificate

According to the CTEVT provision, the accreditation of the skill testing certificate system in Nepal can be found at four varying levels as follows.

Table 3

Level of Skill Test and Equivalent Recognition

Skill Level	Equivalent Recognition
Level One	Non-Gazette Third (Technician) or Level 3
Level Two	Non-Gazette Second (Technician) or Level 4
Level Three	Non-Gazette First (Technician) or Level Five
Level Four	Gazette Third (Technician) or Level Six

(NSTB, 2012)

Effectiveness of Skill Test

The effects of vocational training and skill test on youth can be measured in terms of the subsequent earnings and career progress in the labor market during employment (Greenhalgh & Mavrotas, 1994). The American Educational Testing Services has identified five major reasons of skill testing they are; placement, prediction, assessment, diagnosis and evaluation (Katz, 1973). Placement concerns with participation of the trainee in a skill test system. Prediction involves a measure which indicates future performance of the participant. Assessment measures the participant´s competency in a specific trade/occupation. The diagnosis function of testing is largely applied to determine the causes of failure and its remedial measures. The evaluation measures the effectiveness of the skill test system and suitability of the vocational curricula (Horne, 1984).

With regard to effectiveness of skill test system, there are basically three view-points concerning the of vocational education and training in Nepal. The first view-point from Government's perspective is to raise the standard of the persons trained by increasing their quality and quantity. Second view-point from the employers' perspective on the skill test system is that it makes the recruitment of the new technical staff easier and it can make the assessment of existing staffs to provide promotions easier. Third view point from the employees' perspective is that the skill tests help to achieve proof in his/her occupational and trade skill (Kafle, 2007). It provides freedom to the employee for moving more in response to career opportunities in the labor market. It increases opportunities to join the labor market and it also makes training programs more efficient and effective, which is also a matter of pride and status of the training institutions (NSTB, 2012)

Conceptual Framework

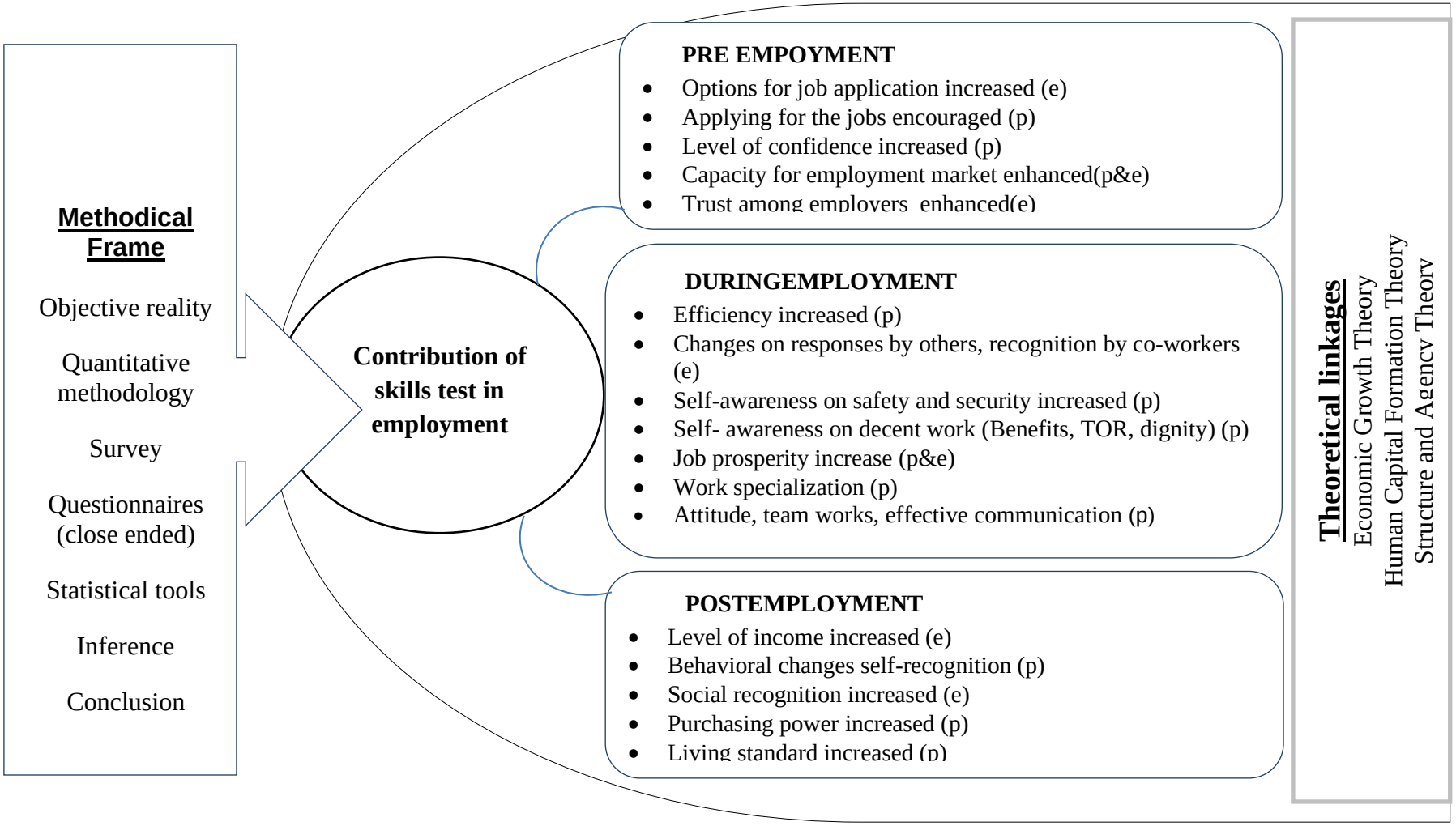
Most of the youths in Nepal have dropped their school education for a number of reasons. A large number of out-of-school youths have a choice to go either for the formal TVET program, livelihood related training or direct to the labor market without any skill training and certification. Very few of them used the non-formal education system before entering the TVET program. Those graduates who have gone through the formal TVET or livelihood trainings are mostly certified through the National Skill Testing Board (NSTB). On the foundation of the thematic review, historical review, philosophical review, theoretical review, policy review, empirical review and review of the skill test variables and existing practice and pre-determination of CTEVT, the researcher developed a conceptual framework. The hypotheses are developed and tested against each research question. The hypothesis, to measure the role of the skills test at pre-employment, during- employment and post-employment stages has been tested. Similarly, the roles of skills test to the employment through personal and external traits of the graduates have also been tested. The significance tests of the statistical hypothesis have also been measured. Finally, the disaggregation of the test hypothesis with regards to the sex, marital status, age group, ethnicity, geographic origin and educational level of the graduates have also been tested.

This framework guided the researcher and became a road map to the whole research process. Hence, this framework supported the researcher to conceptualize and track the overall study process in a correct way. Moreover, this frame guided the researcher to present the idea from the beginning to the final thesis so that the readers could get a concept of the whole study.

The methodological frame (on the left side of the framework) shows the hierarchy of overall research methodology from the ontological view to the point of conclusion. The middle parts (in the three boxes) enlists the different employment stages as pre-employment, during-employment and post-employment stages which are supposed to be contributed by the skills test of the graduates. The pre-employment stage is defined as a time period between the completion of the skill test and the joining of any employment. The during-employment stage is defined as the overall work tenure of a graduate. Similarly, the post-employment stage is defined as the afterward stage of any employment including the transition period for the succeeding employment. Moreover, during the conceptualization of this research, the disaggregation of the different traits of an individual as a 'personal (p)' and 'external (e)' were also defined. This has supported the researcher to see the contribution of the skill test to the personal and external traits of the graduates separately. The also attempted to explain the phenomena with the support of some theoretical aspects viz. human capital formation theory, structure and agency theory and economic development theory as shown in Figure 1.

In this chapter, researcher reviewed different literatures regarding the skills training and tests. The historical prospective, theoretical interconnection of the study and different policy provision in Nepal were majorly reviewed. Moreover, skill testing system, defined occupational standards and variables and effectiveness of the skill test were also reviewed to develop a conceptual framework of the study.

Figure 1: Conceptual Framework of the Study



CHAPTER III

RESEARCH METHODOLOGY

In this chapter, the research methodology and design applied to address research problems and corresponding questions has been presented. The content includes research paradigms, philosophical views, research design, field of the study, population and sample determination procedure, data collection techniques, data analysis and interpretation, reliability/validity as well as ethical considerations.

Research Paradigm: Post-positivism

A research paradigm is a fundamental set of beliefs for guiding the actions and interactions of the researcher during field study (Creswell, 2009). The researcher has applied post-positivist paradigm to advocate the objective reality and truth. The researcher owned the deterministic view point that believes on experimental knowledge by applying the cause and effect relationship. Thus, this research represents the traditional form of research by following the quantitative method to explore objective reality or absolute truth of knowledge (Phillips & Burbules, 2000). The researcher identified and assessed the causes that may influence the effect which is assumed as an outcome of the study i.e. contribution of the skill test to the employment of the vocationally trained graduates. By experimenting on the cause and effect relationship, the researcher derived knowledge by developing the numeric measures of observations and studying the facts within the individuals to bring objective knowledge that exists outside the field (Creswell, 2009). In such a way, this philosophical consideration holds that the cause and effect relationship between the tested variables.

Therefore, the explored knowledge is based upon careful observation and measurement of the objective reality that exists in the research field. The development of numeric measures of observations and studying facts within the individual was vital to the researcher for this research (Phillips & Burbules, 2000).

Ontologically, the researcher believed the skill test (as social phenomena) and its contribution (as their meanings) to the employment as an existence that is independent of social actors or from any subjective perceptions. The researcher assumed the existence of objective nature of reality. Thus, it is easy to understand and explain and how reality exists in experiential world. It helped the researcher to sensitize and conceptualize the existence of reality in research phenomena (Creswell, 2009). For exploring the reality, the researcher was guided by the thought system that knowledge is out there and that it can be measured objectively (Creswell, 2012).

To be more specific, the skill tested graduates were taken as the survey graduates and the contribution of skill tests to their employment was as a tangible reality in the field. The evidence of the contribution of skill tests was explored as an objective reality which can be validated by every researcher as a truth in the field. Thus, the ontology of this research is exploration of the falsifiable truth lying the skill tested graduates through the objective measurement of the evidence using the survey method. Furthermore, the contribution of the skill test to the employment was abstracted as the ‘facts are facts’ manner.

Epistemologically, the researcher believed on hypothetic-deductive logic of generating/testing the existing truths (Creswell, 2009). In this research, the contribution of the skill test as an empirical knowledge, which relies on objective facts, were tried to establish and demonstrated. In general, there are different sources of knowledge like intuitive, authoritarian, logical and empirical where researcher

applied deductive (logics from general to particular) reasoning methods to excavate truth i.e. generalized form of knowledge (Cohen, et al., 2007). In this research, all the skill trained graduates were supposed to be certified by the skills testing system and hopefully linked with employment afterwards. Though there might be various other factors contributing to their employment, the ‘skills test’ could have been one of the contributing factor to their employment. On the basis of this logical assumption, the researcher tried to measure the relation of the skills test with the employment. Thus, this kind of objective reality that existed in the field was measured by this research. Moreover, the logical knowledge generated as a result of the analysis of the primary data, the researcher findings and conclusions can be perceived as empirical knowledge.

Research Design: Quantitative

The purpose of the study was to analyze the relationship between the short term vocational test and the employment status of the graduates. Taking this into consideration, qualitative methodology following survey was applied to collect numerical description of relevant aspects of the sample graduates to investigate against the specific research questions. In the survey process, a specifically defined group of skills tested graduates were asked to answer a number of questions (Baker, 1994). The researcher designed sampled a survey method to collect the data from a large group of populations to reduce the cost implication to go for the census. The information collected from the samples has been used to make inferences about the population as a whole.

The essence of the survey method is 'questioning individuals on a topic/s and then describing the responses'. The researcher has envisioned two purposes from this design; to describe the aspects of relation between the skill test and employment

measured in the sample graduates and also testing the hypothesis about the nature of relationship within a population. Of the various forms of survey, the researcher has applied a specialized survey that covers skill test and employment as the major subjects in the field of study (United Nations, 2007). The data was collected from the selected representative sample and analyzed with the support of the SPSS 23 software. Descriptive statistics were generated on each item comprising the preference rating on each question denoting the Likert Scale from 1 to 5. The ordinal scale measures the levels of agreement or disagreement with the stated questions. It assumed that the strength of preference or experience of the graduates could be measured from the continuum of strongly agree to strongly disagree. It also shows that preferences or attitudes can be measured. The descriptive statistics encompassing the Mean, Median and Mode scores and frequency distribution of each response were applied. The findings of this research can be generalized to the population who attended the skill test after completing their Level One vocational training from private training institutions.

Field of Study

According to CTEVT, comparatively most of the skill tested graduates are from Central Development Region, which was the field of study. The total population of the study were the level one skill tested graduates who were trained by the private training institutions and were skill tested by NSTB in 2012. The population was considered as of individuals that has one or more characteristics in common that are of interest to the researcher (Best &Kahn, 2004). All the trained graduates sit on skill test for Level One conducted by the NSTB were assumed as a population of having common characteristics in terms of the level of the skill test and defined the standard of skill testing procedure by NSTB. The identification of the skill tested graduates for

vocational skill training was done through the support of NSTB and training providers. Graduates of technical education certified by CTEVT were not included in the field of study.

Population and Sampling Procedure

A multi-staged random sampling method was applied to determine the sample population and sample number (Burton, 2007) considering the sampling plans where sampling is carried out in stages using smaller and smaller sampling units in stage. The vocational skill tested graduates who completed their short-term vocational training and skill test in 2012 made the total population of the study. When the researcher had drafted an idea of thesis during 2015, it was expected that there should be at least 2-3 years of post-training period to observe the real employment after training. Hence, the researcher had opted the data of 2012 as more reasonable to conduct the research. The highest number of the graduates were trained by the private training institutes and the opting for the skill test was from the Central Development Region, which constituted the theoretical population. From the theoretical population, the sample population was determined by considering the institutions which had the highest number of graduates (top three). Finally, the sample number was determined randomly by applying the sample determination formula.

At the first stage, there were a total of 55,311 short term vocational skill tested graduates for Level One in 2012 (NSTB, 2012) taken as the total population. At the second stage, out of the total population, the Central Development Region had the highest number of the short term vocational skill tested graduates (19,651), forming the theoretical population (NSTB, 2012). At the third stage, 1913 short term vocational skill tested graduates from the institutions which had the highest number of graduates were selected as the population of the study i.e. sample population.

Table 4

Sampling Procedure

Stages	Reasons	Number	Remarks
First	Short term vocational skill tested graduates in 2012 graduated from NSTB	55311	Total population
Second	Development region possess highest number of short term vocational skill tested graduates (central development region)	19651	Theoretical population
Third	Possess highest number of short term vocational skill tested graduates from a private training institutes (top three)	1913	Sample Population
Fourth	Random sample generated from the below mentioned formula	305	Sample number

(NSTB, 2012 and analyzed by the researcher)

Finally, 305 sample graduates were selected for collecting the primary data which was generated with 95% confidence level by using the sample size determination formula (Krejcie& Morgan, 1970).

Sample size (n) = $\frac{\chi^2 * N * (1-P)^2}{ME^2 (N-1) + (\chi^2 * P * (1-P))}$

Where,

n = required sample size

χ^2 = Chi square for the specified confidence level at 1 degree of freedom (Value* 3.841 for 5% confidence level with 1 degree of freedom)

N = Population size

ME = Desired Marginal error (expressed as a proportion)

P = Probability of success (0.5 value for unknown population)

Q= (1-P, i.e. 0.5 value for unknown population.

Techniques and Tools of Data Collection

In this study, the researcher applied the survey questionnaire as a technique and a questionnaire sheet as the tools of data collection. On the basis of the review of literatures, assumed theories and consultation with some experts, the researcher had made the preliminary idea about setting the questions. To meet the purpose of the study and for addressing the process of forming specific research questions, the researcher drafted the structured questionnaires. A majority of the question-statements included were scaling type or ranking questions where graduates were asked to rank the available answer to each of the question-statements on the Likert scale of given range of value from 1 to 5. The researcher designed this Likert scale adopting to each question statement to obtain the respondent's preference or degree of agreement with the given statements.

The researcher considered some major aspects while formulating the questionnaire: They were the research purpose and leading questions, need for measurement, level understanding of the graduates and targeted research audiences, data collection procedures and time, language and measurement scales. On the basis those considerations, the final draft was prepared and consultation with experts were done. Then the second level refinement in some of the questions was also done as per the suggestions from the experts. The final questionnaires set was finally edited, formatted and printed as required. The questionnaire is also annexed (see Annex 1).

Data Collection Procedure

To collect data from the field, the researcher allocated three months' time. The researcher made the field visits and interviewed the selected graduates with the support of training providers. The structured questionnaires were filled out from the sample graduates after the orientation given and they were collected back by the

researcher. The information included several aspects of household behavior, demographic composition, training information, occupational sectors, employment status, and satisfaction with the quality of training. The total number of graduates for some variable fewer than total sample size. For example, only 260 responded regarding their education level and only 295 responded about their marital status. Similarly, about their age and special condition, 303 responded to the question. The major portion of the questionnaires has been designed to seek their opinion about role of the skill test for employment disaggregating the pre-employment, during-employment and post-employment stages. The five point Likert scale was used designed to seek their preferences to each possible question-statement in the sheet. Finally, the filled sheets of the questionnaire were collected back by the researcher within the given time period.

Data Analysis and Interpretation

The researcher arranged and analysed the collected data in a systematic way so as to accumulate understanding and present the generalized knowledge to other stakeholders (Bogdan & Biklen, 1998). Thus, all the filled-in questionnaire sheets were systematically recorded, arranged and analysed by the researcher. Since the researcher had opted the quantitative design, the data analysis was expected to turn the raw numbers into meaningful data through the application of rational and critical thinking. Considering the chances of wrong interpretation of the figure, the researcher applied fair and careful judgment. Before analyzing the data, adequate time was spent on getting familiarity with the data. The SPSS software (version 23) was used for managing and statistical interpretation of the data.

To measure the overall contribution of the skill tests to employment, a descriptive analysis of data using Mean, Median and Mode of graduates' preferences

was done. The measures of association of the skill test contribution among all stages of the employment (pre-employment, during- employment and post- employment stages) was analyzed through Spearman's Rank Correlation. Furthermore, the significance tests of statistical hypotheses and segregation results of the test hypotheses were also done through the Mann Whitney and Kruskal Wallis test. While formulating the test, particular attention was given to the number of the valid (no missing) cases.

Reliability and Validity

The researcher considered reliability and validity during the study. At the same time, the researcher also considered some other aspects like, informed consent, confidentiality and trustworthiness for ensuring rigorousness. And finally, the researcher also realized the personal role of researcher as an independent researcher as part of the ethical considerations.

While considering the reliability of this quantitative research, a reliability measure through internal consistency was specially considered. To check the internal consistency of the questionnaire the researcher conducted a pilot test of the draft questionnaire with the support of some training institutes. The researcher conducted the pilot test with 30 (10% of total sample size) graduates from Kathmandu. These graduates were similar to the nature of the targeted samples but not exactly the sampled one (i.e. the ones other than the sampled graduates). The reliability test was done through calculating the Cronbach alpha value which has been presented in detail below. The review was again done after having a field test of the draft questionnaire and a few revisions were made again. The Cronbach alpha was used because it provided a coefficient of inter-item correlations that measures the internal consistency

among the items (Cohen et al., 2007, p.148). In this attempt, the researcher used the given formula (Cohen, et al., 2007, p.506).

Alpha= nrii /1+ (n−1) rii

n=the number of items in the test or survey (e.g. questionnaires)

rii =the average of all the inter-item correlations.

The value of Cronbach alfa values ranges from 0.70 to 0.79 is statistically supposed to be reliable. When the alfa value as weaker internal consistency or less than 0.7, then the tools was revisited before collecting the data. Finally, the researcher calculated the alfa value from 10% of the samples which showed the value 0.711 for internal consistency implying the meaning that the developed tools were consistent.

In this research, the researcher maintained validity through a careful sampling process, applying appropriate tools and techniques for data collection and appropriate statistical analysis of the collected data (Cohen, Menon & Morission, 2007). The researcher considered content, construct, criterion and consequential validity. Content validity has been assured through the test of correlation between individual test item and overall contribution, “r” value shows each item contributes significantly to total sum). Construct validity was assured thorough appropriate literature review, maintained coherence of the research problem, research question, tools, data collection and analysis. Similarly, criterion validity assured through scientific sampling, appropriate tools & uniqueness of samples. The consequential validity has also been maintained by ensuring the independent role of the researcher.

By applying content validity, the researcher attempted scientific sampling and measured the significance test of the variables before doing analysis and interpretation. Similarly, by applying construct validity, the researcher triangulated literature review, maintained coherence of the research problem, research question,

tools, data collection and analysis for a meaningful interpretation. To check statistical validity further, a correlation with individual item with the sum of total item was calculated. The table showing test result is also been annexed (See Annex 3).

Ethical Considerations

For maintaining ethical considerations in the study, the researcher reflected upon the issue of privacy and consent to ignore any kind of bias (Creswell, 2009). Thereby, the privacy of the graduates and their attitude towards their income, employment and work environment and benefits from the employers were matters of the confidentiality. Similarly, simple and explicit language was used for communicating this study to the readers. Along with that, reflecting upon the ideas of Kvale (1996), the researcher was guided mainly by two ethical aspects: (i) responsibility to commit the researcher's academic as well as professional career so that his study can contribute to yield a body of knowledge and, (ii) independence of research that it was conducted more independently to ensure the quality of the study and maintain the independence of research (Kvale, 1996). The researcher has also considered well a respect and equanimity to all the stakeholder of this research work (Bhattarai, 2010). The researcher has tried to acknowledge all kinds of support furnished by the different stakeholders and different levels.

In this chapter, researcher formulated the whole research methodology. The researcher discussed about the post-positivist paradigm has been applied to advocate the objective reality and truth. Taking this into consideration, the discussion about the qualitative methodology applied to collect numerical description of relevant aspects of the sample graduates was also made. Similarly, field of study, procedure for sampling, data collection, management and analysis procedure has also been discussed in this chapter. Moreover, researcher has also discussed about the ethical aspects of the

research considering the informed consent with sampled graduates for their opinion and their acknowledgement. The commitment of researcher on confidentiality, independency, equanimity and academic professionalism has also been elaborated.

CHAPTER IV

DATA ANALYSIS AND PRESENTATION

This chapter includes the presentation, analysis and interpretation of the collected data. The data were collected to justify the research questions: 'Does skill test contribute personally and externally to the graduates' pre-employment stage, during-employment stage and post-employment stage?' Similarly, the chapter also includes the analysis of how the contribution of the skill test is related to age, gender, qualification, ethnicity, marital status and origin of the graduates. Ultimately, primary data have been analyzed and interpreted under these different sections: demographic and geographic information of the graduates, relation between skill test and employment, significance test of statistical hypotheses and segregation results of the test hypotheses.

Demographic Information about the Graduates

In this section, the demographic and geographical information like age, sex, ethnicity, geographical origin, educational background and marital status of the graduates have been presented descriptively. Likewise, special condition and employment status along with the perception of each of the graduates regarding the quality of training programs have also been analyzed in this section.

Table 5 below shows the data with their corresponding percentage about the age, ethnicity, geographical origin, educational level and marital status of the graduates.

Table 5

Demographic and Geographic Information of the Graduates

Demographical Information	Sex		Total
	Female	Male	
Age[1]			
16-25	53 (29.3%)	39 (32.0%)	92 (30.4%)
25-30	74 (40.9%)	63 (51.6%)	137 (45.2%)
30-35	32 (17.7%)	14 (11.5%)	46 (15.2%)
35-40	19 (10.5%)	6 (4.9%)	25 (8.3%)
40 Plus	3 (1.7%)	0	3 (1.0%)
Total	182 (100%)	123 (100%)	303 (100%)
% of Total	59.7%	40.3%	100.0%
Geographical Origin Mountain	4 (2.2%)	3 (2.4%)	7 (2.3%)
Hill	97 (53.3%)	85 (69.1%)	182 (69.7%)
Terai	81 (44.5%)	35 (28.5%)	116 (38.0%)
Total	182 (100%)	123 (100%)	305 (100%)
% of Total	59.7%	40.3%	100.0%
Ethnicity			
Brahmin	32 (17.6%)	23 (18.7%)	55 (18%)
Chhetri/Thakuri	44 (24.2%)	18 (14.6%)	62 (20.1%)
Dalit	9 (4.9%)	6 (4.9%)	15 (4.9%)
Janajati	95 (52.2%)	73 (59.3%)	168 (55.0%)
Others	2 (1.1%)	3 (2.4%)	5 (2.0%)
Total	182 (100%)	123 (100%)	305 (100%)
% of Total	59.7%	40.3%	100.0%
Education level			
Illiterate	11 (6.7%)	1 (1.1%)	12 (4.6%)
Primary	51 (30.9%)	6 (6.3%)	57 (21.9%)
Secondary	72 (43.6%)	61 (64.2%)	133 (51.2%)

[1] Age category of 16-24 are grouped as adolescent in a single bracket

Demographical Information	Sex		Total
	Female	Male	
Higher Secondary	29 (17.6%)	24 (25.3%)	53 (20.4%)
Bachelors and	2 (1.2%)	3 (3.2%)	5 (1.9%)
Total	165 (100%)	95 (100%)	260 (100%)
% of Total	63.4%	36.6%	100.0%
Marital status			
Married	110 (63.2%)	54 (44.6%)	164 (55.6%)
Unmarried	64 (36.8%)	67 (55.4%)	131 (44.4%)
Total	174 (100%)	121 (100%)	295 (100%)
% of Total	58.9%	41.1%	100.0%

From the data, it was found that a majority (60%) of the graduates were women and the remaining 40 percent were men. The composition of the graduates shows that the participation of women was higher in all categories of age. The data also indicates that a significant number of women were involved in technical education and vocational skill development trainings and also received the skill test certificate. There might be various motivational factors to this women participation in vocational sectors.

At the same time, age is one of the prominent variables that determines productive professional or economic life of any individual. In fact, the age of any individual helps to categorize him/her into dependent or independent group. It is a fact that children and aged people cannot engage in any kind of economic or professional activities. From the fact, it was found that the majority of the graduates (45%) were categorized under the age group of 25-30 and a small minority (1.0%) were in the age category of above 40 years. So, the majority of the graduates were from age group 25 to 30 years followed by the adolescent age group 16 to 25 years. Further, there is very

minimal participation of youth above 40 years of age. As the data show, the vocational training and skill test was more attractive for younger youths (16 to 30 years).

Similarly, religious and ethnic values and norms guide the occupational and economic status of any individual in society. Majority of the socio-cultural structures in the country are multi ethnic and multi religious. The research field, Central Development Region of Nepal, is not an exception to this fact. From the data, it was found that a majority (55%) of the graduates belonged to the Janajati ethnic group and smallest minority (4%) of the graduates belonged to Dalit ethnic group, while 20% and 18% of the graduates were from Chhetri/Thakuri and Brahmin ethnic groups respectively. The remaining 2% of the graduates were from the other ethnic groups such as the Muslims. The data indicates that the youths from every caste or ethnic group who were employed were from those who were equipped with vocational training and they were skill tested.

In Nepal, the literacy rate is significantly lower in compared to those in developed countries. However, active youths are being involved in different technical and vocational education and training. From the data, it is found that largest numbers of graduates (51%) passed secondary level and only 2% of the graduates have passed Bachelor and above. The remaining 22% and 20% have passed primary and higher secondary level respectively. Five percent graduates were found illiterate. Though there was high percentage of graduates from higher secondary level, the data indicated that even some illiterate and primary level passed graduates also got employment opportunities just because they had got vocational training and skill test. It can be believed that there is greater relevancy of the skill testing system to the

employment opportunities even for the illiterate youths having various occupational skills.

There were graduates from all three geographical regions: the Mountain, the Hill and the Terai, though they were trained and were working in the Central Development Region. The researcher tried to explore the inflow of the skill-tested graduates in the Central Development Region and tried to compare the numbers respectively from all three geographical regions. This was helpful to make strategies which could provide accessibility to the youths in regions having less or no opportunity of vocational trainings and the skill testing system. From the data, it was found that 59.7% graduates were from Hill region and 2.3% percent graduates from the Mountain region representing the highest and lowest number respectively. The remaining 38% of them were from the Terai region. The data indicated that a significant number of youths who completed the short term vocational training program and got the skill test belonged to the Hill and the Terai regions. In contrast, there was a minimal number of skill tested graduates from the Mountain region due to a small number of active population in the area, poor accessibility of technical education and vocational training program and difficult physical access to the Central Development Region.

Special Condition of the Graduates

The physical condition of an individual and the socio-economic and political condition of a country equally affect the life of an individual. There are people compelled to live with having physical and mental disorders due to disability by birth, health complications, consequences of political movements, war etc. The study tried to categories some graduates into special conditions such as: differently-able, single women, war affected etc.

Table 6 below shows the data on participation of graduates with special conditions and their corresponding percentage.

Table 6

Special Condition of the Graduates

Special Condition	Female	Male	Total
Disabled	1 (50%)	1 (50%)	2 (100%)
Single Woman	1 (100%)	0	1 (100%)
War Affected	0	1 (100%)	1 (100%)
Not special condition	179 (60%)	120 (40%)	299 (100%)
Total	181 (60%)	122 (40%)	303 (100%)

From the data, it was found that a majority (98.7%) of the graduates were normal or categorized as ‘not in special condition’. They were physically and mentally fit during their working and occupational life. The remaining 1.3% graduates, four in number, were under the ‘special conditions’ group: two graduates were found differently-able, one was a single woman and the other one was war affected. The data indicated that the smallest number of graduates were under ‘special condition’. This was due to reasons like poor enrollment opportunities, poor inclusiveness and physical difficulties in some of the vocations.

Employment Status of the Respondent

In general, the occupational status of an individual determines the level of income. The graduates of the study were involved in different trade and occupation-based activities but most of them were planning to get higher level of trade and occupational skills due to earning differences as well as higher social status attached to the higher level of occupational qualification.

Table 7 below presents the data on the employment status of the graduates and the corresponding percentage.

Table 7

Employment Status of the Respondent

Employment Status	Female	Male	Total
Unemployed	0	6 (5.1%)	6 (2.0%)
Employed related to training	177 (100%)	110 (94.0%)	287 (97.7%)
Employed but not related to training	0	1 (0.9%)	1 (0.3%)
Total	177 (100%)	117 (100%)	294 (100%)
% of Total	60.20%	39.80%	100%

From the data, it was found that a great majority (94.2%) of the graduates worked within the sectors in which they were trained, but the smallest minority of them (2%) were unemployed and the remaining 3.8% of the graduates worked in sectors other than those they were trained in.

Quality of the Training Programs

The outcome of vocational education and training programs largely depends on the attitude and perceptions of the trained graduates. The level of social networking and working experience of the graduates play a determinant role for achieving higher outcomes from their occupational skills. Therefore, it is necessary to analyze how the trained graduates perceived and reflected upon the quality of the training program and how the training program supported them at the different phases of employment.

Table 8 shows the data about the perception of the trained graduates towards the quality of the training programs.

Table 8

Graduates Perceptions towards Quality of the Training Programs

Statements (after employment)	N	Percent	Median	Mode
Strongly Satisfied and Satisfied	295	96.72	3	3
Partially satisfied	10	3.27		
Total	305	100		

The Mode of their rating in descriptive preferences (i.e. Likert type scaling) was 3 which implied that the largest number of graduates were strongly satisfied with the quality of training they received. The Median of the distribution was also 3 (i.e. moderately satisfied), which means that 148 graduates were aligned towards agreeing the statement of being satisfied from the quality of the training received. Based on this result, it can be understood that 50% graduates were strongly satisfied and the remaining 50% graduates were for the 'partially satisfied' and 'satisfied' categories. That is why it can be concluded that the distribution was denser in areas of 'strongly satisfied' and 'satisfied' categories respectively, with 97% of the graduates being satisfied with the quality of the training received.

Relation between the Skill Test and Employment

This section explains the contribution of the skill test to employment generation. In this section, the role of the skill test at the pre-employment, during-employment and post-employment stages. Similarly, the descriptive analysis using the overall mean, median and mode, has been used to explain the overall contributions of the skill test to the above described employment stages. It also includes the disaggregated analysis of contributions of the skill test to the personal and external traits of the graduates at different employment stages.

Role of the Skill Test at Pre-employment Stage

In this sub-section, the responses to the statements related to role of the skill test at the pre-employment stage have been analyzed using the Likert Scale.

Table 9 below presents the Ordinal Data-1 (Mean, Median and Mode of the Likert scale) related to the role of the skill test during the pre-employment stage.

Table 9

Mode and Median of all Likert Scale (Ordinal Data-1)

Role of skills test in pre-employment stages	N	Mean Rank	Median	Mode
After skill tests, I see many job options	300	4.2	4.00	4
After skill tests, I had applied for many job options	297	4.0	4.00	4
After skill test my self-encouragement to apply has increased	299	4.3	4.00	4
After skill test my training provider institute encourages me to apply as many as possible even to the international market	305	4.5	5.00	5
My level of confidence to face the job interview increased after skill test	298	4.4	4.00	4
My competency for employment market has been increased	298	4.3	4.00	4
After the skill test I feel the increased level of trust among the employers and employees	288	4.2	4.00	4
After the skill test employers started to believe in my technical knowledge, skills and inner personal ability	295	4.2	4.00	4

Referring to Table 9, the Mode for the first statement (i.e. after skill tests I see many job options) was calculated to be 4, implying the largest number of graduates agreed that they saw many opportunities to start the employment after skill test. The

Mean rank and the Median of the distribution were also 4.2 and 4 respectively (i.e. Agree), which means that nearly 50% of the graduates were aligned towards agreeing the first statement. Thus, 505 graduates were in the category of Strongly Disagree, Disagree and Neutral and the remaining 50% graduates in Strongly Agree and Agree categories. That is why, it can be concluded that the distribution was denser in the areas of 'Strongly Agree' and 'Agree', which implies that most of the graduates agreed that they saw many job options after having the skill test certification.

Similarly, the Mode in the rest of the statements as listed in table was mostly 4 and 5 implying that the largest number of graduates agreed with the corresponding statements. The Mean rank and Median of distributions for the other statements were also 4 (i.e. Agree), which means nearly 50% of the graduates were aligned towards agreeing the respective statements. Thus, it can be understood that 50% of the graduates were on the side of Strongly Disagree, Disagree and Neutral; and the remaining 50% of them aligned to Strongly Agree and Agree. Then, it can be concluded that the distributions were denser in areas of Strongly Agree and Agree, which implies that most of the graduates agreed with each corresponding statement.

Role of the Skill Test at During-employment Stage

In this sub-section, the responses to the statements related to the role of the skill test at during- employment stage has been analyzed using the descriptive rating viz. the Likert Scale.

Table 10 below highlights the Ordinal Data-2 (mean, median and mode of the all Likert scale) related to the role of the skill test at the during-employment stage.

Table 10

Mode and Median of all Likert Scale (Ordinal Data-2)

Role of skill test in during- employment stages	N	Mean Rank	Median	Mode
My work efficiency has increased	293	4.4	4.00	4
Responses by coworkers during work has positively changed	296	4.1	4.00	4
Recognition by coworkers to me has increased	297	4.2	4.00	4
My self-awareness in work place safety & security has increased	297	4.3	4.00	4
My self-awareness on decent work has been increased	295	4.3	4.00	4
My self-awareness on employment benefits has increased	297	4.2	4.00	4
My self-awareness about duties & responsibility has been increased	297	4.3	4.00	4
My self-dignity has been increased	297	4.3	4.00	4
My capacity or specialization in my job has increased	293	4.4	4.00	4
I can work in team better than before	297	4.4	4.00	4
I can communicate better than before	297	4.4	4.00	4
My attitude towards vocational work has positively changed	296	4.3	4.00	4

The data in Table 10 show that the Mode for the first statement (i.e. my work efficiency has increased) was 4, implying that the largest number of graduates agreed that their work efficiency during the employment stage has increased due to the skill test. The Mean rank and Median of the distribution was also 4.4 and 4 respectively (i.e. Agree), which means fifty percent of the graduates were aligned towards agreeing the first statement. This further means that 146 graduates were in favor of

Strongly Disagree, Disagree and Neutral; and the remaining 147 graduates on the Strongly Agree and Agree side. The denser distribution to Strongly Agree and Agree categories implies that most of the graduates agreed that their work efficiency during the employment stage has increased due to the skills tests.

Similarly, regarding the rest of the statements too, the Mean, Median and Mode were 4, implying that the largest number of the graduates agreed with the corresponding statements.

Role of the Skill Test at Post-employment Stage

In this sub-section, the responses to the statements related to role of the skill test at the post-employment stage have been analyzed using the Likert Scale.

Table 11 below presents the Ordinal Data-3 (mean, mode and median of the all Likert scale) related to the role of the skill test at the post-employment stage.

Table 11

Mode and Median of all Likert Scale (Ordinal Data-3)

Role of skill test at post-employment stage	N	Mean Rank	Median	Mode
My career prosperity has increased	294	4.3	4.00	5
I upgraded my skill level more than before	296	4.4	4.00	4
My level of income has increased	296	4.4	5.00	5
My ability in self-recognition has increased	298	4.3	4.00	4
The number of job offers to me has increased	298	4.2	4.00	4
My social prestige has increased	299	4.2	4.00	4
My purchasing power has increased	301	4.4	4.00	4
Me and my family's access to better health care has successfully increased	298	4.0	4.00	4
My children have increased their access to educational opportunities and trainings	298	4.0	4.00	4
I became able to buy the fixed assets	288	3.5	4.00	4

The Mode for the first statement, ‘My career prosperity has increased’ was 5, implying that largest number of graduates strongly agreed that their career prosperity increased at the post- employment stage due to the skill test. The Mean rank and the Median of the distribution was 4.3 and 4 respectively (i.e. Agree), which means that 147 graduates aligned themselves towards agreeing the statement. It can be concluded that the distribution is denser to the areas of Strongly Agree and Agree, which implies that most of the graduates agreed that their career prosperity increased at the post- employment stage due to the skill test.

Similarly, for the rest of the statements too, the Modes was 4 and 5 implying that most of the graduates agreed with the corresponding statements. The Mean and the Median of the distribution is also 4 (i.e. Agree), which means that fifty percent of the graduates aligned themselves towards agreeing the statement.

Overall Contribution of the Skill Test to all Stages

This section has analyzed the overall Mean, Median and Mode related to the contribution of the skill test to the graduates at the three employment stages (pre-employment, during-employment and post-employment stages) through personal and external traits. To materialize the idea, the data were analyzed using the descriptive rating to all the responses viz. the Likert Scale.

Table 12 below highlights the overall Mean, Median and Mode for the overall contribution of the skill test to employment at all the three stages.

Table 12

Contribution of the Skill Test to all the Three Stages

Overall contribution of skill test	Mean	Median	Mode
At pre- employment stage	4.13	4.23	4.00
At during-employment stage	4.12	4.25	4.45
At post- employment stage	4.04	4.17	4.00

From the above table, it was found that Mean Rank of overall contribution of the skill test in pre-employment stage of graduate was 4.14 implying that concentration of the responses was towards agree side. The Median for the same was 4.23, implying that more than 50% of the responses were agreeing and strongly agreeing to the statements. Further, Mode was 4, implying that maximum number of graduates agreed that there was overall contribution of the skill test in pre-employment stage of the graduates through their personal and external traits.

Similarly, it was found that the Mean rank of the overall contribution of the skill test at the during-employment stage of the graduates was 4.12 which implies that concentration of the responses was on the Agree side. The Median for the same was 4.25, suggesting that more than 50 percent of responses were agreed and strongly agreed to the statements. Further, the Mode was 4.45, indicating that the largest number of graduates agreed that there was an overall contribution of the skill test to the during-employment stage of the graduates through their personal and external traits.

Lastly, it was found that the Mean rank of overall contribution of the skill test at the post-employment stage of the graduates was 4.04, implying that the concentration of the responses was on the Agree side. The Median for the same was 4.17, which implies that the more than 50 percent of the responses agreed and strongly agreed to the statements. Further, the Mode was 4.0, suggesting that the largest number of graduates agreed that there was an overall contribution of the skill test to the post-employment stage of the graduates through their personal and external traits.

Overall Contribution of the Skill Test to Personal and External Traits

This section has analyzed the overall Mean, Median and Mode related to the contribution of the skill test to the graduates' employment through personal and external traits. To materialize the idea, the data were analyzed using the descriptive rating in all the responses viz. the Likert Scale.

Table 13 highlights the overall Mean, Median and Mode for the overall contribution of the skill test to the employment through and external traits.

Table 13

Overall Contribution of Skill Test in Personal and External Traits

Overall contribution of the skill test	Mean	Median	Mode
To personal traits	4.29	4.50	4.20
To external traits	4.46	4.20	4.31

From Table 13, it can be found that Mean rank, Median and Mode of overall responses about the contribution of the skill test to the employment through personal traits was 4.29, 4.50 and 4.20 respectively. This implies that the concentration of the responses was towards the Agree side. Furthermore, it can be seen that most of the graduates agreed that overall, there was contribution of the skill test to their employment through their personal traits.

Similarly, the Mean rank, Median and Mode of overall responses about the contribution of the skill test in employment through the external traits was 4.46, 4.20 and 4.31 respectively. This implies that the concentration of the responses was towards Agree side. Furthermore, it can be understood that at the maximum of the graduates agreed that there was overall contribution of the skill test to the employment through their external traits.

Significance Test of the Statistical Hypotheses

This section presented significant results and relationships between the tested variables as well as an inferential statistical test. More specifically, the measurement of association at the personal and external level and overall relationship between the skill test and employment has been analyzed.

Measurement of Association at Personal Level

Null hypothesis, H_o: There is no correlation between the pre-employment and the during employment stages.

Alternative Hypothesis, H_A: There is a significant contribution of the skill test to the personal level before employment and during employment.

Table 14 below indicates the correlation between before and during employment stages at the personal level.

Table 14

Relationship between Before and During Employment (Personal Level)

Rank Correlations (Personal)		Before employment
Summary of Personal during-Employment	Correlation	.568**
	Sig. (2-tailed)	.000
	N	281

** Correlation is significant at the 0.01 level (2-tailed).

Here, Spearman's Correlation $\rho = 0.568$, level of significance $p = 0.00$ (probability of happening of null hypothesis), and population, N= 283. While testing, at the 0.05 significance level, it was found that $\rho=0.568$, $\rho^2= 0.322$ and $p=0.00$. This implies that the null hypothesis is rejected. Thus, there is significant relationship between the contributions of the skill test of the graduates to the personal level before employment and the contribution of the skill test at the personal level during employment of the graduates. The change at the personal level due to the skill test

before employment has 32% contribution to the personal level due to the skill test during employment which indicates towards a moderate positive relationship. Thus, we can generate the meaning that the skill test contribution before starting the employment and during it was moderately satisfactory.

Null hypothesis, H_0: There is no significant contribution of the skill test to the personal level before employment and after employment.

Alternative Hypothesis, H_A: There is a significant contribution of the skill test to the personal level before employment and after employment.

Table 15 below indicates the correlation between before and after employment stages at personal level.

Table 15

Relationship between Before and After Employment (Personal Level)

Rank Correlations (Personal), Spearman's rho		Pre-employment
Summary of Personal Post-Employment	Correlation	.473**
	Sig. (2-tailed)	.000
	N	281

** Correlation is significant at the 0.01 level (2-tailed).

Here, Spearman's Correlation, $\rho = 0.473$, level of significance, $p=0.000$ (Probability of happening of null hypothesis), and population, N= 281. While testing at the 0.05 significance level, it was found that $\rho = 0.473 > \rho^2 = 0.223$ and $p=0.00$. This implies that the null hypothesis is rejected. Thus, there is a significant relationship between the contributions of the skill test of the graduates at the personal level before the employment with the contribution of the skill test at personal level after the employment of the graduates. The change at personal level due to the skill test before employment has 22.3% contribution at the personal level due to the skill test after the employment of the graduates indicates a moderate positive relationship. This means

that the contribution of the skill test before employment of the graduates was moderately satisfactory.

Null hypothesis, H_o: There is no significant contribution of skill test at the personal level during employment and after employment.

Alternative Hypothesis, H_A: There is significant contribution of the skill test at the personal level during the employment and after their employment.

Table 16 below indicates the correlation between the during and after employment stages at the personal level.

Table 16

Relationship between During and After Employment (Personal Level)

Rank Correlations (Personal), Spearman's rho		During- employment
Personal post-employment	Correlation	.515**
	Sig. (2-tailed)	.000
	N	273

** Correlation is significant at the 0.01 level (2-tailed).

Here, Spearman's Correlation, $\rho = 0.515$, $\rho^2 = 0.256$, level of significance, $p = 0.000$ (Probability of happening of null hypothesis), and population, N= 273. While testing at the 0.05 significance level, it was found that $p=0.00 < 0.05$. This implies that the null hypothesis is rejected. Thus, there is a significant relationship between the contributions of the skill test of the graduates at the personal level during employment with the contribution of the skill test to personal level after the employment of the graduates. The change at the personal level due to the skill test during employment has 25.6% contribution at the personal level due to the skill test after the employment of the graduates indicating a strong positive relationship. This means that the contribution of the skill test after the employment of the graduates was found highly satisfactory.

Measurement of Association at the External Level

Null hypothesis, H_0: There is no significant contribution of the skill test at the external level before and during employment.

Alternative Hypothesis, H_A: There is significant contribution of the skill test at the external level before and during employment.

The table 17 below indicates the correlation between before and after employment stages at external level.

Table 17

Relationship between Before and During Employment (External Level)

Rank Correlations (Personal), Spearman's rho		External pre-employment
Summary of External	Correlation	.572**
during-employment	Sig. (2-tailed)	.000
	N	305

**. Correlation is significant at the 0.01 level (2-tailed).

Here, Spearman's Correlation, $\rho = 0.572$, $\rho^2 = 0.327$, level of significance, p=0.000 (Probability of happening of the null hypothesis), and population, N= 305. While testing at the 0.05 significance level, it was found that $p=0.00 < 0.05$. This means that the null hypothesis is rejected. Thus, there is significant relationship between the contributions of the skill test of the graduates at the external level before and during the employment of the graduates. The change at the external level due to the skill test during their employment has 32.7% contribution at the external level caused by the skill test after the employment of the graduates. This indicates a strong positive relationship. It means that the contribution of the skill test during the employment of the graduates at the external level found highly satisfactory.

Null hypothesis, H_0: There is no significant contribution of the skill test at the external level before and after employment.

Alternative Hypothesis, H_A: There is significant contribution of skill test at the external level before and after employment.

Table 18 below indicates the correlation between the before and after employment stages at external level.

Table 18

Relationship between Before and After Employment (External Level)

Rank Correlations (External), Spearman's rho		External pre-Employment
External post- employment	Pearson Correlation	.487**
	Sig. (2-tailed)	.000
	N	305

**. Correlation is significant at the 0.01 level (2-tailed).

The table 18 depicts, Spearman Correlation, $\rho = 0.487$, $\rho^2 = 0.237$, level of significance, p=0.000 (Probability of happening of null hypothesis), and population, N= 305. While testing at the 0.05 significance level, it was found that p=0.00. This implies that the null hypothesis is rejected. Thus, there is significant relationship between the contributions of the skill test of the graduates at the external level before employment with the contribution of the skill test at the external level after employment of the graduates. The change at the external level due to the skill test before employment has 23.7% contribution at the external level due to the skill test during employment of the graduates. This means that the contribution of the skill test before employment of the graduates at the external level was found highly satisfactory.

Overall Relationships between Skill Test and Employment

Relation between before-employment and during-employment stage:

Null hypothesis, H_o: There is no significant contribution of the skill test before and during employment stages of the graduates

Alternative Hypothesis, H_A: There is significant contribution of the skill test before and during employment stages of the graduates.

Table 19 below indicates the correlation between the overall before and after employment stages.

Table 19

Relation between Before and During Employment Stages (Overall)

Rank Correlations (Total), Spearman's rho		Total during-employment
Total pre- Employment	Correlation Coefficient	.598**
	Sig. (2-tailed)	.000
	N	269

**Correlation is significant at the 0.01 level, 2-tailed

Here, Spearman Correlation, $\rho = 0.598$, $\rho^2 = 0.357$, level of significance, p=0.000 (Probability of happening of null hypothesis), and population, N= 269. While testing at the 0.05 significance level, it was found that p=0.00. This implies that the null hypothesis is rejected. Thus, there is significant relationship between the contributions of the skill test of the graduates before the employment with the contribution of the skill test during the employment of the graduates. The overall changes due to the skill test at before employment has 35.7% contribution in overall changes due to skill test at during employment.

Relation between before-employment and after-employment stage:

Null hypothesis, H_o: There is no significant contribution of the skill test before their employment and after it.

Alternative Hypothesis, H_A: There is significant contribution of skill test before their employment and after it.

Table 20 below indicates the correlation between the overall before and after employment stages.

Table 20

Relationship between Before and After Employment Stages (Overall)

Rank Correlations (Total), Spearman's rho		Total after-employment
Total before-Employment	Correlation Coefficient	.763**
	Sig. (2-tailed)	.000
	N	266

**Correlation is significant at the 0.01 level, 2-tailed

Here, Spearman Correlation, ρ= 0.763, level of significance, p=0.000 (Probability of happening of null hypothesis), and population, N= 305. While testing at the 0.05 significance level, it was found that p=0.00. This implies that null hypothesis is rejected. Thus, there is significant relationship between the contribution of the skill test of the graduates before the employment and the contribution of skill test after their employment. The overall changes due to the skill test before their employment has 58.2% contribution of skill test after their employment.

Relation between during-employment and after-employment stage:

Null hypothesis, H_0: There is no significant contribution of the skill test during employment and after the employment of the graduates.

Alternative Hypothesis, H_A: There is significant contribution of the skill test during employment and after the employment of the graduates.

Table 21 below indicates the correlation between the overall during and after employment stages.

Table 21

Relation between During and After Employment Stages (Overall)

Rank Correlations (Total), Spearman's rho		Total after-employment
Total during employment	Correlation Coefficient	.621**
	Sig. (2-tailed)	.000
	N	267

**Correlation is significant at the 0.01 level, 2-tailed

Here, Spearman Correlation, $\rho = 0.621$, $\rho^2 = 0.385$, level of significance, p=0.000 (Probability of happening of null hypothesis), and population, N= 267. While testing, at the 0.05 significance level, it was found that p=0.00. This implies that the null hypothesis is rejected. Thus, there is significant relationship between the contributions of the skill test of the graduates during their employment and the contribution of the skill test after their employment. The overall changes due to the skill test during their employment have 38.5% contribution in the overall changes due to the skill test after the employment of the graduates.

Segregation of the Test Hypotheses Results

Contribution of the skill test as per the sex of graduates:

Null hypothesis, H_0: Personal and external factors due to the skill test are not significantly related to the sex of the graduates.

Alternative Hypothesis, H_A: Personal and external factors due to the skill test are significantly related to the sex of the graduates.

Figure 2: Samples Mann-Whitney U Test

Hypothesis Test Summary		
Test	Sig.	Decision
Independent Samples Mann-Whitney U Test	0.983	Retain the null hypothesis

Asymptotic significances are displayed. The significance level is .05.

Figure 2 shows the information about the segregation hypothesis test summary results at the 0.05 level of significance where, p=0.983 (Probability of happening of null hypothesis). From the data fact, it is found that p=0.983. This implies that null hypothesis is retained. Thus, the personal and external factors due to the skill test are not significantly related to the sex of the graduates. It means that the male and female are equally benefitted by the skill tests for their employment.

Contribution of the skill test as per the marital status of the graduates:

Null hypothesis, H_o: Personal and external factors due to the skill test are not significantly related to the marital status of the graduates.

Alternative Hypothesis, H_A: Personal and external factors due to the skill test are significantly related to the marital status of the graduates.

Figure 3: Independent Samples Mann-Whitney U Test

Hypothesis Test Summary		
Test	Sig.	Decision
Independent Samples Mann-Whitney U Test	0.030	Reject the null hypothesis

Asymptotic significances are displayed. The significance level is .05.

Figure 3 indicates the information about the segregation hypothesis test summary results at 0.05 level of significance where, p= 0.030 (Probability of happening of null hypothesis). From the data, it is found that the p value is 0.030 which implies that the null hypothesis is rejected. Thus, the personal and external factors due to the skill test are significantly related to the marital status of the graduates. It means that married and unmarried graduates are differently benefitted by the skill test for their employment.

Contribution of the skill test as per the age group of the graduates:

Null hypothesis, H_o: Personal and external factors due to skill test are not significantly related to the age group of the graduates.

Alternative Hypothesis, H_A: Personal and external factors due to skill test are significantly related to the age group of the graduates.

Figure 4: Independent Sample Kruskal-Wallis Test

Hypothesis Test Summary		
Test	Sig.	Decision
Independent Samples Kruskal Wallis Test	0.526	Retain the null hypothesis

Asymptotic significances are displayed. The significance level is .05.

Figure 4 highlights the information about the segregation hypothesis test summary results at 0.05 level of significance where, p= 0.526 (Probability of happening of null hypothesis). From the data, it is found that the p value is 0.526. This implies that the null hypothesis is retained. That is the reason behind personal and external factors due to the skill test are not significantly related to the age group of the respondent. It means that the graduates having different categories of age were equally benefitted by the skill test for their employment.

Contribution of the skill test as per the geographical region of the graduates:

Null hypothesis, H_0: Personal and external factors due to the skill test are not significantly differ to the geographical region of the graduates.

Alternative Hypothesis, H_A: Personal and external factors due to the skill test are significantly differ to the geographical region of the graduates.

Figure 5: Independent Sample Kruskal-Wallis Test

Hypothesis Test Summary		
Test	Sig.	Decision
Independent Samples Kruskal Wallis Test	0.000	Reject the null hypothesis

Asymptotic significances are displayed. The significance level is .05.

Figure 5 depicts the information about segregation hypothesis test summary results at 0.05 level of significance where, p= 0.00 (Probability of happening of null

hypothesis). From the data, it is found that p value is 0.00. This implies that the null hypothesis is rejected. The result shows that there are significant differences in personal and external factors due to skill test with the geographical area of the graduates. It means that the graduates from different geographical origins were differently benefitted by the skill test for their employment.

Contribution of the skill test as per the ethnicity of the graduates:

Null hypothesis, H_0: Personal and external factors due to the skill test are not significantly related to the ethnicity of the graduates.

Alternative Hypothesis, H_A: Personal and external factors due to the skill test are significantly related to the ethnicity of the graduates.

Figure 6: Independent Sample Kruskal-Wallis Test

Hypothesis Test Summary		
Test	Sig.	Decision
Independent Samples Kruskal Wallis Test	0.491	Retain the null hypothesis

Asymptotic significances are displayed. The significance level is .05.

Figure 6 shows the information about the segregation hypothesis test summary results at 0.05 level of significance where, p= 0.491 (Probability of happening of null hypothesis). Data shows the p value 0.491. This implies that the null hypothesis is retained. The result shows that personal and external factors due to the skill test are not significantly related to the ethnicity of the graduates. It means that graduates having different ethnicity were equally benefitted by the skill test for their employment.

Contribution of the skill test as per the education level of the graduates:

Null hypothesis, H_0: Personal and external factors due to the skill test are not significantly related to the level of education of the graduates.

Alternative Hypothesis, H_A: Personal and external factors due to the skill test are significantly related to the level of education of the graduates.

Figure 7: Independent Sample Kruskal-Wallis Test

Hypothesis Test Summary		
Test	Sig.	Decision
Independent Samples Kruskal Wallis Test	0.490	Retain the null hypothesis

Asymptotic significances are displayed. The significance level is .05.

Figure 7 indicates the information about the segregation hypothesis test summary results at 0.05 level of significance where, p= 0.490 (Probability of happening of null hypothesis). From the data, it is found that the p value is 0.490, which implies that the null hypothesis is retained. Therefore, the result shows that personal and external factors due to the skill test are not significantly related to the level of education of the graduates. It means that the graduates having different educational attainment were equally benefitted by the skill test for their employment.

This chapter researchers presented about the analysis and interpretation of the collected data. The demographic information of the graduates, the contribution of the skills test as per the personal and external trait and as per the employment stages has been discussed. Similarly, the analysis of how the contribution of the skill test is related to age, gender, qualification, ethnicity, marital status and origin of the graduates. Ultimately, significance test of statistical hypotheses and segregation results of the test hypotheses has also been presented in this chapter.

CHAPTER V

FINDINGS AND DISCUSSIONS

This chapter presents the findings and the discussions on the relation between the skill test and employment of the graduates. The chapter mainly includes discussions on three topics: diversity in the skill test participation, relationship between the skill test and the employment at different stages (pre-employment, during-employment and post-employment stages); relationship between the skills test and the employment with regards to sex, marital status, education, ethnicity and origin of the graduates. On the basis of data analysis, the major findings are pointed out and a follow up discussion has been made.

Diversified Participation in the Skills Test

The youth of the age group 16-30 had a greater access to the vocational trainings and skill test and a large number of youths from the Janjati ethnic group had greater access to the vocational skill test. As per the origin of the graduates, youths from the Hill and the Terai regions had greater access to the vocational skill test compared to the Mountain region. Similarly, youths having special conditions (e.g. disabled, single women and war affected) had poor enrollment opportunities to the vocational skill tests. As per the educational back ground of the graduates, a large number of youths who completed school level education got employment opportunities after vocational skill tests. Similarly, while assessing the employment status of the respondent, a significant number of graduates were found employed in their trained occupational sectors.

The study found that most of the graduates (44.9%) under 25-30 age group followed by 30.2 % of the 16-24 age group were found to have participated in vocational training programs. However, 1% was in the age category of above 40 years. So, the vocational skill training was more attractive for the younger age group people. It can be argued that a significant number of active aged youths are involved in the skill testing system for job productivity and improved work efficiency. According to the human capital theory, they are mounting their intrinsic value for transforming family wellbeing to prosperity and playing socio-economic roles in the society for achieving economic outputs (Sen, 2000).

The study found that the majority of the graduates (59.7%) were women working in different trade related professional sectors. The trend of woman involvement in the productive sector is improving due to the vocational training program as seen in the findings. For attending the vocational training programs, girls and women are also offered various scholarships by the government and non-government institutions. The employers are giving high priority to women. Such contexts are motivating and encouraging the women's involvement in the vocational training program and the skill testing system. Taking reference of the structure and agency theory, skilled women are getting to understand the socio-cultural structures and transforming them by changing the traditional stereo-type role of women (Giddens, 1976).

The studies found that the majority of the graduates (55.1%) were from the Janajati ethnic groups. Literature says that the vocational training program aims to produce lower-medium level work force and is targeted upon both literate and illiterate youths (Greenan & Lisa, 1998). Some youths from the Chhetri/Thakuri and the Brahmin ethnic groups having higher educational status were also participating in

the vocational trainings because of greater job opportunities. In this situation, it can be inferred that the vocational training providing institutes are playing the agency role against the poor educational system that has been producing unskilled and passive human resource in the country (Giddens, 1976).

The majority of the graduates (97.7%) were from the Hill and the Terai regions whereas the smallest number was from the Mountain region. It indicates that there is poor accessibility of the vocational skill development training programs in the Mountain region. To take the reference of the unlimited supply of labor theory, there are two sectors of economy, agriculture and non-agriculture in a country but this is not found true in case of some geographical areas (Author & Lekhi, 2008). Economic growth activities are being generated through the supply of surplus skilled labor trained through the skill development trainings around the urban centers where youths are working in both agriculture and non-agriculture sectors.

The majority of the graduates (98.7%) are normal (physically and mentally fit), categorized under ‘not special condition’. According to the human capital theory, human capital formation is a process of investing in them by means of education, training, or other activities, which raises their future income by increasing their life time earnings (Abeysinghe, 2012). Unfortunately, in the Nepalese context, parents and local stakeholders are failing to motivate youths having special condition to get involved in the vocational training program to increase their earning. Hence, special priority with customized packages of training and employment opportunities can be offered to get more enrollments of the youths having special conditions.

43.6% of the graduates have passed secondary level education whereas only 3.9 percent were illiterate. The findings indicate that the vocational training programs are equally productive to both literate and illiterate youths. So, it can be reflected that

literate youths diverted to the TVET sector because of better job market opportunities. This may be because of the school education system which has been producing unemployed youths because the curricula are not linking with livelihood of the local people as reflected by Nepal Living Standard Survey (NLSS, 2011) report. From the reference of the human capital theory, all of the graduates were purposefully participating in the human capital formation process. They are acquiring knowledge and skills from the formal and non-formal education program and developing their competencies and expertise acquired through training and on-the-job experiences (Author & Lekhi, 2008).

The study found that only 3.93 percent of the graduates worked in sectors other than the one they were trained in. As mentioned in one of the previous studies done in Nepal by World Bank, there was 65% retention rate of the skill trained graduates in the same occupation they were trained in (Chakravarti, 2013). So, this research strongly supports the finding of that previous study. According to the progress reports of the training providers, it was also found that a majority of the trainee got job opportunities after completion of their training programs. Some of them were also work abroad country too. Referring to the of structure and agency theory, the youths who passed the skill test and were employed, are improving their life and social structure through their transformative power. They are becoming rational, conscious and managing priorities to uplift family livelihood and national economy (Lacroix, 2012).

Finally, when asked the level of satisfaction on the quality of the training program that they attended, 97% of the graduates mentioned that they were strongly satisfied and simply satisfied with the quality of the training received.

The Skill Test Contributed to all Stages of Employment

The descriptive analysis of the data such as the Mean, Median and Mode of the graduates' preferences showed that the distribution of preferences was denser in areas of 'Strongly Agree' and 'Agree', which implies that most of the graduates agreed that they saw the contribution of the skill test to their employment. Statistically, while assessing the contribution of the skill test at the pre-employment stage, the analysis showed that the Mean rank of the descriptive rating of the responses obtained through the Likert Scale was 4.13 whereas the Mode and Median of the distribution of the preference rating was found 4.23 and 4.00 respectively. Thus, it can be concluded that the majority of the graduates were on the side of agreeing and strongly agreeing to the contribution of the skill test in getting employment opportunities. It can be inferred that the graduates are getting benefit from the skill test to start their job career as they saw many job options, attempted many job applications, increased their self-encouragement to apply for more jobs and were encouraged more by the training providers. Also, they experienced higher trust of the employers and stakeholders in their skills.

Similarly, while assessing the contribution of skill test at the during-employment stage, the Mean rank, Median and Mode of descriptive rating of the responses through the Likert Scale were found to be 4.12, 4.25 and 4.45 respectively. It is concluded that the majority of the graduates were on the side of agreeing and highly agreeing with the contribution of the skill tests during their job performances. So, it means that the skill test also contributed during their job tenures by facilitating them on areas like increased job efficiency, increased recognition by co-workers, increased awareness on work place safety and security, increased awareness on employment benefits as well as duties and responsibilities, increased self-dignity,

increased team work capacity, increased communication skills and increased vocational work attitude.

Finally, while analyzing the contribution of the skill test at the post-employment stage, the Mean rank, Median and Mode of the descriptive rating of the responses through the Likert Scale were found to be 4.04, 4.17 and 4.0 respectively. It is concluded that a majority of the graduates are on the side of agreeing and highly agreeing about the contribution of the skill tests even after their job tenure. So, it means that the skill test contributed even after their job period by facilitating them on areas like increased career prosperity, increased level of proficiency, increased level of income, increased self-recognition, increased further job offers, increased social prestige, increased purchasing power, increased access to education and health and increased capability to buy some fixed assets.

In the present context of TVET, the quality and relevancy of the training program is being a major concern of various actors (CTEVT, 2012). The quality and relevancy of training program is directly related to the achievement of the graduates. The skill test is a means to measure the quality of the training delivered and can also be seen as an intermediate indicator to measure the intended outcome of the program. The finding above shows that there is a strong linkage of the skill test with the employment of an individual which proves that skill certification is beneficial to secure employment (pre-employment), to perform the job (during employment) and to foster the carrier (after employment).

While relating it to the literature, with regard to effectiveness of the skill test system, there are basically three view points in the context of vocational education and training in Nepal (NSTB, 2012). The first view point from the Government's perspective is that it helps to raise public living standards by influencing the quality

and quantity of skilled persons and to their family livelihood. The second viewpoint from employers' perspective is that it can help to produce more skillful and competent national level workforce as the graduates are becoming competent and confident after skill test. The third viewpoint from employee's perspective is that the skill tests helps to achieve proof in his/her occupational skill, getting career/job opportunities and increasing pride and status of the institutions. The finding above validates all these three viewpoints by establishing relationship between the skill test and employment.

Furthermore, as stated by Kafle (2007), the employment rate of the graduates of technical schools is one of the most significant criteria for external efficiency. Although up- to-date and comprehensive data are not available, the technical schools have shown that the employment rate of graduates' averages about 50–60%. In relation to this study, it is compliments the finding that graduates who had gone through the skill training and skill tests have good connection with the employment. So, it can be supposed that the skill test is a good contributing factor for their employment.

The Skills Test Contributed to Employment through Personal Traits

The descriptive analysis of data such as the Mean, Median and Mode of the graduates' preferences on contribution of the skill tests on their personal traits showed that the distribution of preferences was denser in areas of Strongly Agree and Agree. Statistically, the analysis showed that the Mean rank, Median and Mode of preferences about the contribution of the skill tests to employment through personal traits were 4.29, 4.50 and 4.20 respectively. Thus, it can be concluded that most of the graduates agreed that they saw the contribution of the skill test to the employment through their various personal traits.

To compare the previous study, one of the studies conducted by Michael and Conny (2008) in Chicago states that with respect to the medium-run to long-run effects of training programs, the training programs increase employment and earning opportunities to graduates by enhancing their inner capabilities.

The above findings show that the skill test have been contributing to foster the various personal traits of an individual like self-reorganization, self-encouragement, confidence, personal competency, work efficiency, self-awareness, self-dignity, team work, attitude towards work, income and purchasing power etc. The skills tests cannot be seen only as the certification of the certain skills that individual possesses. It has a deeper connection with the various internal traits of an individual graduates since it is not only a matter of technical or occupational skills. Thus, in the TVET sector, the concept of soft skills is also emerging rapidly to enrich the personal job ability of graduates. The soft skills that directly support to foster the personal traits of the trainees are also called employability skills (BCA, 2002). The thirteenth three year plan of the Government of Nepal, which aimed to manage human resource development through the given objectives: (i) to produce skilled workforce who can compete in national and international labor market, (ii) to provide qualitative TVET education and link it with employment opportunities and, (iii) to interlink all kinds of education into quality, livelihood, skillful, and employability oriented and contemporary (NPC, 2014), is being contributed to some extent by the current practices of the skill training and tests as extracted from the findings of this study.

Similarly, in reference to the human capital theory, all those graduates are purposefully participating in the human capital formation process. They are acquiring knowledge and skills through the formal, in-formal and non-formal education program and developing their inner competencies and expertise acquired through

training and on the job experiences (Lekhi, 2008). Early ability (whether acquired or innate), qualifications and knowledge acquired through informal and non-formal education and skills, competencies and expertise acquired through training on the job experiences are basic components for human capital formation (Schultz, 1987).

Skills Test Contributed on Employment Through External Traits

The descriptive analysis of data such as the Mean, Median and Mode of the graduates' preferences on contribution of skills tests to their external traits showed that the distribution of preferences was denser in areas of Strongly Agree and Agree. The analysis showed that the Mean rank, Median and Mode of preferences about contribution of the skill tests in employment through external traits were 4.46, 4.20 and 4.31 respectively. Thus, it can be concluded that most of the graduates saw the contribution of the skill test to the employment through their various external traits.

The above findings show that the skill test contributed to foster the various external traits of an individual mainly increased job options, increased trust among the employers, encouragement by the employers, recognition by other co-workers, level of income, increased career prospects, team work, increased social recognitions.

The tendency to undertake training has also been found to be associated with various external market characteristics (Greenhalgh & Mavrotas, 1994). The internal as well as external traits of an individual are considered to be an important factor to get the job opportunities. In the process of training acquisition, the positive influences in both the traits seemed to be important for those individuals.

In the present context, vocations, technologies and other soft skills are also acquired equally through formal, non-formal and informal ways. For centuries, the tradition of informal learning as well as acquiring occupational skills from parents, senior professionals, and peers has been prevalent in Nepal. Informal learning has

been an integral part of life as it is a source of survival skills acquired through crafts, trades, agriculture and modern industries. In many cases, a learner can acquire various skills at his/her own convenience through practical work even with minimal theoretical knowledge (Kafle, 2007). He also emphasized that the vision of skill training, testing and standardization is to excel at providing kinds of market information that assist workers and businesses to achieve success in the global economy. Thus, it can be argued that it is important to take into account the practicality of the learning environment, which focuses on various external behavioral aspects for the effective operation of the vocational skill training program.

As said by Bazos (2004), vocational training has been defined as "the acquisition of skills that are directly transferable to a workplace" (Bazos and Hausman, 2004, p.4). In relation to this definition, the skills gained by an individual should be limited not only to the enhancement of his/her interpersonal traits but should also encompass the enrichment of various external traits of an employee so that it can be transferable and compatible to various workplaces. A study conducted to see the outcome of the federal training programs in the USA (Saron & Harlan, 2012) and On-the-Job Training (OJT) was most likely to result in immediate employment whereas classroom training was about half as likely as on-the-job training to result in immediate employment.

According to David (1989), the vocational skills should encompass the learning of skills, knowledge, understanding and attitudes that will contribute to a person's ability to 'make a living' or attain a satisfying and rewarding 'way of living'. He also emphasized that vocational education should not only be limited to the transmission of skills enabling the individual to engage in a particular paid occupation, but rather it should be aimed at integrating the individual in the whole

range of contextual learning. In other hands, the contribution of the skills test is not only limited to personal traits and vocational skills but also contributes to the external qualities of an individual.

Established Relationship Between the Effects of the Skills Test on Employment

The analysis of the data showed that there was a relationship between the contributions of the skill test of the graduates at all the stages of employment (i.e. pre-employment, during-employment and post-employment stages). Statistically, while testing the measures of association (at 0.05 level of significance), it was found that overall changes due to the skill test at the pre-employment stage had 35.5% contribution further to overall changes at the during-employment stage of the graduates. It indicates graduates those benefited by the skill test at their pre-employment stages are also benefited by the skills test at their post-employment stage. The overall changes due to the skill test at the pre-employment stage also had 58.2% contribution further to the overall changes due to the skill test to the post-employment stage of the graduates. Similarly, overall changes due to the skill test during-employment have 38.5% contribution further to the overall changes due to the skill test to the post -employment stage of the graduates. Then it comes to us that there was a strong relation between the contribution of the skill test to the overall changes at the pre-employment and post- employment stages. According to Kafle (2007), technical education and vocational training are an integration of education and training that contribute to the transfer of affective and cognitive skills that enable workers to access the vertical and horizontal mobility in occupations. Such education and training are given on a long term regular basis or short-term job oriented basis. Thus, logically it is supposed that the vocational training should be judged through its effectiveness on linking trained graduates to the prospective job opportunities and

their performance in vocational jobs. So, it is worthwhile to claim that skill training with its appropriate skills certification is a crucial factor to bridge them to the employment opportunities, retain them in their professions and support them to flourish their carrier prosperity in the long run. This finding of the study indicates that the skill test enabled the graduates to get the employment opportunities, to perform the job better as well as to enhance their proficiency even after the employment period.

Men and Women Equally Benefitted by the Skill Test

Talking about the segregation of the overall results, the overall changes due to the skill test of the graduates is not significantly related to the sex of the graduates. The result showed that both male and female youths who got their skills tested their skills were equally benefitted by the test throughout professional life.

In the Nepalese context, employment is not only a source of income and personal satisfaction, but also an important field for the formation of social relations and status. With the reference to Vhagavad Gita, those youths are not only nourishing their knowledge, skills, action, and devotion but also maintaining their high aspiration and determination capacity (Ghimire, 2013). In Nepal, the male literacy rate is 75.1% compared to the female literacy rate of 57.4% (CBS, 2012). Despite the huge gap between male and female, the study shows that there was higher level of participation of women in the training program and also, they were equally benefitted by the skill testing system. It indicates that the women's participation in the vocational skills training program was greater than that of men and in return they were reaping more benefits.

A survey report showed that in Nepal, much time and energy needed to be spent on subsistence activities, which do not produce any real income. These activities

are mostly carried out by women (ILO, 2010). The finding of this study contradicts with the ILO findings as women are equally participating and benefitting from the skill training and test. The Nepal Human Development report (2014) states that there is no significant potential productivity gap between young men and women in Nepal across the regions. The empirical evidence also shows that the current generations of the women are more active in out-of- household chores and involved themselves in productive vocations. It also indicates that the development trend has changed in respect to encompassing more gender inclusive approaches to the overall development. Simultaneously, women are being able to challenge the societal believes about the stereotypical work confinements.

Married and Unmarried Graduates not Equally Benefitted by Skills Test

The relationship between overall changes due to the skill test of the graduates is significantly related to their marital status. It also shows that, statistically, the overall mean rank of the preferences opted by the married youths was 4.27 and that of unmarried youths was 4.14. It shows that a majority of the married youths believe in the contribution of the skill test to their employment. Indirectly, it can be supposed that married youths are becoming responsible for supporting family livelihood and they are also realizing their economic role. With the reference of the human capital theory, they are improving their well-being and indirectly influencing social change and economic output (Sen, 2000).

Youths from all Age Groups Equally Benefitted from the Skills Test

The relationship between personal and external factors due to the skill test of the graduates is not significantly related to the age group they are. There is no reason to say that certain age groups are getting more benefits from the skill test. Therefore,

the youths from any age group are equally benefitted from the skill test during their professional life.

In general, the topic of age discrimination and inequality in employment has received little sociological attention relative to class, ethnicity and gender but it is equally important to see the productivity of a person in terms of age. The Census (2012) shows an increasing employment trend in manufacturing and service sectors but the increment is very gradual. It has to be noted here that the total employment accounts for all age groups. The population census also indicates that (a) youths of the 15–24 age group have higher employment than adults, (b) women have higher employment than men, (c) the percentage of the unemployed is higher in the urban areas than the rural ones, and (d) unemployment among people with a formal education of the 10^{th} grade or above is higher than the illiterate and simple literate people.

In line with the census the research showed that women and graduates having less educational attainment have a slightly higher employment rate. However, in the case of the age groups and employment of the graduates, the graduates having higher age groups have a slightly higher employment rate, which contradicts with the census figure (2012). There seems to be a smaller variation employment rate and different demographic features because the aggregate employment rate is higher i.e. a smaller number of graduates are unemployed.

Youths from all Geographic Regions not Equally Benefitted from the Skill Test

The relationship between overall changes due to the skill test of the graduates was found significant with the geographical region of the respondent. The analysis showed statistically that the mean rank of preferences of the graduates from the Terai, the Hill and the Mountain regions were 4.35, 4.18 and 4.11 respectively. Then, it can

be concluded that the graduates from the Terai were more benefitted from the skill test following the graduates from the Mountain region. At the same time, the graduates from the Hill region were least benefitted from the skill test, though there was a smaller amount of participation (2.3%) in the skill test from the Mountain region. It shows that they were more benefitted from the skill test than the youth from the Hill region.

Youths from all Ethnic Groups Equally Benefitted by the Skills Test

The relationship between overall changes due to skill test of the graduates was found not significantly in relation to the ethnicity of the graduates. The youths from all ethnic groups were involved in the vocational training program and benefitted from the skill testing system. Irrespective of what the literature says, the effects of the vocational training and skill test on the youths can be measured in terms of the subsequent earnings and career progress in the labor market during employability (Greenhalgh & Mavrotas, 1994).

The majority of the out-of-school youths in Nepal comprises women, disabled, Dalits, marginalized groups from the remote and isolated rural areas along with the conflict victims who have been deprived of general education and vocational training. There is no systematic provision available so far for any affirmative action allowing the inclusion of such population to the TVET programs. The major issues in this area are: increasing access to TVET, improving equity, inclusion and affordability (Kafle, 2007). Thus, it can be understood that if there was a good opportunity to the youths from those marginalized and disadvantaged communities, they could be benefitted equally from the training as well as the skill testing system. Thus, it would be worthwhile to mention that the increase in training accessibility to those

disadvantaged segments of the population would be a good step to make the sharing of the benefits from the TVET program more inclusive.

The Youths from all Educational Levels Equally Benefitted from the Skill Test

The relationship between the overall changes due to the skill test of the graduates is not significantly related to the level of education of the respondent they have. The iterate youths are also being involved in vocational training program and the skill testing system due to employment opportunities. There must be a bridge between school and work so that students can see the relevance of their school activities in which portable skills is now required as the notion of a job for life (Belbase, 2007). As per CBS (2012), every year hundreds of thousands of students appear for the test. The examination pass rate of the private schools is far better than that of the public or government schools. This achievement is made against a huge investment of the parents and the selective admission process of the national catchments from well-to-do families. Hence, a huge educational waste has been created due to the inefficiency and ineffectiveness in the total education system. The opportunity cost is also high. In contrast, the study found that the benefits of the vocational skills training and test equally contributed to the youths from all educational levels. It can be claimed that the appropriateness of the vocational stream is higher than the general education system with respect of getting employment opportunities. It can also be mentioned that the vocational skills training program has been catering to a huge proportion of school dropouts making them skillful and eventually the employed.

Overall Theoretical Reflection

The skill test significantly contributes personally and externally to the graduates' during pre-employment stage. Conceptually, it was/is possible due to the

occupational skill and ability of the graduates. While linking this concept with the human capital theory, it can be inferred that the skill tested graduates transformed into productive capital through their knowledge and skills. According to the Schultz, the basic components of the human capital formation are the ability (acquired through any means or innate), qualifications (acquired through formal or informal education) and skills (acquired through experience or training (Schultz, 1987). Here, because of the increasing level of occupational skills, the skill tested graduates enhance job opportunities in the national and international labour market. While doing so, they are also motivated by self (who got the vocational training and the skill test) and others (family, peer groups and training institutions) to apply for the jobs and start their careers.

Owing to the social structure and agency theory, the skill tested graduates, their family members and training providing institutions equally played the agency role for reforming the social and educational structures of the country in which school education system is producing unskilled and passive manpower. Social structure thus can reproduce individuals' actions and, their action to change the existing social structures. This shows that individuals' actions and agency relationships are the by-products of unproductive structures (Giddens, 1976). An agency relationship is one in which one or more persons engage with another person (the agent) to perform some service (Jensen, 1976). In our case, the individuals increase their self-encouragement to apply for more jobs, raised the level of confidence to face interviews. They experienced higher trust from their employers and stakeholders in their skills while attempting the job interviews.

From the viewpoint of the unlimited supply of labor theory, surplus labors from subsistence agriculture sectors are migrating from the urban sectors for

becoming skilled manpower capable of work in non-agriculture sectors of the economy (Lekhi, 2008). According to this theory, a capitalist sector develops by utilizing labor from a non-capitalist backward or subsistence sector. The labor market sector demands more skillful labors to perform a certain vocational or occupational specific skills. Those skillful individuals who work in labor market can increase their skills from job experiences and they also accumulate their earnings. They can invest their earning in the village to run small enterprises. This might provide employment opportunities to the local people and uplift rural economy as a result.

The skill test also contributes personally/externally to the graduates' during-employment stage. This study shows that the skill test has been supporting the graduates for better job performances and also has increased their job efficiency. While linking these issues with the human capital formation theory, beyond doubt family members of the trained graduates invested only for capacity building activities of their children that raised future income of the family members throughout their life (Abeysinghe, 2012). The skill tested graduates also gained recognition by co-workers, increased awareness about the work place safety and security, increased awareness about employment benefits as well as duties and responsibilities. The human capital formation theory has emphasized benefits of education in three different layers; self, society and nations (Psacharopoulos & Woodhall, 1997). Thus, the vocational training and skills development process improves the productivity and efficiency of labor for better participation in economic activities that benefited to them, their family members, society and the nation. The skill tested graduates have increased self-dignity, team work capacity, communication skills and vocational work attitude. According to the unlimited supply of labor theory, the skilled graduates are getting additional opportunities for the wage labor (from the subsistence sector) to shift

towards the self-employment after a certain level of professional and economic attainment of the graduates (i.e. capital accumulation). It seems to be continuous employment opportunities for the subsistence sectors without substituting existing opportunities in the long run (Lekhi, 2008).

The skill test also contributes personally and externally to the graduates' post-employment stage. In the line of this study, the skill test supported them after job period by facilitating them on areas like; increased career prosperity, increased level of proficiency and increased level of income. Owing again to the human capital formation theory, involving in the vocational training and the skill testing system is a process of human capital formation and the return of such expenditure can be seen in the form of enhanced labor productivity which is more than its cost (Schultz, 1987). The skill test also increased the probability of self-recognition, further job offers, social prestige, purchasing power, access to education and health and capability to buy some fixed assets. All those activities can also be analyzed owing to the human capability approach that has an intrinsic value for the well-being of people; an indirect role in influencing social change and influencing economic output (Sen, 2000). The skilled graduates not only are investing in health, education and for buying land property but also in non-agriculture sectors that lead to the expansion of employment opportunities by utilizing further labor form the subsistence sectors and ultimately to the economic development of the nation (Lekhi, 2008).

Similarly, as the study revealed there is a varied relation between the skill tests and age, gender, qualification, ethnicity, marital status and origin of the graduates. Men and women are equally benefitted by the skill test for their employment. The youths from every age group, ethnic groups and educational backgrounds were equally benefited from the skill test for their employment.

In contrast, the skill test significantly differed from the marital status and geographical origin of the graduates. From the viewpoint of cultural structures, women are still facing a socio-cultural stigma. They are involving themselves in household chores rather than employment opportunities for playing economic roles. However, the government and I/NGOs are working together for women empowerment. In such a situation, the guardians of the married women could not play agency role in which they embedded in social contexts which causally influence their original nature (Giddens, 1984). It is a time for rethinking on the minimal accessibility or urban centric vocational training and skill testing system by state mechanism. If the state mechanism analyzes vocational training, the skill testing system and employment practices from human capital formation perspectives it might benefit the nation itself. Because it is a process of investing in the youths by means of training, it raises their future income by increasing their life time earnings (Abeysinghe, 2012). While linking this issue with the structuration theory of Giddens, TEVT and Skill Testing Board can make an action on the basis of the ability or the capability of trainees and trained graduates as the structure and the agency are mutually dependent for forming or reforming structures which may affect future action.

In this chapter, researcher discussed about the each finding under the demographic information of the graduates. The discussion about the contribution of the skill test as per the employment stages and traits (personal and external) of the graduates has been made thoroughly. Similarly, the correlation between contribution of skills test in each of the employment stages i.e. pre-employment and during-employment, pre-employment and post-employment and during-employment and post-employment has been discussed as per its findings. The varied contribution of

skill test as per the marital status and geographical origin of the graduates and equal contribution of skill test as per sex, age, education and ethnicity has also been discussed. Moreover, researcher also discoursed about the theoretical contribution of the research findings especially relating with the human capital formation theory focusing the Schultz's idea and structure and agency theory of Anthony Gidden. The theory of economic development especially referring the Lewis's idea on unlimited supply of labors.

CHAPTER VI

SUMMARY, CONCLUSIONS AND IMPLICATIONS

This chapter describes the overall summary of the study in the first section which mainly covers the introduction and background of the study, review of the literatures and a brief account of the methodology applied. In the second section, the study has been concluded highlighting the findings against the research questions. In the third section, the implication of the study has been discussed focusing from the planners, policy makers and implementers perspectives.

Summary

It is a known fact that the lack of employment opportunity has contributed to slower economic development of Nepal. The Nepal Human Development Report (2014) recommended two prolonged approaches. The first is agricultural transformation from subsistence to commercialization and modernization, and the second is the absorption of a growing labor force in secondary and tertiary sectors by utilizing potential skills and resources (NHDR, 2014). The vocational trainings have tried to provide the skill development of the unemployed youths in the labor market of Nepal. As per the CTEVT data, about 40,000 youths are getting enrolled in different types of vocational skills training every year and most of them cross through the skills test provisioned by the National Skill Testing Board (NSTB) under CTEVT. The NSTB is responsible for skill testing and standardization of skills. The primary role of NSTB is to develop a system of skill testing and standardization in an autonomous way so that a fair and equitable certification system is established. The certificates must be recognized by government authorities, private organizations and international

labor market organizations. As a result, the system should enable skilled people to access better opportunities and jobs in the global market. National skill standardization, testing and certification have become important for the Government, employers and employees. But in most of the cases, TVET graduates and institutions have been questioned in terms of their employment and performance quality (CTEVT, 2005).

This research was initiated in the context of the unsystematic practices observed in the vocational skill training delivery and certification system. The first purpose of conducting the research was to examine the contribution of the vocational skill test to the employment of the skill-tested graduates especially at the pre-employment, during-employment and post- employment stages. The second purpose was to compare and contrast the role of the skill test with varied age, gender, qualification, ethnicity, marital status and origin of the graduates. Accordingly, there two leading research questions: (i) Does the skill test contribute personally and externally to the graduates' pre-employment, during-employment and post-employment stages? (ii) Does the contribution of the skill test vary with the age, gender, qualification, ethnicity, marital status and origin of the graduates?

The research has applied the post-positivism paradigm to establish the relationships among the studied variables. The quantitative research encompassing the survey research method was applied and the variables were analyzed. A total of 305 sample who had completed the Level One vocational skill training from private training institutes in the Central Development Region were identified as the sample. The multistage random sampling methods with 95% confidence level using the sample size determination formula of Krejcie and Morgan (1970) was used to determine the sample size.

Since the researcher had opted the quantitative design, the data analysis was expected to turn the raw numbers into meaningful data. The study collected the primary data from each respondent through structured survey questionnaires. The SPSS software (version 23) was used for managing and statistical interpretation of the data. To measure the overall contribution of the skill test toward employment, descriptive analysis of the data using the Mean, Median and Mode of the graduates' preferences were carried out. The measures of the association of the skill test contribution among all stages of their employment (pre-employment, during-employment and post-employment stages) were analyzed through the Spearman's Rank Correlation. Furthermore, significance tests of statistical hypotheses and the segregation results of the test hypotheses have been applied through the Mann Whitney and the Kruskal Wallis test. Particular attention was given to the number of valid (no missing) cases while formulating the tests.

Conclusion

The research finding shows that the vocational skill training and test given to the graduates has significantly contributed to their employment. The skill test contributes personally and externally to the graduates' pre-employment stage by enhancing job opportunities (Research Question1). The graduates are getting benefits from the skill test at the beginning of their job carrier as they see many job options and receive intrinsic (by self) and extrinsic (by training) motivation to apply for the jobs. Further, it increases their self-encouragement to apply for more jobs, raises the level of confidence to face interviews and encourages more by the training providers. They are also experiencing higher trust of the employers and stakeholders in their skills while attempting the job interviews.

The skill test contributes personally and externally to the graduates' during-employment stage by supporting them for the better job performances (Research Question 1). The skill test is instrumental to the graduates during their job tenures as it facilitates them in areas like increased job efficiency, increased recognition by co-workers, increased awareness in workplace safety and security, increased awareness of the employment benefits as well as duties and responsibilities, increased self-dignity, increased team work capacity, increased communication skills and increased vocational work attitude.

The skill test contributes personally and externally to the graduates' post-employment stage by increasing better job prosperities (Research Question 1). The skill test is influential even after their job because it facilitates them in areas like increased career prosperity, increased level of proficiency, increased level of income, increased self-recognition, increased further job offers, increased social prestige, increased purchasing power, increased access to education and health and increased capability to buy some fixed assets[2].

Similarly, there is a varied relation of skill tests with age, gender, qualification, ethnicity, marital status and origin of the graduates (Research Question 2). The men and the women are equally benefitted by the skill test for their employment. Further, the youth from every age group, ethnic group and educational background equally benefiting from the skill test for their employment. In contrast, the skill test significantly differed with respect to the marital status and geographical origin of the graduates. It means that the married and unmarried youths are not equally benefitted by the skill test for their employment. The youths from the

[2] Land property, motorbike, television and computer

Mountain, the Hill and the Terai are not equally benefitted by the skill test for their employment.

The graduates are benefitting by the skill certification to foster the various personal traits like self-reorganization, self-encouragement, confidence, personal competency, work efficiency, self-awareness, self-dignity, team work, attitude towards work, income and purchasing power. Similarly, it also contributes to foster the external traits of an individual like increased job options, increased trust among the employers, encouragement by the employers, recognition by other co-workers, level of income, increased career prospects, team work, increased social recognitions.

Implications

The findings of the study have many possible implications to the stakeholders both policy maker, development planner, public and private training providing institutions, local stakeholders as well as technical and vocational education and training graduates for effective designing and implementation of the TVET programs. Some of the possible implications to the policy makers, implementing agencies and to potential researchers are listed below:

Implication to TVET policy makers

1. This study shows that skill test help to make graduates to gain employment easily. That means, more the investment in this sector better the creation of employment opportunity. In existing practice government has very less budget allocation for TVET sector rather it can be increased to make it more accessible and productive for the better employment and income opportunities within the country.
2. The contribution of the vocational skill testing system is found significant to link the graduates to employment, through the enhancement of both personal

and external traits. So, it is worthwhile to make a provision of the skill testing system in every vocational skill training program that is being implemented by various institutions.

Implication to TVET implementers

3. Since there is a good relation between skills certification and employment, people who have acquired skills through informal and non-formal means can also be encouraged to take the skills test as a Recognition of Prior Learning (RPL) provision made by the existing CTEVT guideline.
4. Moreover, migrant workers who return with a good amount of earned capital together with vocational and entrepreneurial skills, can also be part of the formal national certification system as study show the significant contribution to the employment of the graduates. This will further benefit them with better employment opportunities within the country, which will further contribute to the economic development of the nation.
5. This research indicated that the participation of women and the benefits of certification to women is encouraging. Thus, it is worthful to increase engagement of women in TVET program irrespective of their caste, religion, ethnicity and origin.

Implication to TVET research professionals

6. This study shows that skills test contributes not equally to the married and unmarried youth. Similarly, youths from different geographical locations are not getting equal benefit of the skill test. It can be an area for further research.
7. In general, it is said that vocational education aims to produce a lower-medium level workforce and targets upon the literate and the illiterate (Greenan & Lisa, 1998). However, this research showed that 53% of the

graduates having secondary to bachelor level education were found to be enrolled in the vocational skills training and testing and also getting benefits from it. Thus, it can be a subject to further research studies.

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कोड नं.

ANNEX I

Survey Questionnaire

सर्वेक्षण फाराम

छोटो अवधिका व्यावसायिक सीपमूलक तालिम प्राप्त प्रशिक्षार्थीको रोजगारीमा सीप परिक्षणको भूमिका

प्रिय उत्तरदाताहरू
यो अध्ययन नितान्त अनुसन्धानमूलक प्रयोजनका लागि गरिएको हो । यो अध्ययन तपाइका महत्वपूर्ण उत्तरहरूमा निर्भर गर्नेछ । यस अध्ययनका क्रममा तपाइबाट प्राप्त सूचना अध्ययन प्रयोजन बाहेक अन्य प्रयोजनाका लागि प्रयोग गरिने छैन । तपाईका उत्तर गोप्य रहनेछन् । यस सम्बन्धमा तपाईका थप प्रश्न वा जिज्ञासा भएमा सीधै भानु पण्डित (९८५१०४८६७७) लाई सम्पर्क गर्न सक्नहनेछ ।

१ व्यक्तिगत विवरण

उत्तरदाताको नाम :..... थर .....

ठेगाना :जिल्ला : ..... गाविस/नगरपालिका ..... वडा नं. :.....

टोल : ..... सम्पर्क नं. : .....

२ जनसांङ्खिक विवरण

उमेर : ☐१६-२४ ☐२५-३० ☐३१-३५ ☐३६-४० ☐४० भन्दा माथि

लिंग : ☐ महिला ☐ पुरुष ☐ अन्य

भौगोलिक क्षेत्र : ☐ हिमाल ☐ पहाड ☐ तराइ

जात/जातियता : ☐ ब्राम्हण ☐ क्षेत्री/ठकुरी ☐ दलित ☐ जनजाति ☐ अन्य

वैवाहिक अवस्था : ☐ विवाहित ☐ अविवाहित

विशेष अवस्था : ☐ अपांगता भएको ☐ एकल महिला ☐ एचआइभी/एड्स संक्रमित ☐ द्वन्द्व पीडित

शैक्षिक योग्यता : ☐ निरक्षर ☐ प्राथमिक तह ☐ माध्यमिक तह ☐ उच्च माध्यमिक तह ☐ सोभन्दा माथि

३ तालिमसम्बन्धी विवरण

३.१ तालिमको विषय : .....

तालिम स्थलः जिल्ला : ..... गाविस/नगरपालिका ..... वडा नं. :

सीप परीक्षण गरेको मिति : .....(वर्ष/महिना)

३.२ पेशागत /व्यवसायगत क्षेत्र : ☐ कृषि ☐ पशुपालन ☐ सत्कार व्यवसाय ☐ निर्माण ☐ इलेक्ट्रिकल ☐ इलेक्ट्रोनिक्स ☐ मेकानिकल ☐गार्मेन्ट ☐ कम्प्युटर ☐अन्यः .....

४ रोजगारी तथा आम्दानीको विवरण

४.१ रोजगारीको अवस्था : ☐ बेरोजगार ☐ तालिम लिएकै विषयमा रोजगारी ☐ तालिम लिएको भन्दा फरक विषयमा रोजगार

४.२ रोजगारीको प्रकार : ☐ स्वरोजगार ☐ ज्यालादारी रोजगारी ☐ मासिक तलबमा काम गर्ने

४.३ मासिक आम्दानी : ☐ रु. ४,००० भन्दा कम ☐ रु. ४,००१ देखि ६,१९९ ☐ ६,२०० देखि ८,१९९ ☐ ८,२०० भन्दामाथि

४.४ तपाइले सीप परीक्षण सकिएको कति महिनापछि रोजगारी पाउनुभयो ? ..... महिना

४.५ यदि तपाइ बेरोजगार हुनुहुन्छ भने यसको कारण :

☐ मैले प्रयास नै गरिनँ ☐ घरको कामको कारणले ☐ पारिवारिक समस्याले

☐ काम गर्ने ठाउँ भएकाले ☐ कम आम्दानी हुने भएकाले ☐ मेरो स्वास्थ्यको कारणले

☐ अन्य (भए खुलाउनुहोस्) .....

४.६ आम्दानीको तुलना

कामको प्रकृति १= ज्यालादारी २ = मासिक तलब ३ = स्वरोजगार	**तालिम अघि**	**तालिमपछिको पहिलो महिनाको आम्दानी**	**तालिम पछि** **(हालको आम्दानी)**
	रु.	रु.	रु.

५ रोजगारीका लागि सीप परीक्षणको भूमिका

क्र. सं.	प्रश्न	उत्तर				
		पूर्ण असहमत	असहमत	थाहा छैन	सहमत	पूर्ण सहमत
५.१	**रोजगारीमा जानुभन्दा पहिलाको भूमिका**					
५.१.१	सीप परीक्षणपश्चात मैले रोजगारीका प्रशस्त अवसरहरू देखें					
५.१.२	सीप परीक्षणपश्चात मैले धेरै ठाउँमा रोजगारीका लागि आवेदन गरें					
५.१.३	सीप परीक्षणपश्चात अन्यत्र आवेदन गर्ने आत्मविश्वास बढेको छ					
५.१.४	सीप परीक्षणपश्चात मलाई तालिम दिने संस्थाले रोजगारीका लागि हौसला दियो					
५.१.५	सीप परीक्षणपश्चात अन्तर्वार्ता सामना गर्ने आत्मविश्वास बढेको छ					
५.१.६	सीप परीक्षणपश्चात रोजगारीको बजारमा मेरो क्षमता बढेको छ					
५.१.७	सीप परीक्षणपश्चात रोजगारदातामाझ मेरो विश्वास बढेको छ					
५.१.८	सीप परीक्षणपश्चात रोजगारदाताले मेरो सीपमा अझ विश्वास गर्न थाले					
५.२	**रोजगारीमा रहेको अवस्थामा भूमिका**					
५.२.१	मेरो विषयगत कार्यदक्षता बढेको छ					
५.२.२	मेरा सहकर्मीहरूको मलाई दिने प्रतिक्रियामा सकारात्मक परिवर्तन आएको छ					
५.२.३	मेरा सहकर्मीहरुमाझ मेरो पहिचान बढेको छ					
५.२.४	मैले काम गर्दा अपनाउनुपर्ने सुरक्षासम्बन्धी प्रावधानमा मेरो सचेतना					

क्र. सं.	प्रश्न	उत्तर				
		पूर्ण असहमत	असहमत	थाहा छैन	सहमत	पूर्ण सहमत
	वृद्धि भएको छ					
५.२.५	मैले काम गर्दा मर्यादित वातावरणप्रतिको मेरो सचेतना बढेको छ					
५.२.६	मैले काम गर्दा पाउनुपर्ने सेवा सुविधाबारेको मेरो सचेतनामा वृद्धि भएको छ					
५.२.७	मैले काम गर्दा मेरो कर्तव्य र दायित्वसम्बन्धी सचेतनामा वृद्धि भएको छ					
५.२.८	मेरो आत्मसम्मानमा वृद्धि भएको छ					
५.२.९	मेरो काम गर्ने विषयमा निपूर्णता बढेको छ					
५.२.१०	म पहिलाभन्दा अहिले समूहमा काम गर्ने सीपमा बृद्धि भएको छ					
५.२.११	म पहिलाभन्दा अहिले राम्ररी सञ्चार गर्न सक्ने भएको छु					
५.२.११	व्यावसायिक पेशाप्रतिको मेरो धारणामा सकारात्मक परिवर्तन भएको छ					
५.३	**रोजगारीपश्चातको अवस्थामा भूमिका**					
५.३.१	मैले अन्यत्र पनि काम पाउने सम्भावना वृद्धि भएको छ					
५.३.२	मेरो सीपको तहमा अझ वृद्धि भएको छ					
५.३.३	मेरो आम्दानीमा वृद्धि भएको छ					
५.३.४	आत्मपहिचान गर्ने मेरो क्षमता बढेको छ					

क्र. सं.	प्रश्न	उत्तर				
		पूर्ण असहमत	असहमत	थाहा छैन	सहमत	पूर्ण सहमत
५.३.५	पहिलेभन्दा अहिले रोजगारीका लागि प्रस्ताव बढेका छन्					
५.३.६	मेरो सामाजिक प्रतिष्ठा बढेको छ					
५.३.७	मेरो दैनिक उपभोग्य सामग्री खरिद गर्न सक्ने क्षमतामा वृद्धि भएको छ					
५.३.८	मेरो र मेरो परिवारको गुणस्तरीय स्वास्थ्य सेवासम्म पहुँचमा बृद्धि भएको छ					
५.३.९	मेरो परिवारका सदस्यको गुणस्तरीय शिक्षामा पहुँच बृद्धि भएको छ					
५.३.१०	मैले केही सम्पत्ति आर्जन गर्न सक्षम भएको छु (जस्तैः घर, जग्गा, गाइबस्तु, गाडी आदि)					

६ तपाईले प्राप्त गरेको तालिमको गुणस्तरसँग तपाई कत्तिको सन्तुष्ट हुनुहुन्छ ?

☹ सन्तुष्ट छैन (१)	😐 सन्तुष्ट छु (२)	☺ अत्यन्त सन्तुष्ट छु (३)

प्रशिक्षार्थीको तर्फबाट कुनै टिप्पणी भएमा

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सर्वेक्षकको तर्फबाट	**उत्तरदाताको तर्फबाट**
नाम ..... दस्तखत	उत्तरदाताको दस्तखत .....
मिति :	

ANNEX II

Disaggregation of Traits

SN	Questions	Traits	
		Personal	**External**
5.1	**Pre-employment stages**		
5.1.1	After skill tests, I see many job options	Yes	
5.1.2	After skill tests, I had applied for many job options	Yes	
5.1.3	After skill test my self-encouragement to apply has increased	Yes	
5.1.4	After skill test my training provider institute encourages me to apply more		Yes
5.1.5	My level of confidence to face the job interview was increased	Yes	
5.1.6	My competency for employment market has been increased	Yes	Yes
5.1.7	After a skill test I feel the increased level of trust among the employers		Yes
5.1.8	After a skill test employers started to belief in my skills ability		Yes
5.2	**During employment stages**		

5.2.1	My work efficiency has been increased	Yes	
5.2.2	Responses by coworkers during work has been positively changed		Yes
5.2.3	Recognition by coworkers to me has been increased		Yes
5.2.4	My self-awareness on work place safety and security has been increased	Yes	
5.2.5	My self-awareness on decent work has been increased	Yes	
5.2.6	My self-awareness on employment benefits has been increased	Yes	
5.2.7	My self-awareness duties & responsibility has been increased	Yes	
5.2.8	My self-dignity has been increased	Yes	
5.2.9	My capacity to specialization on my job is increased	Yes	
5.2.10	I can work on team better than before	Yes	Yes
5.2.11	I can communicate better than before	Yes	
5.2.12	My attitude towards vocational occupation is positively changed	Yes	
5.3	**Post-employment stage**		
5.3.1	My career prosperity has been increased		Yes

5.3.2	I upgraded my skill level than before	Yes	
5.3.3	My level of income has been increased	Yes	
5.3.4	My ability on self-recognition has been increased	Yes	
5.3.5	Number of job offers to me has been increased		Yes
5.3.6	My social prestige has been increased		Yes
5.3.7	My purchasing power for consumable has been increased	Yes	
5.3.8	Me and My family's access to better health care has been increased	Yes	
5.3.9	My children or belongings have increased access to education	Yes	Yes
5.3.10	I became able to buy the fixed assets (land or house or vehicle or cattle etc.)	Yes	

ANNEX III

Correlation between Individual Test Item and Grand Total

Individual test item	Grand total Correlation	Sig. (2 tailed)	N
Question.5.1.1. Saw many opportunities of employment after the skill test	.545**	0.000	300
Question.5.1.2. Applied for job in many places after the skill test	.477**	0.000	297
Question.5.1.3. Increase in self-confidence to apply for job after the skill test	.586**	0.000	299
Question.5.1.4. Training Organization motivated for employment after the skill test	.387**	0.000	300
Question.5.1.5. Increase in Confidence to face interview after the skill test	.529**	0.000	298
Question.5.1.6. Increase of capability in employment market after the skill test	.507**	0.000	298
Question.5.1.7. Increase of trust by the employer after the skill test	.399**	0.000	288
Question.5.1.8. Employer's trust in my skill increased after the skill test	.486**	0.000	295
Question.5.2.1. Increase in my work potential	.482**	0.000	293
Question.5.2.2. Peers give positive response	.507**	0.000	296
Question.5.2.3. Increase in my identity among peers	.545**	0.000	297
Question.5.2.4. Increase in self-awareness of safety while working	.349**	0.000	297
Question.5.2.5. Increase in self-awareness of environment while working	.357**	0.000	295
Question.5.2.6 Increase in self-awareness of incentives while working	.410**	0.000	297
Question.5.2.7. Increase in self-awareness of duties and responsibilities while working	.466**	0.000	297

Individual test item	Grand total Correlation	Sig. (2 tailed)	N
Question.5.2.8. Increase in myself respect	.517**	0.000	297
Question.5.2.9. Increased perfection in my work	.472**	0.000	293
Question.5.2.10. Increased skill to work in group	.498**	0.000	297
Question.5.2.11. Increased skill to communicate	.545**	0.000	297
Question.5.2.12. Positive change towards the vocational occupation	.530**	0.000	295
Question.5.3.3. Increase in my income	.515**	0.000	296
Question.5.3.4. Increased capacity to notice of self	.613**	0.000	298
Question.5.3.5. Increase in offers of employment	.485**	0.000	298
Question.5.3.6. Increase in my social prestige	.566**	0.000	299
Question.5.3.7. Capacity to buy daily basic needs has increased	.136*	0.018	301
Question.5.3.8. Access to good health facilities of me and my family have increased	.410**	0.000	298
Question.5.3.8. Access to good education facilities of my family have increased	.404**	0.000	298
**Correlation is significant at the 0.01 level (2-tailed).			
* Correlation is significant at the 0.05 level (2-tailed).			

The table above shows that all the items (except item number 5.3.7) significantly contribute to the total sum (i.e. contribution of the skill test to the employment of the graduates). So, statistically, the items and results were ensured to be valid.