

Impact Assessment of TITI Training Programs

A study report



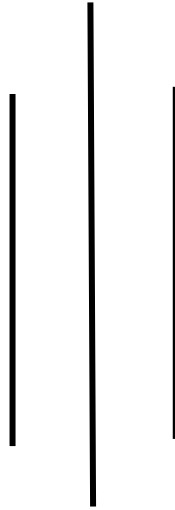
TITI

Training Institute for Technical Instruction (TITI)

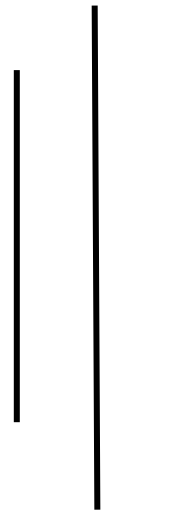
Sanothimi, Bhaktapur

June, 2022

**REPORT ON
IMPACT ASSESSMENT OF
TRAINING INSTITUTE FOR TECHNICAL INSTRUCTIONS (TITI) TRAINING
PROGRAMS**



**Submitted to
Training Institute for Technical Instruction (TITI)
Sanothimi, Bhaktapur**



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June, 2022

Acronyms and abbreviation

ADB	Asian Development Bank
CGAS	Capital Gain Account System
COVID	Corona Virus Disease
CTEVT	Council for Technical Education and Vocational Training
CV	Curriculum Vitae
DGPS	Differential Global Positioning System
FGD	Focus Group Discussion
GIZ	Duetsche Gesellschaft fur Internationale Zusammenarbeit
ILO	International Labour Organization
ISTD	Indian Society for Training and Development
KII	Key Informants' Interview
LLL-CET	Life Long Learning and Continuous Education and Training
MoEST	Ministry of Education, Science and Technology
NCED	National Centre for Educational Development
NPC	National Planning Commission
NSTB	National Skill Testing Board
OIS	Occupational Instructional Skills
OSU	Occupational Skill Upgrading
SDC	Swiss Agencies for Development and Cooperation
SNV	Netherlands Development Organization
SPSS	Statistical Program for Social Science
TECS	Technical Education in Community School
TITI	Training Institute for Technical Instruction
ToT	Training for Trainer
UCEP	Under Privileged Children's Educational Programs
UNDP	United Nations Development Program
UNESCO	United Nations Educational Scientific and Cultural Organization
UNFPA	United Nations Population Fund
UNICEF	United Nations Children Emergency Fund
UNESCO	United Nations Educational Scientific and Cultural Organization
WB	World Bank
ADRA	Adventist Development and Relief Agency International
NCED	National Centre for Educational Development

Executive summary

Background

Training Institute for Technical Instruction (TITI) traces its beginning from ‘Technical Instructors Training Institute’(TITI) established as a Nepali national institute in 1991. The aim of TITI is to meet the nationwide training needs of technical and managerial professionals in TVET sector. For achieving this aim, TITI has been conducting several training program related to instructional skills, management skills, curriculum development and community development. More than 33,000 people have already been trained by TITI including both short term and long term programs. The effectiveness and impact of these programs in terms of utilization of its learning achievements in workplaces has not been comprehensively analysed. This assessment thus aims to address this specific requirement to some extent.

Objectives and methodology

The purpose of the assessment is to find out an impact of TITI training programs against the adopted implementation modality and its planned outcomes and results. The specific objectives of this study are to (a) analyze the increment on effectiveness of teaching and learning activities of institutes as a result of TITI training programs; (b) spell out how participant’s learning transformed into job performance; (c) list out and analyze how enhanced performance of participants due to TITI training programs transformed into gainful employment and productivity of students.

This assessment has covered both (a) short term training and (b) long term courses of TITI within engineering, hospitality, agriculture and health service areas. The trainees who participated these professional development programs, called training attendees hereafter are the target population of this study. Similarly, the supervisors of these training attendees and the students who attended their classes were also falls under the reach of this study as an ultimate beneficiaries of training program. Altogether 126 training attendees, 36 supervisors, 102 students from 31 different institutes were consulted either personally or in group for quantitative and qualitative information for this assessment.

Analysis and findings

Males are in dominant figure among both in training attendees (65.1%) and supervisors’ (77.8%) group. But girls (72.5%) responded more than boys in students group. While categorizing respondents by province, majority are from Bagmati Province where their share in training attendees is 50% and supervisor is 46.8%. As per the positional responsibility, the training attendees and supervisors are of three categories which includes teaching staffs (88.9% of attendees and 61.1% supervisors), managerial staffs (8.7% of attendees and 36.1% supervisors) and supporting staffs (2.4% of attendees and 2.8% supervisors). Similarly, students are also of three categories which includes regular students (79.4%), just completed the course (5.9%) and

graduates (14.7%). The mean age of respondents in student group is 20.21, training attendees group is 32.59 and supervisor group is 39.97.

Large proportion (53.17%) of respondents have reported that they got Instructional Skill-I training followed by Training for Trainers (ToT) (21.43%), Instructional Skills-II (19.84%) and Occupational Skills Upgrading (13.49%). Majority of respondents have attended training programs of duration ranges between 1-4 weeks. Similarly the funding source for majority (85.07%) of participants was the training organizer itself.

Analyzing the selection process, majority (77.0%) of participant's are found nominated by their own institutes. Personal interest (28.6%), necessity of current position (27.8%) and necessity of current career (25.4%) are found as motivating factors for training programs. Similarly, supervisors pointed out compatibility with class schedule (47.2%) and requirement of individual teachers (47.2%) as reference factors while nominating.

Relevancy and quality of training

Training attendees were asked their opinion regarding ten assessment areas related to relevancy, quality and effectiveness of training courses and also asked them to evaluate these areas as indicators by means of five rating scales - (a) Poor (b) Fair (c) Good (d) Very good and (e) Excellent. These rating scales were further scored from 1 to 5 where 1 values for 'Poor', 2 for 'Fair', 3 for 'Good', 4 for 'Very good' and 5 stands for 'Excellent'.

While analyzing the training attendees response, training programs is found rated 3.67 out of 5.0 as aggregate of 10 assessment indicators where rating score of each indicator ranges between 3.5 to 4.1. Similarly, supervisors rated training programs as 3.51 of 5.0 and the corresponding range of the 6 assessment indicators is 3.1 to 3.9. The significant difference in aggregate rating score between training attendees and supervisors suggests that perfect translation of attendees learning achievements is yet to be made in workplace.

The training programs are justified fruitful and effective to enhance overall teaching and learning activities in the institutes. More than 97% of respondents of both groups are found of the opinion that training programs are either as per their prior expectation or above of it. These training programs are found fruitful in various ways including drawing attention of students/trainees, increasing class room interaction, acquiring additional knowledge and skills, increment in attendance rate, reduction in drop out rates among others.

As per the qualitative information from FGDs and KIIs, the training courses helps TVET professionals under three ways. First, it helps them to develop effective presentation skills and instructional approaches that helps for better delivery in the class. Secondly, it teaches them using innovative and effective tools and equipment for instructions. Finally, such training helps them to update with the recent technological development related to their occupational fields. Almost all of the participants also agreed that these benefits are instrumental not only in the class room delivery but also in making enabling environment for enhancing quality of TVET programs and managing TVET programs and institutes effectively. Moreover, participants also accepted that they have successfully applied those acquired skills and knowledge in their profession.

Impact of the training

Attempt is also made to analyze the impact of the training program by comparing behavior and performance of instructors, status and performance of students and status of overall institutional environment before and after instructors/staffs got trained. Such a analysis is made based on the opinion of supervisors who are directly involves in monitoring and supervising these staffs. The aggregate rating score of these three indicators obtained from the analysis are 2.07, 1.87 and 1.84. These corresponding values suggests that significant change is observed in the behavior and performance of the instructors after they got trained. Moreover, the degree of change seems slightly lower (1.87) in the evaluation of status and performance of students and even lower (1.84) in the evaluation of overall institutional environment for quality education.

The observations and opinions of the students also justifies the importance of these professional development training in general and instructional skills development training in specific. Large majority of students are found agreed on the importance of teachers' qualification, experience and training for their learning outcomes. Students are not found in the position to evaluate the importance of such professional development training for effective class delivery, since they don't have adequate information regarding training of their instructors. Moreover, further comparing and analyzing these three components associated with instructors, students do not give greater ranking to training of instructor than other two (qualification and experience). But graduates were found agreed that their post training/education status could be attributed to the professional development training program to some extent.

Conclusion and recommendation

The direct, indirect and induced effects of this training programs jointly contributes on quality of TVET to large extent which is observed in the change assessment result and employment rate after graduation. The opinions of all categories of respondents justify this statement. However, sufficient rooms are still available to improve these effects. Indirect and spill over effects of these professional development training programs are noticed by the respondents in the institution level. Opinion of large proportions of respondents (78.6% of training attendees and 75% of supervisors) supports this conclusion. Rest of them also accepted the occurrence of spill over effect but they were not found confident that the effect could be noticed.

The information obtained from FGDs and KIIs (as qualitative data) also substantiates the aforementioned findings. Almost all of the participants have common perception that training brings significant enhancement in the course delivery approach of instructor/trainers. Moreover, such types of enhancement is largely noticeable in case of newly appointed instructors than the experienced one.

Significant gap is observed between the training programs conducted by TITI and the needy people for training program. On one hand, TITI is striving to fulfill the required number of participants for the training. The instructors of large number of TECS and private institutes, on the other hand have complained to TITI not organizing the training as per their particular need and interest. The existing infrastructure and human resource of TITI also seems insufficient to cater the needs of continuous professional development of TVET professionals, since large

number of instructors, managers and other professionals of private affiliated and TECS institutes could not access TITI training programs.

Quality education is not only the function of performance of teaching staffs but also the performance of managerial staffs who creates conducive environment in the institutes for teaching and learning. TITI seems providing limited opportunities for administrative/managerial staffs for their competency development which is justified by the lower share of administrative staffs in the attendees pie. Attention should also be paid to address the training requirement of non teaching staffs of the TVET institutes and other regulatory bodies.

Table of contents

Acronyms and abbreviation.....	ii
Executive summary	iii
Table of contents	vii
List of tables	ix
List of charts.....	x
CHAPTER I INTRODUCTION	1-11
1.1 Background.....	1
1.2 Literature review	2
1.3 Purpose and objectives	5
1.4 Scope of the assessment	6
1.5 Methodology	6
1.5.1 Research design.....	6
1.5.2 Collection of qualitative data	8
1.5.3 Data collection tools	9
1.5.4 Data analysis and report preparation	10
1.5.5 Theoretical approach of analysis.....	11
1.6 Structure of the report.	11
1.7 Limitation	11
CHAPTER II ANALYSIS AND FINDINGS OF QUALITATIVE INFORMATION	13-21
2.1 Background.....	13
2.2 Major benefits of the programs	13
2.3 Impact of training in terms of internal efficiency of students.....	16
2.4 Impact of Training in terms of external efficiency of graduates	18
2.5 Indirect and induced effects of TITI training programs.....	19
2.6 Limitations on applicability of training.....	21
CHAPTER III ANALYSIS AND FINDINGS OF QUANTITATIVE DATA	23-44
3.1 Personal information of respondents	23
3.1.1 Respondents' by provinces and districts.....	23
3.1.2 Respondents' by professional category	24
3.1.3 Respondents by sex	25
3.1.4 Respondents' by age.....	26
3.2 Access and motivation towards training programs.....	26
3.2.1 Name of training programs	26

3.2.2	Training duration.....	27
3.2.3	Funding source and nomination.....	28
3.2.4	Motivation and selection process.....	28
3.3	Assessment of training and its delivery system	29
3.4	Observed differences due to training courses.....	33
3.4.1	Effect of training on improvement of classroom environment.....	34
3.4.2	Students' perception on quality of TVET.....	36
3.5	Impact on TVET quality	37
3.5.1	Indicators related to performance and behavior of instructors.....	38
3.5.2	Indicators related to status and performance of students.....	39
3.6	Indirect and induced effect.....	42
3.6.1	Indirect effect of training programs.....	42
3.6.2	Induced effect of training programs.....	43
3.7	Specific suggestions	45
CHAPTER IV	SUMMARY, CONCLUSION AND RECOMMENDATION	46-51
4.1	Summary of findings	46
4.1.1	Satisfaction of training attendees.....	46
4.1.2	Application of acquired skills.....	46
4.1.3	Realized benefits of the programs.....	47
4.1.4	Increment of assessment result and employability.....	49
4.2	Conclusions	49
4.3	Recommendations.....	51
4.3.1	Recommendation for immediate action.....	51
4.3.2	Recommendation for longer term actions.....	51
Annex I	: Additional analysis tables	53
Annex II	: Questionnaires and checklists.....	57
Annex III	: List of Participants of FGDs and KIIs	74
Annex IV	: Pictures related with FGDs and KIIs.....	75

List of tables

Table No	Title	Page No
Table 1.1:	Distribution of training attendees by types of institutes and provinces	7
Table 1.2:	Distribution of supervisor by institution type and province	7
Table 1.3:	Distribution of supervisor between institution type and province	8
Table 1.4:	Matrixes of types of events organized to collect qualitative data	8
Table 3.1:	Distribution of respondents by province	23
Table 3.2:	Distribution of respondents by district	24
Table 3.3 :	Categories of respondents by role and status	25
Table 3.4:	Respondents by gender	25
Table 3.5:	Descriptive statistics of age of the respondents	26
Table 3.6:	Training programs attended by target group	27
Table 3.7:	Duration of Training Programs	27
Table 3.8:	Funding of the training programs	28
Table 3.9:	Selection process for training	28
Table 3.10:	Motivation towards training	29
Table 3.11:	Nomination basis for training course	29
Table 3.12:	Assessment of training and delivery system	30
Table 3.13:	Assessment of skills transformation and application	31
Table 3.14:	General assessment of training courses	33
Table 3.15:	Immediate benefits of training course	33
Table 3.16:	Experience of teaching or supervising before and after TITI training	34
Table 3.17:	Status on difference observed	34
Table 3.18:	Observed changes after training	35
Table 3.19:	Effect of training to enhance overall quality of TVET	36
Table 3.20:	Emphasis on different factors' of assessment	37
Table 3.21:	Priority order by students on teachers' components	37
Table 3.22:	Effect of training programs in employability	41
Table 3.23:	Justification on impact of training on outcome	41
Table 3.24:	Indirect benefit of training programs	42
Table 3.25:	Spill over effect	43
Table 3.26:	Types of spill over effect	44
Table 3.27:	Recommendation to pairs and subordinates	44

List of charts

Chart 3.1: Transformation of training outcome to quality education	38
Chart 3.2: Indicators related to behavior and performance of instructors	39
Chart 3.3: Indicators related to status and performance of students	39
Chart 3.4: Indicators related to overall teaching and learning experience	40
Chart 4.1: Dimensions of training impacts	46
Chart 4.2: Types of effects	47

CHAPTER I

INTRODUCTION

1.1 Background

Training Institute for Technical Instruction (TITI) was established as a Nepali National Institute in 1991 with the assistance of the Swiss Government, Swiss Agency for Development & Cooperation (SDC) through Swisscontact- the Swiss Foundation for Technical Cooperation. TITI programs and services are mandated by an Act of the Council for Technical Education and Vocational Training (CTEVT). TITI has been devoted to meet the nationwide training needs of professionals in technical, managerial human resources, quality assessors and curriculum developers in TEVT sector.

With a vision of becoming the “**Centre of Excellence**” to develop human resource capacity for Technical and Vocational Education and Training (TVET) in Asia and beyond, TITI is moving forward with the mission of contributing to the quality of programs and services of TVET by means of training, education and research. Because of its conducive environment (physical and working environment) & resources (physical, human and financial), TITI has got recognition/reputation as an excellent institution in national and international market.

TITI also won “Knowledge Management ‘Oscar’ 2005” award from Switzerland for the successful Skill Card System and Special Commendation Prize for “Innovative Training Practices 2005-06” from Indian Society for Training and Development (ISTD), India. TITI has trained over 33,000 instructional, managerial and curriculum developers from 17 different countries such as Afghanistan, Albania, Bangladesh, Bhutan, Burkina Faso, India, Indonesia, Kosovo, Mali, Moldova, Nepal, Pakistan, Sri-Lanka, Switzerland, Uganda, Vietnam and Zimbabwe. TITI has conducted training programs, provided TEVT consultancies and other services to Technical Cooperation-Federal Republic of Germany (GIZ), Department for International Development (DFID), Netherlands Development Organization (SNV), ILO/UNDP, SDC, UNICEF, ADRA, SOS, NCED, Aga Khan Foundation, UNFPA, ADB, WB, UNESCO and other national and international organizations in Nepal and abroad.

TITI has been assigned for credited initial education, non-credited experiential attachment to work-place, credited capacity building and life-long learning and continuous education and training (LLL-CET). The first issue has been partially addressed by the B. Tech Ed, though it is not TITI’s own program. The second issue has never been thought, though there are some examples in technical schools using the methods of trade test and preparation for the test. The occupational instructional skills (OIS) and occupational skill upgrading (OSU), though have been there since long, the recognition of them has been limited to the work-day and the content recognition is still far away. The last issue has been partially exercised.

The above-discussed issues have been dealt through instructional, management, curriculum development and community development and work-place programs. More than 33,000 personnel have been trained so far and the effectiveness and impact of these programs in terms of utilization of its learning achievements in job-places and workplaces has not been

comprehensively analysed. This assessment aims to address this specific requirement to some extent. TITI has therefore carried out this study to assess the impact of its programs and services by the help of external expert. This assessment intends to explore the actual benefits of its programs and services to the TVET sectors of Nepal by means of direct, indirect and induced effects incorporating both short term and long term effects.

1.2 Literature review

It is evident that quality of instructors and trainers largely influences the effectiveness of technical and vocational education and training (TVET) programs and institutes producing qualified and skilled workers for the labour market. The quality of education in general and technical and vocational education and training (TVET) in specific is strongly dependent on the competencies of teachers. The competencies of teachers is more dependent on how well they continue to learn and update their knowledge and skills. The effectiveness of education system in general and TVET education in specific strongly depends on the quality of interactions that occurs in the classroom and other learning venues and the relationship between students and instructors. According to UNESCO, the following four factors are found instrumental for continuous professional development of TVET teachers.

1. Strengthening TVET teacher education through collaboration with industry;
2. Motivating TVET teachers to build linkages with industry;
3. Strengthening pre-service TVET teacher education;
4. Enriching TVET teachers through continuing professional development. (UNESCO, 2012)¹

As the vision of TITI is to be developed as a “*Centre of excellence*” for developing human resource capacity for technical and vocational education and training in Asia and beyond. In order to achieve this vision, TITI has focused more on the third and fourth of these areas which are (3) strengthening pre-service TVET education (4) enriching TVET teachers through continuing professional development than the previous two (TITI, 2018)². According to the Bukit, professionalization of TVET teachers or trainers is widely regarded as a critical issue that affects the quality of technical and vocational education and training in generating skilled workers (Bukit, 2007)³.

TVET systems need to be prepared in order to adapt and respond the need of 21st century skills. The 21st century skills needed for industrial revolution IR-4.0 includes, but are not limited to, the following list of skills.

- Skills in oral and written communication;
- Problem solving;
- Ethics and professionalism at work;

¹ UNESCO, 2012. *Strengthening TVET teachers' education*. Report of online conference. Bonn, Germany. United Nations Educational, Scientific and Cultural Organization.

² TITI, 2018. *TITI strategic plan 2018-22*. Sanothimi, Bhaktapur. Training Institutes for Technical Instruction.

³ Bukit, 2007. Strengthening TVET teachers education. Retrieved from <https://unevoc.unesco.org/home/Background+note:+TVET+teacher+education&context=>

- Teamwork and collaboration;
- Ability to use new technology effectively;
- Project management and leadership;
- Agility and adaptability;
- Initiative and entrepreneurship;
- Ability to access, analyze and synthesize information;
- Curiosity and imagination;
- Productivity and accountability; and
- Innovative, global citizenship, higher order thinking. In addition, the competence profile of TVET graduates in Indonesia must include (CMoE 2017)

Teachers professional development training also includes the aforementioned list of skills in one or other way.

Committed and competent teachers and trainers are crucial to ensuring the quality and labour market relevance of learning, both in VET schools/ centres and in companies, and whether in classrooms, in workshops, in laboratories and simulated learning environments, or at the workplace. (CEDEFOP, 2016)⁴. The role of teacher and trainers are not limited within class room and institute but also to the outside environment of institute environment such as linking education to work, establishing new curricula, providing more and high-quality apprenticeships and other forms of work-based learning.

Education policy 2019 has sets some target regarding the capacity development of TVET teachers and other professionals and sets various strategies regarding this. Instead of continuous professional development of TVET teachers, it has also aimed to lunch licencing system as a basic requirement entering in to the teaching service in TVET system and to modernize the curricula, teaching materials and approaches in TVET teaching (MoEST, 2019)⁵.

Similarly, Fifteenth Plan 2019/20-2023/24 has mentioned a program to revise the minimum qualification of teachers and aimed to start the teachers professional development program for continuous professional development of teachers of general institute (NPC, 2019)⁶. Both of the provisions seems equally relevant to the development of TVET teachers in the present context of Nepal. The strategic plan of CTEVT 2014-2018 had some programs and targets regarding the development of TVET by means of teachers' education and training. However some of these programs are still waiting to be translated into practice.

Chadwick, K. and Gordon, J. mentioned some rule of thumps based on the impact of the training. They are (a) A worker's lifetime income is higher, on average, by around 10% for each additional year spent in formal education (b) the firm captures around half of the benefits of their investment in specific training for their workers and the workers capturing the other

⁴ CEDEFOP, 2016. *Professional development of VET teachers and trainer*. Thessaloniki, Greece. European Center for the Development of Vocational Training

⁵ MoEST, 2019. *National education policy, 2019*. Kathmandu, Nepal. Ministry of Education, Science and Technology

⁶ NPC, 2019. *Fifteenth plan 2019/20-2023/24*. Kathmandu, Nepal. National Planning Commission

half, and the individuals trained around a third (c) improvements in human capital explain around 30% of the increase in total factor productivity (d) 50% of increases in (agricultural) productivity are due to interstate or international R&D spillovers. (Gordon, J. and Chadwick, K, 2012,⁷,

Literatures regarding concept and methodology

Impact evaluations are a particular type of evaluation that seeks to answer cause-and-effect questions. Unlike general evaluations, which can answer many types of questions, impact evaluations are structured around one particular type of question: What is the impact (or causal effect) of a program on an outcome of interest (Gertler, P. J. et al. 2010)⁸. The methodology we choose to estimate the causal effect or impact of a program on outcomes should estimate so-called counterfactual, that is, what would have happened in the absence of intervention or the program. (Gertler, P. J. et al. 2010). Project impact evaluation studies the effect of an intervention on final welfare outcomes, rather than the project outputs or the project implementation process.

Impact is a wider consequence of a given set of actions or processes which can be experienced at the individual, organizational or societal level. In other words, an impact evaluation is meant to assess the extent to which what was learned is making a difference to the targeted groups or beneficiaries of the intervention. Impact should be viewed in multi-dimensional way including intended and unintended, direct and indirect, and tangible and intangible. Various indicators are used to judge impacts of training programs some are directly related with the training programs but some contribute indirectly, some are easily quantifiable and some are difficult to quantify.

The Kickpatrick four level evaluation approach is also found more relevant to this impact study of the training programs. As per the Kickpatrick, the reaction and planned action of individual participants is the major concern in first level of evaluation. Similarly, learning and confidence is the concern of second level evaluation, application is the concern of third level and result is the major concern at level four. (Pateda, S.E et al, 2020)⁹

As per the general methodology of training evaluation, impact of any training programs could be monitor using a qualitative and quantitative baseline and accompanying indicators. Hence, the impact assessment of a training program is not always easy and extremely difficult in the absence of baseline data and without estimating the counterfactual.

Accordingly to Gordon, J. and Chadwick, K.; capacity building activities contribute to improved economic, environmental and social outcomes through four main pathways. At first,

⁷ Gordon, J. and Chadwick, K, 2012, *Australian centre for international agricultural research. retrieved from <https://cas.cgiar.org/sites/default/files/pdf/76.pdf>. visited data May 31, 2022)*

⁸ Gertler, P. J.; Martinez, S. Premand, P.; Rawlings, L.B.; Christel M. J. Vermeersch, C.M.J, 2010. *Impact evaluation theory and practice*. Washington U.S.A. World Bank, 2010.

⁹ Pateda, S. A.; Badu, R. W., Hamid Isa, A.; and Rahmat, A. 2020. Evaluation of the Kickpatrick model program on towards class at the gorontalo district. *JournalNX- A Multidisciplinary Peer Reviewed Journal*.6(7). Gorontalo State University Indonesia

training programs raises the productivity and earning capacity of individuals which are reflected in higher lifetime income. At second, the enhanced capacity and productivity of direct beneficiaries provides echo effects on the productivity of other workers and ultimately to the efficiency of the organization. At third, innovation in the organization as the culture and mindset changes, new and better ways of doing things are introduced and new products and services are developed. And finally, it increases the effectiveness of the organization within the policy environment, improving targeting to areas of need, attracting more resources and engaging it more effectively on policy, due to the networks and enhanced perceptions of the views of the organization, as well as its competency. (Gordon, J. and Chadwick, K, 2012)

Likewise other evaluation exercise, impact evaluations can be carried out under two approaches: quantitative approach and qualitative approach. The basic organizing principle of quantitative impact evaluation is the use of an explicit counterfactual analysis. On the other hand, qualitative impact evaluation does not use a counterfactual analysis but relies on understanding processes, observing behavior, and condition changes. (ADB, 2006)¹⁰. This qualitative approaches seems more relevant in the situation in the absence of base line data.

The review of aforementioned literatures shows that impact evaluation exercise has to face with several limitations in general and in the absence of base line data in particular. Without availability of baseline data and forming control group, actual counterfactual estimation is not possible. None of the literatures was available to review which could be take complete reference for methodology to this study, however the qualitative approach qualitative approaches suggested in (ADB, 2006) seems more practical to follow as a theoretical framework.

1.3 Purpose and objectives

The purpose of the assessment is to find out an impact of TITI training programs against the adopted implementation modality and its planned outcomes and results. This assessment also aims to evaluate its programs focusing on relevance, coherence, effectiveness, impact and added value as an organisation, as well as effectiveness of its operation. This impact assessment provides valuable inputs to TITI and its stakeholders for upcoming discussion and decision-making process. Evaluation of training effectiveness and its contribution to improve quality of TVET is a very important aspect of this assessment exercise. In addition, this study has also provided meaningful data and information to TITI and CTEVT for overall development of TVET sector of Nepal. In addition, it also helps TITI management to ensure the programs are on track to reach the vision and mission of TITI.

The specific objectives of the study were to;

- analyze the increment on effectiveness of teaching learning activities of institutes as a result of TITI training programs;

¹⁰ ADB, 2006. *Impact evaluation: operational and methodological issues*. Manila, Philippines. Asian Development Bank

- spell out how participant's learning transformed into job performance after attending TITI training programs;
- list out and analyze how enhanced performance of participants due to TITI training programs transformed into gainful employment and productivity of students after graduation;

1.4 Scope of the assessment

This assessment has covered both (a) short term training and (b) long term courses of TITI within engineering, hospitality, agriculture and health service areas. The short term program includes various subject areas including (a) Instructional programs (b) Curriculum development program (c) Management program (d) Community development program. Similarly, (a) Bachelor of Technical Education (b) TVET Management and Leadership (c) Entry Level Certificate in Technical Instruction (d) Diploma and Advance Diploma in Technical Instruction are the long term courses delivered by TITI. The trainees who attended these TITI catered short term training programs and long term courses were under the target population of this study. Similarly, the supervisors of these training attendees and the students who attended their classes were also falls under the reach of this study.

1.5 Methodology

The analytical approach of this study is the mixed of both qualitative and quantitative approaches. Under the quantitative approach, primary data were collected from the target population using semi-structured data collection format designed in cobotoolbox. Similarly, desk review of relevant literatures, focus group discussion (FGD), key informants' interview (KII), field observation and stakeholders' interaction are the major tools to collect qualitative data which are presented detail in the sub topics included hereafter.

1.5.1 Research design

Multi-stage sampling techniques was adopted for this assessment. At first stage, three out of seven provinces- Karnali Province; Lumbini Province and Bagmati Province were selected based on the number of participants in TITI training program, number of TVET institutes and their enrolment capacity, socio-economic diversities and comfortability to visit the places. In the second stage, some constituent institutes, TECS programs running institutes and affiliated institutes are selected purposively from each of these provinces based on number of participants as direct beneficiaries of TITI training courses, number of trades and enrolment capacity. (*See Table 6 of annex I for list of selected institutes*).

In total, 126 attendees of TITI training programs (direct beneficiaries of training) were interviewed as a target population. Of the 126 interviewed training attendees, 68 (53.97%) are from constituent institutes, 40 (31.75%) are from TECS/partnership institute and 18 (14.29%) are from private affiliated institutes. Of the 68 individuals from constituent institutes, 37 are from Bagmati Province, 31 are from Lumbini Province but none of them were from Karnali Province. Similarly, out of 40 individuals from TECS/ partnership institutes, 18 are from Bagmati Province, 19 are from Lumbini Province and 3 from Karnali Province. Similarly, of

the 18 individuals from private affiliated institutes 8 are from Bagmati Province, 9 are from Lumbini Province and 1 from Karnali Province. The detail distribution of training attendees by province and types of institutes is presented in table 1.1.

Table 1.1: Distribution of training attendees by types of institutes and provinces

SN	Provinces	Types of institutes						Total
		Constitution Institutes		TECS and Partnership Institutes		Private affiliated institute		
		Number	Percent (Row)	Number	Percent (Row)	Number	Percent (Row)	
1	Bagmati Province	37	58.73	18	28.57	8	12.70	63(100)
2	Lumbini Province	31	52.54	19	32.21	9	15.25	59(100)
3	Karnali Province	-	-	3	75.00	1	25.00	4(100)
	Total	68	53.96	40	31.75	18	14.29	126(100)

Similarly, total of 36 supervisors were administered the online questionnaire from 13 institutes. Of these 36 supervisors, 28 (77.8%) are from constituent institute. 6 (16.67%) are from TECS and Partnership Institute and 2 (5.56%) are from private affiliated institutes. Similarly, as the province wise distribution, 22 are from Bagmati Province, 13 are from Lumbini Province and remaining single respondents is from Karnali Province. The distribution of respondents by province and types of institute is presented in table 1.2 in detail.

Table 1.2: Distribution of supervisor by institution type and province

SN	Provinces	Types of institutes						Total
		Constitution Institutes		TECS and Partnership Institutes		Private affiliated institute		
		Number	Percent (Row)	Number	Percent (Row)	Number	Percent (Row)	
1	Bagmati Province	20	90.91	1	4.55	1	4.55	22(100)
	Lumbini Province	8	61.54	4	30.77	1	7.69	13(100)
2	Karnali Province	-	-	1	100.00	-	-	1(100)
	Total	28	77.78	6	16.67	2	5.56	36(100)

Likewise, 102 students were also responded the online questionnaire from 16 institutes from where the training attendees were interviewed. Of these 102 students, 7 are from Bagmati province and remaining 95 are from Lumbini Province. None of the respondents from the institute of Karnali Province responded our online questionnaire. Similarly, distributing respondents by types of institute, large majority (76%) are from constituent institutes followed by 15% from private affiliated institute and 9% from TECS and partnership institute. The detail figure is presented in table 1.3.

Table 1.3: Distribution of students by institution type and province

SN	Provinces	Types of institutes						Total
		Constitution institutes		TECS and partnership institutes		Private affiliated institute		
		Number	Percent (Row)	Number	Percent (Row)	Number	Percent (Row)	
1	Bagmati Province	7	100	-	-	-	-	7(100)
2	Lumbini Province	71	75	9	9	15	16	95(100)
	Total	78	76	9	9	15	15	102(100)

1.5.2 Collection of qualitative data

Similarly, the qualitative data was also the major basis for the assessment. All major approaches to collect qualitative data were adopted for this study which includes (a) Desk review of relevant literatures (b) Focus group discussions (FGDs) (c) Key informants' interview (KII) and (d) Field observation. For the desk analysis, related and relevant literatures with the subject area of assessment were selected, collected and reviewed which is presented earlier in the literature review section (topics 1.2) and the foot note of corresponding pages.

Table 1.4: Matrixes of types of events organized to collect qualitative data

SN	Data Sources	Focus group discussion	Key informants' interview	Interactive discussion/workshop
1	Federal level (CTEVT & TITI)		2	1
1	Province management level (province Office)	3	-	-
2	Institute management level	17	10	-
5	Training participants level	4	-	-

Focus group discussion (FGD) and key informants' interview (KII) were organized to collect the qualitative data. These interviews were conducted with and among immediate and ultimate supervisors of the participants which includes principles/vice-principles, trade-heads, senior instructors, administrative officers etc.. At least one individual from each of these category of supervisors from each institutes were either interviewed as KII or included as a participants of FGD. While conducting the FGD and KII, the participants of those training programs which are not included in primary sample are also incorporated in this group. The detail number of key professionals participated in FGD or KII is presented in the table 1.4.

Instead of these FGD and KII activities, one wider interactive discussion/workshops will be conducted for the purpose of sharing the draft report and collecting feedback. In addition to the target participants of FGD & KII, this interactive workshop had included officials of CTEVT and TITI as a participant. Besides these formative data collection process, field observation was also made of the training delivery in TITI, class room performance of training attendees (instructor) and performance of graduates in post-training employment period.

1.5.3 Data collection tools

Three different semi-structured interview questionnaires had been developed to collect data from (a) training attendees (b) supervisors of these beneficiaries and (c) regular and graduated students who are/were trained from these training attendees as instructor/assistant instructors. Similarly, separate checklists was also prepared to conduct focus group discussion (FGDs) and key informants' interview (KII) with concerned stakeholders. The questionnaires and checklist basically incorporate the following questions/issues however contents had slightly varied as per the target group and nature of data collection process. (*see Annex II for detail questionnaires and checklist*)

- Is their any notable difference in the instructional skills before and after attending the training program?
- Is there any notable difference in students' satisfaction level before and after attending training program?
- Is their any visible increment in output and outcome of institute due to training programs?
- How has the training course helped instructors in the delivery of class?
- What activities in the training programme help trainees to best perform their responsibility?
- Was the training effective?
- What part of the training programme are found less fruitful in your professional life?
- Which special components would you suggest to add in the training programme?
- Was there adequate focus on practical exercises during the training program?
- Would you recommend that your colleagues should take this programme? If not, why not?
- Are there any other indirect benefits of training programs than increase in class room delivery skills?

Before using the questionnaire for data collection, pre-testing of it was made with those group of peoples which are similar to the target group of the study. Based on the feedback of the pre-test, questionnaires were finalized and developed as a online questionnaire in the cobo toolbox.

1.5.4 Data analysis and report preparation

Once the quantitative data collection from cobo toolbox completed, it was downloaded, processed and migrated into the statistical programs named SPSS. After migrating the data in to SPSS, it was cleaned and analyzed by the help of same statistical program. The findings from both quantitative and qualitative analysis are triangulated and substantiated to each other to increase the validity of the survey.

The basic principle adopted for the analyze is the comparison of output and outcome of institutes before and after impartation of training for their staffs in general and teaching staffs in specific. Similarly, comparison of performance level of trained and untrained instructors and other managerial staffs is also made as far as possible. The comparison is made based on the opinion of interviewed persons (training attendees, supervisors, regular students and graduates) as well as other available secondary data and information of the reference period.

Data presentation is made in the form of tables, charts, graphs and statistics depends on nature of analysis and types of data. Both descriptive and inferential statistics are adopted for the analysis. The following are the major indicators to analyze the impact of the delivered programs.

- a. Learning retention of trained personnel (knowledge, skills and attitudes);
- b. Internal efficiency of regular students (Internal and final assessments scores)
- c. External efficiency of students (Employment rate and post training income)
- d. Managerial effectiveness of institutes (Institute management, information sharing and operation system etc.)
- e. Technical effectiveness of institutes (Enrolment rate, drop-out rate, student & staffs satisfaction)
- f. Indirect benefits of training (Career progression, feedback on managerial part, relevancy of training programs etc.)
- g. Training impact on organizational effectiveness.
- h. Impact on the market or environment or stakeholder's competencies

Priority is given to justify the impacts of training based on the aforementioned indicators by collecting and analyzing both qualitative and quantitative data and information so far as possible. However, due to limitation of quantitative data, some indicators are assessed only with the help of qualitative information collected by means of FGDs and KIIs.

1.5.5 Theoretical approach of analysis

The analysis of this study focuses to collect and compare satisfaction level of students and supervisors towards trained and untrained staffs/instructors and the individual staff before and after training. Similarly, it also attempts to distinguish overall change in the output and outcome of TVET programs as a causal-effect of TITI delivered training programs. Based on the various literatures, the following statements are adopted as a theoretical approach for this study.

The enhanced competencies of trained personnel due to TITI training program leads to increase the students' learning achievements thereby enhances the internal efficiency of students and external efficiency of graduates. The increment in the internal efficiency of students and external efficiency of graduates because of these trained personnel is the actual impact of the training programs.

Some assumptions are also made while analyzing the data and justifying the adopted theoretical approach. These assumptions are (a) the increment in competencies of training attendees within the review period¹¹ is fully attributed to the TITI training programs and (b) the increment in internal efficiency of students and external efficiency of graduates is fully attributed to the enhanced competencies of trained personnel and no other intervention was available to them that has significant influence to enhance the performance level and efficiency.

1.6 Structure of the report.

This report incorporates four parts, first part is the introduction of the report, which has covered background, objectives and the methodologies used. This part of the report also delineates the literature review and limitations of the study. Similarly, second part is about the analysis and findings of the qualitative data which summarizes the major essence of the opinion expressed by the participants as well as the analysis of their opinions. Likewise, third part includes the similar analysis and findings of the quantitative data. This part of the reports further explains general and training profile of the respondents as well as their status, opinion and suggestions in detail as structured in the questionnaires regarding the impact of TITI training program. The findings of the data analysis is presented in the forms of tables, charts and graphs and other descriptive and inferential statistics.

Finally, the conclusion and recommendation is presented in part four, which is further divided under two topics –summary of findings and conclusion and recommendations.

1.7 Limitation

In a impact study, experiential research design, availability of baseline data and estimation of counterfactual are the pre requisites. Due to limitation of these data, time and cost for the survey, non experimental research design was adopted for this assessment.

The limited availability of actual information regarding the current placement status or present address of the target participants is another limitation for this assessment. The purposively selected participants (training attendees) could not be traced in their previous location as per the available training record of TITI. Slight variation therefore happens in the purposively

¹¹ Review period is the period between the training completion and the interview date.

selected lists of institutes and number of participants at the time of actual data collection than the previous planing.

Beside, the data collection work for this study had to be carried out at the time when the country was suffering from the crisis of COVID-19 pandemic. The data therefore could not be collected in free and comfortable environment which was another major limitation. Research had also aimed to compare the status and progress of institute to spell out the contribution of trained staffs/instructors for quality TVET, however this could not be possible because of limitations of comparable data of both of these periods.

Despite these limitations, sufficient efforts have been made to collect and explore the data and analyze it to meet the objectives of this study as well as reveal impact of TITI training programs in overall quality enhancement of TVET programs in Nepal.

CHAPTER II

ANALYSIS AND FINDINGS OF QUALITATIVE INFORMATION

2.1 Background

As mentioned earlier qualitative data is one of the major source of information for this study. To collect the qualitative data, sufficient numbers of focus group discussions (FGDs) and key informants' interview (KII) were carried out with and among principals vice-principals, trade heads, instructors and other officials of TVET institutes and regulatory bodies both at individual level and in group. In addition, directors, deputy directors and monitoring officers of CTEVT province offices and other TVET professionals working in CTEVT and TITI were also consulted. Different set of checklist (*Annex II*) was developed and used for this purpose. The checklist covers various issues of teachers' professional development programs in general and TITI delivered training courses in particular. These FGDs and KIIs were carried out in national, provincial and institution level as per the relevancy of the contents.

The issues and information collected under the above mentioned qualitative approach are analyzed and incorporated hereafter under four major sub-topics. These sub-topics are- (a) benefits of the TITI training courses realized by the participants, (b) how these benefits transformed into internal efficiency of students as learning outcomes; (c) how the learning outcomes of students transformed into external efficiency of graduates as labour market outcomes (d) indirect and inducted effects of TITI training programs and (e) limitations on applicability of training programs.

2.2 Major benefits of the programs

Since the date of its establishment in 1991, TITI has been conducting several professional development training for TVET professionals including principles, vice-principals, trade-heads, different levels of instructors/trainers, managers, researchers, planners and policy makers. Similarly, it has covered various areas from curricula development to instructional programs and community development to management programs. Moreover, the duration of these programs ranges from short term non-academic courses to long term academic courses. Till the end of fiscal year 2077/78, more than 33,555 human resources have been capacitated by TITI by means of these professional development training (CTEVT, 2022)¹². Of them large numbers are supposed to be working in TVET sector of Nepal.

In focus group discussions, participants have pointed out several benefits of these training courses. Almost all of the participants have common perception that training brought significant enhancement in the course delivery approach of instructor/trainers. Moreover, such type of enhancement is clearly noticeable in case of newly appointed instructors than the

¹² CTEVT, 2078. Council for Technical Education and Vocational Training, Annual Report 2078. Sanothimi, Bhaktapur. CTEVT

experienced one. As per the participants, training courses help them under three ways. First, it imparts effective presentation skills and instructional approaches among the participants that helps for better delivery in the class room¹³. Secondly, it teaches them to use innovative and effective tools and equipment for teaching/instruction. Finally, such training helps them to update with the recent technological development related to their occupational fields. Moreover, participants further insisted that the tools, technics and delivery approaches imparted in them by means of training programs are justified effective for better learning of the students and ultimately helps to enhance overall performance of their institutes.

While sharing their personal experiences, some instructors also reported that these tools, technics and delivery approaches are justified effective to grasp students attention towards instructors. One instructor of CTEVT constituent institute further mentioned that training makes instructor capable to assess students psychology and their level of understanding under multidimensional ways. An instructor without instructional skills related training, focus only on contents and curricula while delivering the classes. Instead, a trained instructor always focus on students and try to assess their level of understanding alongside delivery of contents and curricula. A trained instructors/trainer not only focuses on what to deliver but also on how to deliver. Similarly, s/he also assesses how the students are understanding or internalizing the contents. Participants mainly from the training categorized as instructional programs, listed out the following direct benefits of the training courses.

- imparts skills to prepare lesson plan and session plan;
- helps to be interactive with students;
- helps to assess the level of understanding of students alongside teaching;
- helps to promote self esteem and confidence;
- apply demonstrative teaching approach in class room like flip chart, multi-media, smart board etc.;
- acquire and apply effective instructional skills and approach;
- helps to upgrade skills in relevant occupation;
- provides platform to share knowledge among the people of same profession;
- enhance presentation skills;
- helps to manage time;
- help to acquire other skills also valuable for personal life;
- motivate to learn and use further knowledge and skills for better performance in classroom

Almost all of the participants agreed that these benefits are instrumental not only in the class room delivery but also in effective management of TVET institute and making enabling environment for enhancing quality of TVET programs in the institutes.

¹³ The term ‘class room’ also indicates workshops, laboratory and work place where instructors are available to teach/instruct/train students/trainees. This definition is also applicable in the similar context of upcoming parts of the report.

Participants also reported that these training programs are not equally beneficial to all the instructors and staffs. There is significant differences in the instructional skills between the new and experienced staffs. Moreover, the training provided by TITI are found more beneficial to newly appointed instructors who have insufficient teaching experiences than the experienced one. This fact is justified by the enthusiastic response made by new instructors who have got limited training opportunities. They reported that such types of instructional skills related training enlightens them about the roles and responsibility of instructors and train them to apply basic tools and technics for instruction. The participants who have recently got TITI training programs reported that they were completely unknown about these tools and technics which are instrumental to enhance the learning outcomes of students. These statements were further justified by the opinion and observation of their supervisors (principles and trade-heads). These supervisors reported that they observed significant difference in the teaching performance of instructors before and after training as well as between trained and untrained instructors/trainers.

The same facts were highlighted by the monitoring officers of province offices. They pointed out the relationships between the proportion of trained instructors in the institutes and quality of TVET programs delivered by these institutes. In justification, they elaborated that constituent institutes relatively have higher proportion of trained instructors than the TECS and private affiliated institutes. Similarly, the quality of TVET programs delivered by these institutes is also in the same line. In general, the constituent institutes are relatively delivering higher quality education and training than the TECS and affiliated institutes. Although several factors could be responsible for this difference in quality, role of trained instructors is pointed out as one of the main reasons for this difference.

The managers and principles participated in the FGDs, also shared that they are getting relatively lower numbers of complains from students regarding teaching methods adopted by trained instructors than the untrained one. While sharing own experience, a principal of CTEVT constituent institute pointed out that most of the complains they received from students are related with the instructional approaches and methods adopted by the untrained instructors. He further pointed out that these limitations in teaching approaches of untrained instructors can be corrected by sending them in TITI training. Majority of supervisors agreed that trained instructors have developed good communication skills. Similarly, they adopts innovative approaches for instructions and provide feedbacks to students in positive and productive way among others. These approaches are justified effective to motivate the students in further learning and to draw their attention towards lecturers. In our concern, whether they have such examples of good practices in their institutes that could be attributed to TITI training programs, respondents pointed out such good examples as (a) use of flip chart in the instructional process (b) making power point presentation in effective and logical way, (c) practice of making lesson plan and session plan in structured and formative approach etc.

Most of the participants also agreed that instructor as a fresh graduates from university could not make satisfactory performance in the classroom despite having outstanding academic career. They further mentioned that a good student is not necessarily a good teacher. A teacher

should have specific skills and attitudes to be a good teacher which could be imparted by means of training to large extent. Moreover, the TITI training programs are reported perfect for skilling such instructors/trainers. This statement is further justified by the fact that most of the instructors as a fresh graduates from university are found more enthusiastic to express the benefits of training programs since they personally realized such effects after training.

Participants are found aware about the importance of the training programs such as training helps instructors identify their common mistakes they usually make in class room and also provides opportunity to correct it. In further explanation, participants stated that they used to enter directly in to the subject matters, provide feedback to students starting from the negative sentence and conduct one way delivery of lecturers without paying proper attention on students and their mood of understanding before training. Now, training had helped them to correct these common but serious mistakes and students are also found satisfied with their improved teaching approaches.

To sum up, the training courses provided by TITI have pivotal role to enhance the teaching learning activities of the institute in general and equip them with class room delivery skills in specific. These training programs impart not only instructional skills but also occupation and managerial skills among the TVET professionals. Although there are some limitations, instructors are translating these acquired skills in to practice.

2.3 Impact of training in terms of internal efficiency of students

Large number of instructors/trainers participated in FGDs, accepted that training courses delivered by TITI plays instrumental role to enhance their instructional skills and knowledge. Participants also accepted that they have successfully applied those acquired skills and knowledge in their profession. Respondents were further asked how much the enhanced skills and knowledge of instructors/trainers contribute to improve the teaching and learning environment of the institutes and contribute on overall quality of TVET programs in Nepal. In response, mixed perception was found from respondents however, large proportion of respondents agreed that the upgraded and updated instructional skills and knowledge of instructors/trainers due to TITI training programs is significantly contributing to enhance the quality of TVET education in Nepal.

Beside the instructional programs, TITI is also providing training programs under other areas including management; community development; and curricula development. As per the respondents, all of these categories of training programs are complementing to each other in order to enhance the quality of TVET programs in Nepal. Although, almost all of the participants agreed that those training programs contributes on the quality of TVET programs, they have different opinions regarding the scale and volume of its contribution. Some of them conceived that role of the TITI training is too small to be noticeable however large number of them confirmed that effect is in significant level and easily noticeable.

Some issues that are related to classroom delivery of students were also discussed among the selected third year students. Our main concern was whether the students are equally satisfied

by the class room delivery of their instructors. In discussion, majority of students reported that they were not equally satisfied by the class room delivery of their instructors. Some instructors perform satisfactorily because they are interactive, could clearly express their thoughts and focus on each students in the class however, some of them only focus on content and subject matter without paying proper attention on students' psychologies and attention. Students were found unaware whether differences in instructional skills among various instructors could be attributed to the training they acquired. But they were found clearly aware that experienced teachers usually have such quality to large extent than the inexperienced one.

Students were further asked what types of teaching approaches they prefer from their instructors, the following features/approaches are pointed out by students which are instrumental to satisfy them or make them clearly understand the lectures.

- Sufficient interaction with students;
- Explaining with visualization and examples;
- Refreshment break during the lectures;
- Use of simple and understandable language and words;
- Incorporating limited volume of contents at a lectures;
- Sufficient motivation through out the classes; and
- Conducting theory and practical simultaneously,

Almost all of the students to whom we made interaction, have agreed that the role of instructors is more instrumental to enhance the quality of TVET in the institutes than the other factors including infrastructures, curricula etc. In our further queries, respondents stated that teaching experience plays vital role to increase the effectiveness of classroom delivery than just having additional qualification in the related subjects. However, the students knowledge and experience is found too limited to make opinion regarding the role of professional development training of the instructors for the effectiveness of classroom delivery.

In this regards, a principle of CTEVT constitution institutes shared his experience that majority of complains he received from students are against the teaching approach of untrained instructors. He elaborated "Most of the untrained instructors only focused on the delivery of the contents but they didn't pay proper attention on the process of delivery. But the same teacher changes the teaching approach after training". He further added "As a result, complain received against him reduced significantly". While justifying the effect of professional development training of instructors in students learning outcome, some instructors stated that they found sufficient signals in the face and expression of the students to know their level of satisfaction by the modified approach of teaching. Furthermore, participants also claimed that increased level of their understanding could be justified by the class room assessment they usually conduct. Moreover two trainers working in two different vocational training institutes mentioned that they observed significantly higher pass rate in NSTB skill test of their students after they acquired training from TITI. They further claimed that there must be significant difference in the aggregate pass rate of NSTB skills test if result is systematically analyzed for long period of time as a result of larger share of trained trainers (with ToT) in the training institutes in general.

It is found that students could not distinguish the trained and untrained instructor/trainers since they don't usually have such information about their instructors/trainers. But they can make some idea regarding their training and experience by their performance and teaching approaches. Moreover, students have conceptualized some ideas regarding the experience and training of instructors/trainers. They conceived that trained/experienced instructors are more effective in their teaching performance than fresh university graduates. Students gave higher priority for the experience/training of teachers rather than their additional educational qualification. The above mentioned facts also justified the influential role of teacher to enhance the effectiveness of the teaching learning activities and a trained teacher can contribute more to enhance the quality of education.

In further clarification, students insisted on the importance of teacher related components (qualification, training and experience) against the components unrelated with teachers (TVET management, infrastructures, curricula etc.) for quality training. Moreover, students' emphasis was found on training and experience than the addition educational qualification for effective class delivery. Unlike the students, the monitoring officers of CTEVT, province office mainly emphasized on the training parts for effective instruction. They further highlighted that continuous professional development of instructors was a major component to enhance the effectiveness and quality of TVET programs.

Increased confidence level of teacher is spelled out as a major part for quality training delivery. Most of the participants also argued that the training programs imparts various skills and knowledge in the instructors so that they become confident in their subject matter and developed their capacity to better understand the psychology of the students.

2.4 Impact of Training in terms of external efficiency of graduates

It is explained earlier that the effectiveness of training programs could be measured under two approaches, these approaches are (a) internal efficiency of students and (2) external efficiency of graduates. Beside assessing the effect of training program on internal efficiency of students, assessment was also made to what extent such internal efficiency of graduates transformed into external efficiency at job market. In FGDs, participants made several arguments to justify that such training programs have notable effect also on external efficiency of graduates however, they could hardly show justifiable evidence in its favor.

Large number of participants were of the opinion that quality of training programs is affected by several factors of which teachers professional development is one of them. They further reported that there is not conducive environment that helps to translate the acquired skills in to practice in their context. Moreover, trainers/instructors have to face with several limitations which demotivate them to best apply the acquired skills and knowledge in the classroom/lab/workshop. Similarly, a skilled graduates have to pass through several circumstances that hinders them from linking with labour market and applying their acquired skills and knowledge in the workplace.

Regarding the impact of the TITI training courses, majority of instructors were of the opinion that such impacts could not be visible in the short interval. Longer period will be required to realize such impact. An instructor/trainer may not have such long experience in the same institute. Moreover, institutes neither have such practice of collecting, analyzing and recording post training status of graduates nor have systematic record keeping system of pass rate, enrolment rate and drop out rates. In addition, post training/education status not only depends upon the quality of training, but is largely dependent with the available opportunity in the market. So the participants could not express strong opinion regarding the effect of TITI training to enhance the external efficiency of graduates.

Although it is hard to justify the effect of training program to increase the external efficiency of graduates by the quantitative data of employment rate and increased income of the graduates, most of the FGD participants believe that such types of training programs must have some effect on it. In this regard, it is interesting to mention that instructors of few private training institutes confidently accepted that significant difference could be observed in the drop out rates, graduation rates and even in the employment rate of the students because of the TITI training courses. Some instructors/trainers of UCEP, Bhaktapur and Nepal Rastriya Technical Institutes, Surkhet are belongs in this groups.

Most of the instructors believe that the TITI offered training programs is contributing in the enhancement of quality of education to large extent where other interventions are also more or less responsible for this enhancement. So it is hard to specify or distinguish the impact of a single component as *instructors' professional development training* for enhancing the quality of TVET program. Individual instructors/trainers were not found in the position to distinguish or quantify the increased output and outcome due to such professional development training catered by TITI however, the participants confidently reported that the training positively contributes on the teaching and learning outcomes or quality of TVET. While justifying their opinion, they argued that if training helps to draw attention of students and increases the satisfaction level of them, there is no doubt that it ultimately increases the quality of TVET programs in terms of both internal and external efficiency of graduates.

2.5 Indirect and induced effects of TITI training programs

TITI training programs are found mainly focused on enhancing instructional skills of TVET instructors/teachers however it also have been conducting training courses in other areas of TVET sector including governance and management, need identification and curriculum development, and community development in regular interval. As discussed earlier, these training courses are found effective for continuous development of TVET professionals thereby enhances the quality of TVET programs.

Almost all of the participants of FGDs and KIIs unanimously accepted that TITI offered training courses have imparted professional and life skills which are not only instrumental to enhance the teaching and learning environment of the institutes but also to helping them in their personal life. Participants further elaborated that the instructional programs not only help

them for effective performance in the present position as an instructor/trainer and makes promotion easier in same carrier ladder but also helps to them join other non-teaching professions.

In addition to these direct benefits, participants also reported that there are a lots of other indirect benefits of these training courses by which participants themselves and their respective institutes/organizations benefits regularly. Participants also argued that these training programs are beneficial to them even if they choose other profession in other sector (Non-TVET). They further elaborated that increased level of confidence, the acquired communication and presentation skills, leadership and management skills will be equally beneficial either they will take managerial position in a organization or work in other social development field in future.

It is interesting to note that some of the participants have considered acquiring TITI training is a great opportunity for them which paves the way for both internal promotion or widens the opportunities for lucrative career outside. To justify their statement, some participants also highlighted that they feel privileged to mention these training related information in their curriculum vitae (CV) while applying for other job opportunities.

Beside these indirect benefits of the training programs, participants also reported that the knowledge and skills acquired by an individual by means of training courses are also gradually transferring to their pairs and subordinates to some extent. Although only a few of them accepted that they organize formal events to share learning achievements of training, the environment of institute helps to spill over these learning achievements among their pairs and subordinates. Usually, the practice of preparing lesson plan and session plan, using flip charts and other various tools for presentation could be transferred to their pairs or subordinates as a demonstration effects. Students also demands these effective technics and teaching approaches from other untrained trainers/instructors. In this way, an untrained teachers feels pressure either to change their instructional modality or to get trained her/himself. As it is already mentioned that management faces problems from untrained instructors than the trained one. The management therefore feels pressure to send the untrained instructors/trainers in the training. All of these situation ultimately gives pressure not only to management to send their staffs in to training but also individual staffs to improve their performance or competencies by imparting TITI training.

These professional development training courses are found not only helpful within the same position/ profession but also in different profession, no matter an individual will work either in the same or different sector in future. Most of currently working principals of constituent institutes who got instructional skills related training as a instructor in past, they still found these training beneficial to the present position. E.g. the instructional skills related training acquired by him/her while working as an instructor are justified as instrumental in the present position of principal since principal must know all about the teaching approaches to either assess or supervise their instructors as well as to deal with other internal and external stakeholders.

The aforesaid opinions and examples give sufficient basis that there is a causal effect of teachers professional development training to the quality of TVET programs and institutes.

Moreover, an upgraded institutional environment or success cases of institutes as a result of training creates induced effect to wider number of instructors, managers, professionals and policy makers both within and outside of TVET sector of Nepal. Similarly, the training directly delivered to TVET managers, planners and policy makers prepares enabling environment to formulate appropriate plans and policy and its effective implementation. Thus activities further provides indirect benefits to wider range of TVET professionals in one or other way as an induced effect of training programs.

2.6 Limitations on applicability of training

Participants also discussed on the limitations for effective utilization of the training achievements. They pointed out lack of infrastructures, over-saturated workload, personal attitude, lack of motivation in institutes, lack of refreshment training in regular interval etc. as demotivating factors that hinders effective utilization of acquired skills and knowledge from the training courses.

Most of the participants of CTEVT constituent institutes did not reported any limitations regarding the training facilities and infrastructure however, participants from TECS and private affiliated institutes reported it as a major one. Large number of TECS institutes lacks sufficient infrastructure which are the floor conditions to effectively apply the instructional modality suggested and practice during the TITI training. The situation is reported even worse in majority of affiliated institutes.

Similarly, another major limitation of the TVET institute that hinders to implement the prescribed instructional procedure is the existing workload of instructors/trainers. Most of the trainers/instructors reported that they need additional time for preparation before taking class however they are already overburden with the workload and can't manage proper time for preparation. Either they are compelled to allocate their own (personal) time or should enter into classroom without sufficient preparation.

Participants reported that the infrastructure like smart board, multimedia, flip charts and various types of markers are not sufficiently available in the institutes in general and TECS and affiliated institutes in particular. Moreover, some institutions outside Kathmandu also blamed that they don't find teaching materials and stationaries even in the local market as suggested in the training. One monitoring officer of CTEVT province office further reported that some of the TECS institutes in the remote part of the country even could not manage electricity and internet service in their institutes. Such categories of institutes are not found benefited by these training courses in the expected level. The instructors/trainers in such institutes are also found too inexperienced to be benefited from the effective and modern types of teaching approaches and skills envisioned in the curricula.

The non technical principles/managers of TECS institutes which are in dominant figure; is also one of the limitation. The technical coordinator or instructors could not convince their principals about the importance of these training materials for enhancing quality of TVET programs. It is therefore difficult for them to convince their managers regarding the importance

of teaching and learning materials required for the TVET programs. Similar situation is also faced by the instructors and principles of private affiliated institutes. As they reported us, most of the CEO of these private institutes are either from non academic or non technical background. So they could be hardly convinced to provide opportunities of professional development training to their instructors and managers. It was further reported that these managers are found more worried on additional cost and foregone time to send their staffs for training than the endowed benefits to the institutes in terms of higher quality and good reputation..

CHAPTER III

ANALYSIS AND FINDINGS OF QUANTITATIVE DATA

3.1 Personal information of respondents

As mentioned in the methodology section, primary data were collected from selected training attendees, their supervisors and students from the purposively selected institutes using three different sets of questionnaires designed in cobo toolbox. Altogether, 126 training attendees, 26 of their supervisors and 102 students responded the questionnaires. As the institutional networking was used to collect the data from the selected institutes of Bagmati, Lumbini and Karnali provinces, management of some institutes were found more active and sincere than others in supporting our team for this study. Moreover, the limited access of internet service also became a major factor that hindered proportionate representation of target people as a sample of this study. Thus our online questionnaire was responded by the instructors and students of these selected institutes in different proportions.

3.1.1 Respondents' by provinces and districts

Majority of respondents in all of these categories were from Bagmati and Lumbini provinces whereas some portion of respondents were also from Karnali Province. Among the training attendees, 50% were from Bagmati Province, 46.8% were from Lumbini Province and 3.2% were from Karnali Province. Likewise, the proportion of supervisors who responded us via online questionnaire are 61.11% from Bagmati Province, 36.11% are from Lumbini Province and 3.8% from Karnali Province. Among the 102 students who filled the online questionnaire, large proportion (93.1%) were from Lumbini Province and rest 6.7% were from Bagmati Province but none of the respondent were from Karnali Province (see table 3.1 fore detail picture)

Table 3.1: Distribution of respondents by province

SN	Provinces	Training attendees		Supervisors		Students	
		Number	%	Number	%	Number	%
1	Bagmati Province	63	50.0	22	61.11	7	6.9
2	Lumbini Province	59	46.8	13	36.11	95	93.1
3	Karnali Province	4	3.2	1	2.7	-	-
	Total	126	100.0	36	100	102	100

Table 3.2: Distribution of respondents by district

SN	Districts	Training attendees		Supervisors		Students	
		Number	%	Number	%	Number	%
1	Banke	21	16.7	5	13.9	13	12.7
2	Chitwan	12	9.5	15	41.7	2	2
3	Dang	7	5.6	1	2.8	55	53
4	Dolakha	5	4.0	2	5.6	3	2.9
5	Kathmandu	20	15.9	1	2.8	2	2
6	Kavre	10	7.9	2	5.6	1	1
7	Lalitpur	3	2.4	1	2.8	-	-
8	Makwanpur	9	7.1	1	2.8	-	-
9	Palpa	12	9.5	1	2.8	9	8.8
10	Rupandehi	23	18.3	6	16.7	17	16.7
11	Surkhet	4	3.2	1	2.8	-	-
	Total	126	100.0	36	100	102	100

Altogether respondents from 11 districts (*district where their institute is located*) of these three provinces were responded on the questionnaires. Chitwan, Dolakha, Kavrepalanchowk, Kathmandu, Lalitpur and Makwanpur Districts are from Bagmati Province. Similarly, Banke, Dang, Rupandehi and Palpa Districts are from Lumbini Province and Surkhet District is from Karnali Province. While analyzing the respondents by districts, majority of them are from Banke, Dang and Kathmandu. Among the training attendees, majority (18.3%) are from Rupandehi District followed by Banke (16.7%) and Kathmandu (15.9%) Districts.

Similarly, while distributing the number of supervisors by districts, majority (41.7%) are from Chitwan District followed by Rupandehi District (16.7%) and Banke District (13.9%) respectively. The detail figure is depicted in table 3.2. The number of respondents also seems proportionate with the number of institutes and programs of the corresponding districts to some extent.

3.1.2 Respondents' by professional category

Training attendees and supervisors were also asked to categorize themselves under three categories¹⁴- (a) teaching staffs, (b) managerial staffs and (3) supporting staffs as per their nature of position and positional responsibilities. Majority (88.9%) of respondents among the training attendees mentioned themselves as teaching staff followed by 8.7% mentioned as managerial staff and only 2.4% mentioned them as supporting staff. Likewise 61.1% of

¹⁴ The staffs who were in managerial positions like principles, vice principles and coordinators, are largely categorized as managerial staffs and staffs under administration service are categorized as supporting staffs.

supervisors mentioned themselves as teaching staff followed by 36.1% mentioned them as managerial staff and 2.8% as supporting staff.

Similarly, students are also classified under three groups- (a) regular students, (b) just completed the course and waiting for result and (c) already graduated from the institute. While distributing students as per these three categories, majority 79.5% mentioned themselves as regular students, 5.9% of them reported that they have just completed the course and waiting for result and remaining 15.7% students were found already graduated from the institutes. The detail distribution is presented in table 3.3.

Table 3.3 : Categories of respondents by responsibilities and status

SN	Nature of responsibility	Training attendees		Supervisors		Students	
		Number	%	Number	%	Number	%
1	Teaching staffs	112	88.9	22	61.1		
2	Managerial staffs	11	8.7	13	36.1		
3	Supporting staffs	3	2.4	1	2.8		
4	Already graduated					15	14.7
5	Just completed the course					6	5.9
6	Regular students					81	79.4
	Total	126	100	36	100	102	100

3.1.3 Respondents by sex

While analyzing the respondents by sex, males are found in higher proportion than females in the training attendees and supervisor groups. But girls are found in dominant figure than boys in the student group. The corresponding figure of female and male in the group of training attendees are 34.9% and 65.1%. Similarly, 22.2% and 77.8% are the corresponding figure among the supervisors' group. Unlike the training attendees and supervisor, the proportion of girls and boys are 72.5% and 27.5% respectively in the students' group (See table 3.4 for detail distribution).

Table 3.4: Respondents by gender

SN	Sex of the respondents	Training attendees		Supervisors		Students	
		Number	%	Number	%	Number	%
1	Female/girls	44	34.9	8	22.2	74	72.5
2	Male/boys	82	65.1	28	77.8	28	27.5
	Total	126	100.0	26	100	102	100

3.1.4 Respondents' by age

Age of the respondent is analyzed separately of these three groups by means of descriptive statistics. While analyzing the age of the students group, 17 years is obtained as minimum age and 31 years is the maximum age of the respondents in this group. The mean (average) age of the students' group is 20.21 whereas 2.37 is the value of standard deviation which shows that there is little variation in the age of the individuals among the group.

Similarly, while analyzing the descriptive statistics of age of the training attendees, 22 and 62 are the minimum and maximum value of the age. The mean age of the respondents of this group is 32.59 whereas the value of standard deviation is 7.25. This value of standard deviation suggests that almost two third of the respondents falls between 25 to 40 years of age.

The average age of supervisors is found highest (39.97) among the three groups. The value of maxima (65), minima (26) and standard deviation (10.80) also suggest that there is significant variation in the age of the respondents in this group too. The detail descriptive statistics of age of the respondents is presented in the table 3.5.

Table 3.5: Descriptive statistics of age of the respondents

Respondents' group	Number	Minimum	Maximum	Mean	Std. Deviation
Training attendees	126	22	62	32.59	7.256
Supervisors	36	26	65	39.97	10.80
Students	102	17	31	20.21	2.37

3.2 Access and motivation towards training programs

Training attendees were asked to mention the name and other basic information of training program they attended including duration of training, date of training attainment, and funding sources. As per the designed format, respondents could entered the information of maximum three training programs they attended.

3.2.1 Name of training programs

All (126) respondents of training attendees' group have got at least one training program catered by TITI. Out of them, 67 (55.6%) participants have got at least two training programs and 28 (22.22%) of them have got at least three training programs. Of them large majorities have got instructional skills series of training program including Instructional skills-1 by 53.17%, Instructional skills-2 by 21.43% and Instructional skills-3 by 3.17%. Similarly, significant proportion of respondents also mentioned that they have got Training for trainers (ToT) (by 21.43% respondents), Occupational ToT (by 21.43%), Leadership and management (by 7.14%), Occupational skills upgrading (OSU) (by 13.49%) and Computer application (by 1.59%) in their professional career. See table 3.6 for detail distribution of respondents by the name of training they attended.

Table 3.6: Training programs attended by beneficiaries (Multiple response)

SN	Name of training programs	Number	Percent	Percent of cases
1	Instructional skill- I	67	30.32	53.17
2	Training of trainers (TOT)	27	12.22	21.43
3	Instructional skills- II	25	11.31	19.84
4	Occupational skills upgrading (OSU)	17	7.69	13.49
5	Occupational ToT	16	7.24	12.70
6	Skill test assessor	12	5.43	9.52
7	Management and leadership	9	4.07	7.14
8	GESI	4	1.81	3.17
9	Instructional skills- III	4	1.81	3.17
10	Study skills	3	1.36	2.38
11	Active learner methodology	2	0.9	1.59
12	Basic computer application II	2	0.9	1.59
13	Computer application training	2	0.9	1.59
14	Facilitation and moderation	2	0.9	1.59
15	Monitoring and evaluation	2	0.9	1.59
16	Others	27	12.22	21.43
	Total	221	100	175.40

3.2.2 Training duration

Respondents were also asked about the duration of these training programs. In response, large majority of respondents (76.02%) reported that the duration of their training courses ranges between one to four weeks followed by less than a week (19.46%) and 4-8 weeks by 3.17%. It is also important to mentioned that 1.36% of respondents also obtained long term academic programs. (See table 3.7 for detail description)

Table 3.7: Duration of training programs

SN	Training duration	Frequency	Percent
1	Less than a week	43	19.46
2	1 to 4 weeks	168	76.02
3	4-8 weeks	7	3.17
4	Long term academic programs	3	1.36
	Total	221	100.00

3.2.3 Funding source and nomination

While asking respondents about the funding sources to attend these training programs, large majority (85.07%) of them reported that these training programs are fully funded by the organizers followed by fully funded by their own institutes (11.9%). Although the proportion is insignificant, some (5.42%) respondents also mentioned that they had acquired some training programs by paying either full or part of the training fee by themselves. (See table 3.8 for detail distribution)

Table 3.8: Funding of the training programs

SN	Statements	Frequency	Percent
1	Fully funded by organizer	188	85.07
2	Fully funded by own institute	21	9.50
3	Co-funded by organizer	6	2.71
4	Co-funded by own institute	5	2.26
5	Self-funded (full)	1	0.45
		221	100.00

3.2.4 Motivation and selection process

In our concern regarding the selection process, large proportion (77%) of respondents mentioned that they were nominated by their own institute to attend the training course. Similarly, significant proportion (16.7%) of respondents also reported that they were nominated by the organizer themselves. Although the proportion is negligible, some (6.3%) participants also reported that they used personal approach and networking to enroll in the training. Detail figure is presented in table 3.9.

Table 3.9: Selection process for training

SN	Selection process	Frequency	Percent
1	Nominated by own institute	97	77.0
2	Nominated by organizer	21	16.7
3	Using personal approach and networking	8	6.3
	Total	126	100.0

In our further query regarding their motivation towards training, relatively higher proportion (28.6%) of training attendees reported that their personal interest pushed them towards this training course followed by necessity of current position (27%) and necessity of present career (25.4%). Another notable proportion (17.5%) also pointed out that suggestion of seniors and supervisors was the major motivation factor to participate the training. (See table 3.10 for detail picture)

Table 3.10: Motivation towards training

SN	Motivational factors for training	Frequency	Percent
1	Personal interest	36	28.6
2	Necessity of present position	34	27.0
3	Necessity of present career	32	25.4
4	Motivation of seniors/supervisors	22	17.4
5	Opportunity of alternative career	2	1.6
	Total	126	100.0

Supervisors were also asked whether they are consulted in the nomination process and what are the major basis they consider for nomination. While responding the first questions, 41.2% of respondents reported that sufficient discussion was held among the management team before nominating staffs for training. Similarly, 32.4 % of them mentioned that they are occasionally consulted while nominating the staffs for training. Similarly, each 26.5% of respondents mentioned that they are fully authorized either to recommend or nominate their subordinates staffs for training.(See Annex I table 3 for detail figure)

Likewise, in response of the second question regarding the basis of nomination, each 47% percent of respondents pointed out that individuals' training requirements and compatibility with class schedule of related instructor/staffs are the major basis for nominating their subordinates in training. Very insignificant proportion (1%) of respondents also reported that equality in training opportunity (inclusiveness) to all staffs and availability of free time of individual staffs are also the adopted principles for nomination. The detail figure is presented in the table 3.11.)

Table 3.11 : Basis of nomination for training course

SN	Nomination basis	Frequency	Percent
1	Compatibility with class schedule	17	47.2
2	Requirement of individual teacher	17	47.2
3	Considering availability or free time	1	2.8
3	Inclusiveness to all	1	2.8
	Total	36	100.0

3.3 Assessment of training and its delivery system

The perceptions of respondents regarding the training courses and its implementation modality are the major concerns of this study. All categories of respondents were asked some queries regarding this matters.

Training attendees were asked their opinion on ten assessment indicators related to relevancy, quality and effectiveness of training courses. Respondents were asked to evaluate the training

course by means of five different rating scales which are (a) Poor (b) Fair (c) Good (d) Very good and (e) Excellent. For the further analysis, these rating scales were quantified from 1 to 5 where 1 scores for 'Poor', 2 for 'Fair', 3 for 'Good', 4 for 'Very good' and 5 scores for 'Excellent'.

As per the respondents, the aggregate rating score of all 10 assessment indicators is calculated as 3.83 which is close to very good. If the responses are analyzed as per different subject areas, respondents are found more satisfied and rated more than 'very good' to the statement- "*Delivery skills of coordinators and resource persons in the class room*" and "*Punctuality and seriousness towards schedule*". The respective rating score of these two assessment areas are 4.06 and 4.03. Unlike, respondents rated relatively lower for "*Learning opportunity of emerging skills and technologies in your occupations*" and "*Duration of training relative to the course/curricula*" The average rating score for these two areas are 3.67 & 3.51 which lies between good to very good. The table 3.11 gives detail statistics for each of the ten statements.

Table 3.12: Assessment of training and delivery system

SN	Statement related to training delivery	Training attendees		
		N	Mean	Std. Deviation
1	Relevancy of the contents with your occupation/career	126	3.9845	0.69580
2	Practicality of the contents/methods to be applied in your real workplace	126	3.7752	0.79294
3	Competency of coordinator/resource persons to deliver the given contents	126	3.9147	0.79088
4	Delivery skills of coordinators/resource persons in class room	126	4.0620	0.72621
5	Duration of training relative to the course/curricula	126	3.5116	0.83025
6	Sequence and flow of classes	126	3.7597	0.76827
7	Engagement in practical activities during the training programs	126	3.8992	0.81820
8	Learning opportunity of emerging skills and technologies in your occupations	126	3.6744	0.84004
9	Administrative management of training events	126	3.7054	0.77463
10	Punctuality and seriousness towards schedules	126	4.0310	0.93490
	Valid N (listwise)	126	3.83	0.69580

Of the above mentioned ten assessment indicators, three indicators are also relevant to supervisors. Supervisors were also asked their opinion on six indicators together with these three indicators which are common with training attendees. The corresponding mean value of

all these six indicators is obtained 3.5 which indicates between good to very good. Analyzing the value of separate indicator, supervisors are found comparatively least satisfied (*with score 3.11*) in the indicator “*Conversation with school management/supervisors during the process of nomination and course development*” with value 3.11. Likewise, respondents are relatively found more (*with score 3.86*) satisfied in the indicator “*Relevancy of training courses with positional duties and responsibility*”.

If we compare the average value of rating score between training attendees and supervisor, slight difference (0.33) is obtained between these two values. The difference of these two values suggest that supervisors are not found satisfied with the performance of trained instructors to same level in which training attendees are satisfied with the training courses. This difference further suggest that training attendees have not applied the acquired skills and knowledge at workplace in fullest potential. So there seems sufficient rooms to improve the performance of trained teachers. Likewise, indicators 4 and 5 which are more related with sharing and discussions, have comparatively lower value than other indicators. The lower value of coordination related subject areas further suggest that there is sufficient rooms to improve the performance of the instructors by enhancing coordination and networking activities with management and other related stakeholders. (See table table 3.12 fore detail)

Table 3.13: Assessment of skills transformation and application

SN	Statement	Supervisors				
		N	Min.	Max.	Mean	Std. Dev
1	Relevancy of training courses with positional duties and responsibility	36	3	5	3.86	0.683
2	Practicality of the process/techniques to apply in workplace	36	2	5	3.64	0.723
3	Appropriateness of duration as per requirement and with academic calendar.	36	2	5	3.61	0.728
4	Conversation with school management/supervisors during the process of nomination and course development.	36	1	5	3.11	0.919
5	Sharing and discussion in team after completion of training	36	1	5	3.17	1.082
6	Enthusiasm among staffs applying the acquired knowledge and skills after training	36	1	5	3.61	0.766
Valid N (listwise)		36			3.5	

A straight forward question was also asked to respondents of both groups regarding the fruitfulness of training program to improve workplace performance as per their prior expectation. In response, 38.1% of training attendees and 33.3% of supervisors mentioned that

the acquired training programs are justified more fruitful than their prior expectation. Likewise, another large proportion (61.9% of training attendees and 63.9% of supervisors) of respondents realized that these training programs are fruitful as per their previous expectations. Although some (2.8%) proportion of supervisors also stated that these training programs are justified less fruitful than their previous expectations however, none of training attendees are found agreed with this statement.

The pattern of response of both of questions seems more or less similar which further increases the reliability of the response. Similar to the findings of rating scale questions (analyzed in table 3.12 and 3.13), analysis of this question leads towards similar conclusion that supervisors are found less satisfied than the training attendees. This further shows sufficient rooms for training attendees to apply the training in fullest potential. (See table 3.14 for detail figure).

Table 3.14: General assessment of training courses

SN	Statement	Training attendees		Supervisors	
		Frequency	Percent	Frequency	Percent
1	More fruitful than previous expectation	48	38.1	12	33.3
2	As fruitful as per previous expectation	78	61.9	23	63.9
3	Less fruitful than previous expectation			1	2.8
	Total	126	100.0	36	100

Both groups of respondents were asked to list out some immediate benefits of the training courses giving some options to choose from and also requesting to add more on it. Altogether five types of immediate benefits of the training courses has been listed out.

While analysis the response of training attendees, relatively higher proportion (62.2%) of respondents found agreed that these training courses impart knowledge and ideas related to presentation/delivery skills among them which ultimately helps to conduct classroom, workshops and laboratories effectively. Similarly, significant proportion of respondents (36.9%) also agreed that training leads towards effective interaction with students in class room and another (29.7%) respondents agreed that training helps to draw attention of students/trainees toward them. It is pity to note that insignificantly lower proportion (1.8%) of respondents have only highlighted its supports on managerial parts of the institutes.

Similar finding is obtained analyzing the response of supervisors. Large proportion (52.8%) of supervisors agreed that training helps to increase class-room¹⁵ interaction followed by 44.4% respondents agrees on 'training enhances instructional skills related knowledge and ideas among the participants'. Another significant proportion (27.8%) of respondents agrees on training helps

¹⁵ In this report, the word class room indicates the place where teaching and learning activities are carried out. This word also indicates workshops, laboratory and workplace where instructors is available to guide students.

to draw attention of students/trainees in the class room and another 11.1% mentioned that training imparts technical knowledge and skills related to the subject matter. Detail distribution is mentioned in Table 3.15.

Table 3.15: Immediate benefits of training course (Multiple response)

Statement of related Quality training		Training attendees			Supervisors		
		Responses		Percent of Cases	Responses		Percent of Cases
		N	%		N	%	
Benefit of training programs	Helps to draw attention of students/trainees	33	19.8	29.7	10	20.4	27.8
	Increases class room interaction	41	24.6	36.9	19	38.8	52.8
	Provide additional knowledge and skills for classroom delivery	69	41.3	62.2	16	32.7	44.4
	Imparts technical knowledge in the subject matter	22	13.2	19.8	4	8.2	11.1
	Help in the managerial works	2	1.2	1.8			
Total		167	100.0	150.5	49	100.0	136.1

3.4 Observed differences due to training courses

The main purpose of the study is to attempt to analyze and spell out the changes in the quality of TVET programs as a result of TITI offered training courses which can be considered as the actual impact of the training programs. To analyze such impact, this study tries to measure the increment in professional skills, knowledge and competencies of instructors and other staffs as a result of TITI training. The opinion of the training attendees, their supervisors and students are taken as major basis which is analyzed and discussed to figure out such increments.

Attempt is made to compare the opinion and status of trained individuals before and after they got TITI training. Similarly, attempt is also made to analyze the opinion and status of supervisors who have supervised both trained and untrained subordinate staffs and the same staffs before and after they got trained.

Training attendees were asked whether they had experience of teaching before and after they got TITI training courses. Of the total 136 respondents, 111 who are the teaching staffs have responded this questions. Of the 111 teaching staffs, 78.4% mentioned that they have experience of teaching before and after they got training from TITI,. Similarly, of the total 36 supervisors who responded our questionnaire, 63.9% mentioned that they have experience of supervising same staffs before and after they got TITI training programs. (See table 3.16 for detail figure)

Table 3.16: Experience of teaching or supervising before and after TITI training

SN	Status of Experience	Training attendees		Supervisor	
		Frequency	Percent	Frequency	Percent
1	Having experience	87	78.4	23	63.9
2	Not having experience	24	21.6	13	36.1
	Total	111	100.0	36	100.0

3.4.1 Effect of training on improvement of classroom environment

The respondents who have experience of working under both status are further asked whether they found any significant difference in the classroom performance of these beneficiaries as a result of training. In response, all of the supervisors (100%) pointed out that they observed notable changes in the performance level of their subordinate staffs after training. Likewise, almost all (96.6%) of the training attendees realized notable changes in the instructional approach of their own as well as the learning behavior, enthusiasm and interaction of students in class room. Detail data is presented in the table 3.17.

Table 3.17: Status on difference observed

SN	Status before and after training	Training attendees		Supervisors	
		Number	%	Number	%
1	Observed notable changes	84	96.6	23	100
2	Didn't observe notable changes	3	3.4	-	-
	Total	87	100.0	23	100

The respondents who feel or observe some notable changes in the performance level after training were further asked the areas of changes they observes. While asking this question to training attendees, 59.5% of respondents realized that students had became more interested in the subject matter after training. Similarly, 58.3% of respondents also reported that students became more interactive after teaching them in changed modality. Similarly, notable proportions (20.2%) also claimed that the changed modality of teaching also increased the attendance level of students. Moreover, it is interesting and important to mention that 13.1% of training attendees also observed increased assessment result of students after s/he attended the TITI training course (See table 3.18 for detail breakdown)

While asking similar question to supervisors, all supervisors who are related with teaching and learning activities agreed on notable difference in the performance of instructors and their impacts on classroom performance. Only 63.8% (23 out of 36) supervisors are found directly related with teaching and learning activities and all of them responded this question. Almost 74% of these supervisors agreed that students are found more interactive as a result of changing

modality of teaching after training. Similarly, another 43.5% of supervisors agreed that students became interested in subject matter. It is also important to note that some of respondents agreed its impact on the attendance and assessment result. Moreover, 21.7% of respondents observed its impacts on increment in attendance of students and another 13% respondent also observed its impacts on increased assessment result. (See table 3.18 for detail figure)

Table 3.18: Observed changes after training

Impact Indicators	Training attendees			Supervisors			
	Responses		Percent of Cases	Responses		Percent of Cases	
	N	Percent		N	Percent		
Impact of training program	Students become more interactive	49	38.6	58.3	17	47.2	73.9
	Students become more interested in subject matter	50	39.4	59.5	10	27.8	43.5
	Attendance of student has been increased	11	8.7	13.1	5	13.9	21.7
	Students' assessment result has been increase	17	13.4	20.2	3	8.3	13.0
	Increases confidences				1	2.8	4.3
	Total		127	100.0	151.2	100.0	156.5

In addition to the teaching staffs, some concerns were also placed with non teaching staffs (managerial and support staffs) regarding the impact of TITI training programs to improve overall teaching and learning environment of institute beyond the classroom. Respondents spelled out the impact of the TITI training programs on the quality of training under various dimensions. Over 40% of respondents agrees that TITI training helps to provide additional occupational knowledge to the instructors and makes them capable to effectively utilize innovative techniques and procedures. Similarly, other 33.3% of respondents feels that training programs helps to provide good working relationship among internal team, provide crucial support for management on planning and programming, and helps preparing conducive working environment.

Furthermore, 26% percent of respondents also conceived that the training programs helps to enhance effectiveness on monitoring, supervision and assessment activities and providing constructive feedback to subordinates. Detail figure is mentioned in table 3.19.

Table 3.19: Effect of training to enhance overall quality of TVET

	Areas of Improvements	Responses		Percent of Cases
		N	Percent	
Benefit of training programs	Provide further knowledge on subject areas of occupation	6	16.2	40.0
	Makes participants capable to apply effective and innovative techniques and procedures	6	16.2	40.0
	Helps to create conducive working environment in workplace	5	13.5	33.3
	Provide crucial support for management on planning, and programming	5	13.5	33.3
	Establish good working relationship among internal team	5	13.5	33.3
	Enhance effectiveness on monitoring, supervision and assessment system	4	10.8	26.7
	Provide constructive feedback/support to subordinates	4	10.8	26.7
	Establish good coordination and networking with and among other external stakeholders	2	5.4	13.3
	Total	37	100.0	246.7

3.4.2 Students' perception on quality of TVET

Some concerns were also asked to the students regarding their perceptions on importance of teachers' professional development training for quality of TVET education. Students were asked to rank the four major factors which are related to the quality of TVET education based on their experience. These factors are (a) Physical and educational infrastructure of institute (b) Teachers' educational qualification, training and expertise (c) Curricula and teaching materials and (d) Assessment and examination system. Majority of respondents (46%) ranked Physical and educational infrastructure at the top followed by teachers' qualification, training and experience was ranked at top by 43%. Likewise, majority (46%) of respondents ranked Teachers' qualification and expertise at second position followed by Physical and educational infrastructure by 28%. Similarly, majority (56%) of respondents ranked curricula and teaching materials at third position and (70%) of them placed assessment and examination system at fourth position.(see table 3.20)

Table 3.20: Emphasis on different factors' of assessment

S N	Subject Area	First Ranked		Second Ranked		Third Ranked		Fourth Ranked		Total	
		No	%	No	%	No	%	No	%	No	%
		1	Assessment and examination system	4	3.9	8	7.8	19	18.6	71	69.9
2	Curricula and teaching materials	7	6.9	19	18.8	57	55.9	19	18.6	102	100
3	Physical and educational Infrastructure	47	46.1	28	27.5	17	16.7	10	9.8	102	100
4	Teachers' qualification, training and experience	44	43.1	47	46.1	9	8.8	2	2.0	102	100

Moreover, respondents were further asked to rank experience, qualification and training of teachers as per their importance for quality of teaching. Majority of respondents have ranked qualification in first position, experience in second position and training in third position. By analyzing the response of students, very least proportion of students ranked teachers' training at either first or second position as per its importance. The qualitative information also justified these findings where students were not found in the position to say anything regarding the teachers' professional development training. To sum up, analysis of students perception suggest that teachers' training is not found that influencer to enhance quality of TVET from the students' prospective. (See table 3.21)

Table 3.21: Priority order by students on teachers' components

SN	Subject Area of Quality Enhancement	First ranked		Second ranked		Third ranked	
		Number	%	Number	%	Number	%
1	Experience	28	27.5	56	54.9	18	17.6
2	Qualification	52	51.0	28	27.5	22	21.6
3	Training	22	21.6	18	17.6	62	60.8
		102	100.0	102	100.0	102	100.0

3.5 Impact on TVET quality

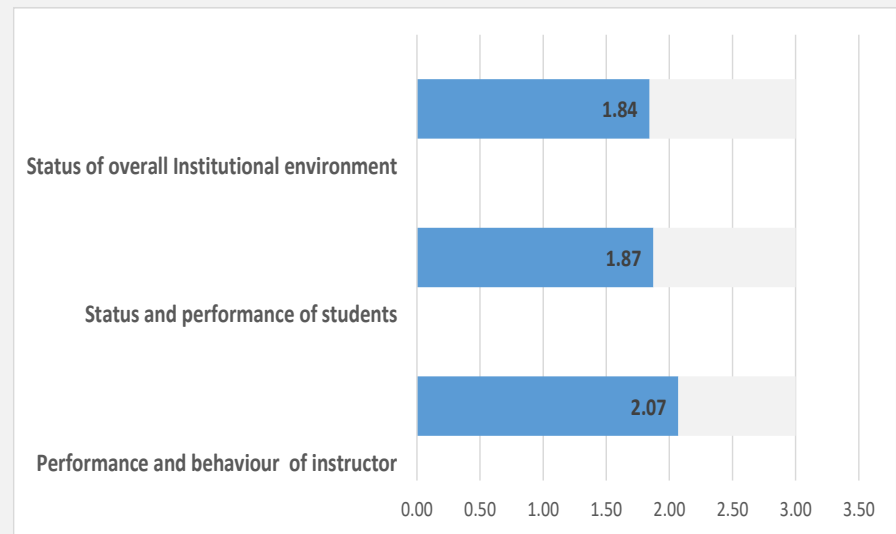
Supervisors were asked to evaluate the performance of instructors and its effects on the various indicators of quality TVET. Respondents were asked for their observations under the given 26 indicators regarding the performance of instructors, students and quality of programs comparing before and after their subordinates staffs completed the courses. They were further given four choices- (a) no change, (b) slight change (c) significant change (d) distinct Change.

In response, large majority of respondents mentioned that they observed either significant change or distinct change in these indicator related areas after the staffs/instructors acquired training programs (see annex 1, table 2 for detail figure). These indicators are also assessed by quantifying 0 for no change, 1 for slight change, 2 for significant change and 3 for distinct change.

Of these 26 indicators, 8 indicators are related with the instructors’ performance and behavior, 9 indicators are related with the performance status and learning attitude of students, and another 9 indicators are related to overall status of teaching and learning environment and achievement of institute. While analyzing the observed changes because of the training programs, the mean value of these three categories of indicators are calculated as 2.07, 1.87 and 1.84. If we considered distinct change as a desired impact, the value of aggregate indicator related to instructor suggests that significant (69%) enhancement is being observed in the teaching and learning

approaches and performance of instructors because of the training programs of TITI. Likewise rest two indicators also suggest that enhanced teaching approaches and techniques adopted by instructors have been transferred to learning status and attitude of students as well as overall teaching and learning environment of institute in significant

Chart 3.1: Transformation of training outcome to quality education



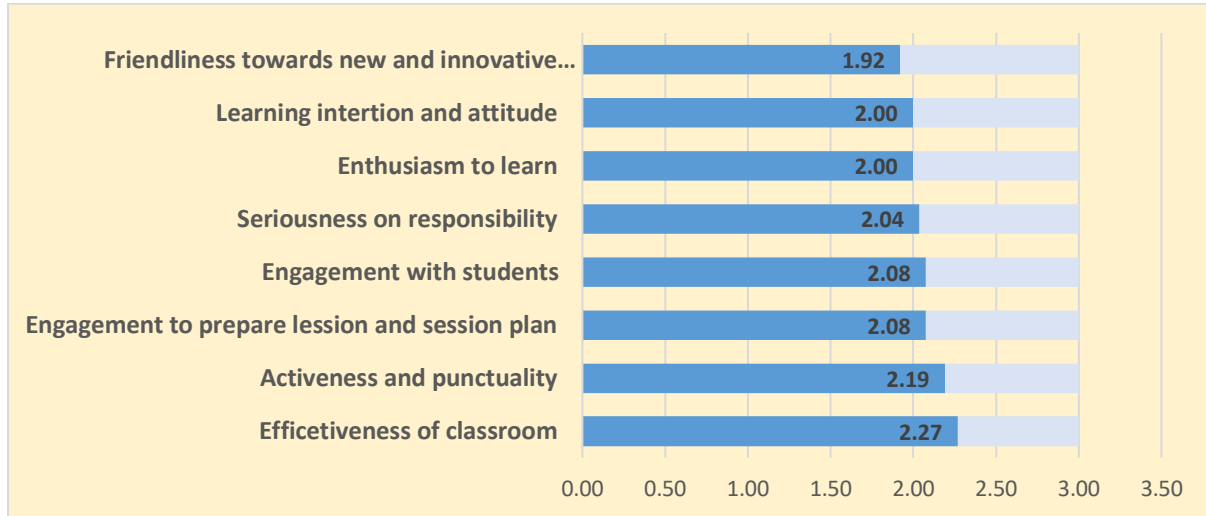
level (62.33% and 61.31%). Unlike usual impact studies, which attempts to spell out the impact of an intervention as an difference between the status of review period and base line status between treatment and control groups. In the absence of data of baseline status of these indicators, attempts is made in this analysis to quantify the increment from the baseline status till the review date. The obtained difference is considered as an impact of the training programs as per our assumption.

3.5.1 Indicators related to performance and behavior of instructors

As mentioned earlier, respondents were asked about their opinion on 26 indicators, of which 9 indicators are related with the performance and behavior of instructors. The score calculated to each of these indicators ranges between 1.92 to 2.27 following the similar method explained above. Highest score (2.27) is obtained for ‘*effectiveness of classroom performance*’ whereas

lowest score (1.92) is calculated for “*Friendliness towards new and innovative technologies*”. It is interesting to note that the values of all of these indicator is either 2 or over 2 except ‘friendliness towards new and innovative technologies’. The detail figure is presented in the chart 3.2.

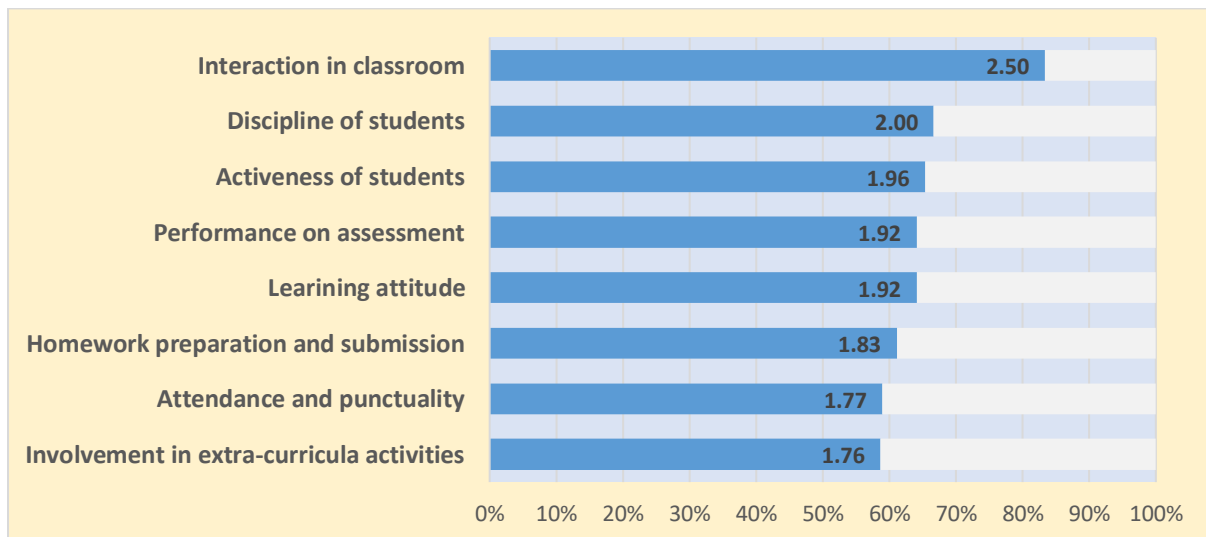
Chart 3.2: Indicators related to behavior and performance of instructors



3.5.2 Indicators related to status and performance of students

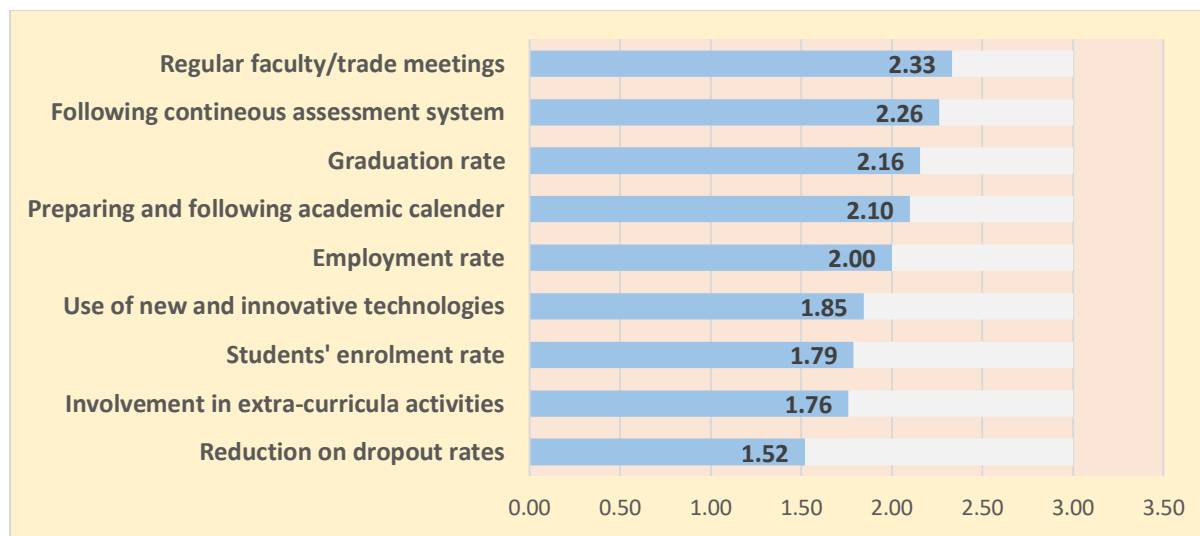
The second group of eight indicators are related with the status and performance of students. The score of these indicators ranges between 1.76 to 2.50. If we analyze the score of each indicators separately, highest score (2.50) is calculated for “*Interaction in classroom*” whereas lowest score (1.76) is obtained for “*Involvement in extra curricula activities*”. The value of these indicators suggests that almost significant change could be observed in the institutes which has sufficient number of trained instructors or other staffs. The detail picture is depicted in chart 3.3.

Chart 3.3: Indicators related to status and performance of students



Improvement of classroom performance of instructors seems impacting to overall teaching and learning environment of students. In total nine indicators were developed and opinion collected from the supervisors regarding the observed change and quantified it accordingly. The obtained score is highest (2.33) on ‘*regular faculty/trade meetings*’ followed by “*following continuous assessment system*” 2.26, graduation rate 2.16, preparing and following academic calendar 2.10, Employment rate 2.0 and so on. Unlike these indicators, lowest score (1.52) is obtained on reduction in drop out rates. (See chart 3.4 for detail figure)

Chart 3.4: Indicators related to overall teaching and learning experience



Effect of Training in Employability

It is undeniable fact that the ultimate outcome of the TVET programs is the gainful employment of its graduates which is expected to increase the income and uplift the living standard of society as a whole. Some questions were also asked to all categories of respondents whether the impact of TITI delivered training programs is also observed to that level.

While asking respondents whether the impact of the TITI training programs is observed in the employability of graduates, similar opinion was obtained from these two categories of respondents. Majority (51.6%) of training attendees were of the opinion that such training programs plays substantial role to increases the employability of graduates which could be justified by evidence and statistics, the corresponding proportion in case of supervisor is also significant (47.2%). Likewise, 14.3% of training attendees thinks that the impact is noticeable but hard to justify with evidence and statistics. The corresponding response rate of supervisor in this regard is 27.8%. Unlike these two opinions, significant proportion of respondents (34.1% of training attendees and 25% of supervisors) also conceive that the impact of training program to enhance the employability of graduates is obvious but not noticeable in short period of time and also lacks reliable and verifiable evidence in support of it. (See table 3.22)

To sum up, none of the respondents including both categories denied the effect of professional development training in the employability of graduates however they have different opinion regarding its level and means of verification. These facts and figures analyzed under this study

suggest that the effect of TITI catered professional development training is playing vital role not only to enhance the internal efficiency of students but also substantially increases the external efficiency of graduates.

Table 3.22: Effect of training program in employability

SN	Status	Training attendees		Supervisors	
		Frequency	Percent	Frequency	Percent
1	Significantly noticeable and justified impacts	65	51.6	17	47.2
2	Slightly noticeable impacts but hard to justified	18	14.3	10	27.8
3	Impacts but could not be noticed and justified	43	34.1	9	25.0
Total		126	100.0	36	100

Those respondents who have pointed out some noticeable impact of TITI training programs on the employability of graduates were further asked about the factors that makes them believe so. In response, majority of respondents of both groups (51.9 % of supervisors and 50% of training attendees) mentioned that personal conversation with graduates makes them to believe in this fact. Similarly, another significant proportion of respondents (33.3% of supervisors and 42.7% of training attendees) mentioned that it is their general impression which has developed overtime without the impression of specific cases. It is interesting and important to mentioned that significant proportion of respondents (29.6% of supervisors and 25.6% of training attendees) specifically mentioned ‘*graduates tracer study*’ as a source of data and evidence behind their claim. (See figure 3.23)

Table 3.23: Justification on impact of training on outcome (Multiple response)

SN	Statement	Responses		Percent of Cases	Response		Percent of cases
		N	%		N	%	
1	Graduates' tracer study	8	25.8%	29.6%	21	21.6%	25.6%
2	Personal conversation with graduates	14	45.2%	51.9%	41	42.3%	50.0%
3	It is my general impression	9	29.0%	33.3%	35	36.1%	42.7%
		31	100.0%	114.8%	97	100.0%	118.3%

Students' perception

Of the total 102 students, 15 (14.7%) were the graduates of the selected TVET institutes who had at least one TITI trained instructor. Out of these 15 graduates, 5(33.3%) were unemployed,

6(40%) were wage employed, 2(13.3%) were self employed and another 2 (13.3%) were found fully engaged in higher study (See Annex I table 4 fore detail distribution).

It is principally agreed fact that the post training status of graduates is largely the reflection of the quality of education/training acquired by individual in its school and college life. These graduates were first asked how much they agree with this statement and to what extent this statement matches to their cases. In response, All of the respondents agreed with this statement but had found different opinion regarding matching with their case.

In the response of second question, large majority of graduates (80%) agreed that this statement fully matches with their cases. Similarly, another 6.7% of graduates were found partially agreed with in. In the contrary, some proportion of graduates (6.7%) fully denied that it matches with their case despite theoretical agreement with the statement.

3.6 Indirect and induced effect

Instead of several direct benefits of training to enhance the quality of teaching and learning activities of the institutes, this study also attempts to analyze other indirect benefits of such training courses either for making enabling environment for quality TVET or professional development of individual trainees.

3.6.1 Indirect effect of training programs

Respondents of both groups were asked a question regarding the indirect benefits of TITI delivered training programs and requested them to choose appropriate options among the set of multiple options.

Table 3.24: Indirect benefit of training programs (Multiple response)

		Training attendees			Supervisors		
		Responses		Percent of Cases	Responses		Percent of Cases
		N	Percent		N	Percent	
Spill over effect of training programs	Increase goodwill of the institutes	45	14.9%	35.7%	14	19.7%	38.9%
	Helps to be promoted in the same career	53	17.5%	42.1%	14	19.7%	38.9%
	Helps to be more communicative	73	24.2%	57.9%	15	21.1%	41.7%
	Increases the clarity in expression	63	20.9%	50.0%	15	21.1%	41.7%
	Helps to provide administrative support for management	30	9.9%	23.8%	7	9.9%	19.4%
	Helps to choose appropriate career	38	12.6%	30.2%	6	8.5%	16.7%
Total		302	100.0%	239.7%	71	100.0%	197.2%

While responding to this question, majority of respondents (57.9% of training attendees and 41.7% of supervisors) agreed that such types of training courses helps individuals to be more communicative, followed by help to increase the clarity in expression (50.0% of training attendees and 41.7% of supervisors). Similarly, significant proportion of respondents (42.1% of training attendees and 38.9% of supervisors) also agreed that training helps participants to promote in the same career. Moreover, 35.7% of training attendees and 38.9% of supervisors also mentioned that it helps to increase the good will of the institute. (See table 3.24 for detail figure)

3.6.2 Induced effect of training programs

It is undeniable fact that the training participants are the direct beneficiaries of training programs which not only help them to enhance their own knowledge, skills and competencies but also contribute to enhance the quality of TVET programs of the institute where they work. Respondents were further inquired whether their institutes have conducive environment which helps to spill over such benefits of training programs to other instructors or staffs who are not direct beneficiaries of training programs. While analyzing the response, large majority of respondents (78.6 of training attendees and 75% of supervisors) are found of the opinion that such spill over effect or positive externalities could be realized to some extent however significant proportions (21.4% of training attendees and 25% of supervisors) does not believe on the noticeable level of such spill over effect. (See table 2.25)

Table 2.25: Spill over effect

SN	Statement	Training attendees		Supervisors	
		Number	Percent	Number	Percent
1	To some extend	99	78.6	27	75.0
2	Not at visible level	27	21.4	9	25.0
	Total	126	100.0	36	100.0

Those respondents who believe on spill over effects were further asked about the nature of such effects. In response, majority (59.6% of attendees and 55.6% of supervisors) of them mentioned that the improved teaching approaches or enhanced skills and knowledge of trained staffs further inspires other untrained staffs to participate in the training programs. Similarly, another significant proportion of respondents (34.8% of attendees and 48.1% of supervisors) mentioned that these training programs inspires other teaching staffs to use various innovative teaching approaches, tools and techniques which are used by the trained instructors. Moreover, some 42.4% respondents also mentioned that the initiation made by trained instructors helps to manage adequate facilities and proper teaching environment in the institute which ultimately helps to enhance TVET education in Nepal. (See table 3.26 for detail figure)

Table 3.26: Types of spill over effect

Factors of spill over effects	Training attendees			Supervisors			
	Responses		Percent of Cases	Responses		Percent of Cases	
	N	Percent		N	Percent		
Spill over effect of training	Inspires other staffs for training	59	38.1	59.6	15	41.67	55.6
	Other faculty members to use tools and equipment	54	34.8	54.5	13	36.11	48.1
	Conducive environment to manage teaching and learning facilities	42	27.1	42.4	5	13.89	18.51
Total	155	100.0	156.6	39	100	122.22	

To justify the effectiveness of training programs, respondents asked whether they recommend their colleagues and subordinate staffs to take TITI training program. In response, large majority of respondents (93.7% of training attendees and 97.22% of supervisors) mentioned that they highly recommend to them to enroll in the training programs. Similarly, rest (6.3% of attendees and 2.78% of supervisors) of the respondents also want to suggest them to enroll in the training program very slightly. It is interesting to mention that none of the training attendees are found who don't like to recommend their friends and subordinate staffs to take part in the training programs.

These analysis further suggest that training attendees are fully realized the importance of these training programs in their professional career as well as in personal life based on their own experience. The table 3.27 presents detail situation regarding it.

Table 27: Recommendation to pairs and subordinates

SN	Level of recommendation	Training attendees		Supervisors	
		Frequenc y	Percen t	Frequen cy	Percen t
1	Slightly recommend	8	6.3	1	2.78
2	Highly recommend	118	93.7	35	97.22
	Total	126	100.0	36	100

3.7 Specific suggestions

Respondents were further asked to provide both specific and general suggestions for enhancing the effectiveness of training program. Generally, respondents pointed out the need of refresher training to those who had got training programs long ago. It was also suggested that TITI should organized training programs to all newly appointed instructors at the time of service entry and all the instructors at the time of implementing revised curricula. Some of them also pointed out the need assessment and consultation with supervisors before nominating in training programs. Some of the respondents also suggested TITI to involve additional resource persons and master trainer while delivering the training programs and conducting training program on workplace. Moreover, respondents suggest to replace the paper based presentation modality by multimedia. Similarly, individual presentation instead of group presentation could be appropriate in some specific training such as online modality, and instructional skills related training.

Regarding the specific suggestions, respondents pointed out the need of incorporating latest and updated technology while delivering the OSU training. Similarly, respondents pointed out the need of surgery training for the instructors of veterinary science. They also pointed out the need of more trainers for the training programs e.g. IS-series. Respondents also demanded training like Advance level taught, Tally and CGAS trainings. Similarly, training for the use of Ultrasonography, Auto CAD, Drone and DGPS, Assessor, TOT are also in demand.

CHAPTER IV

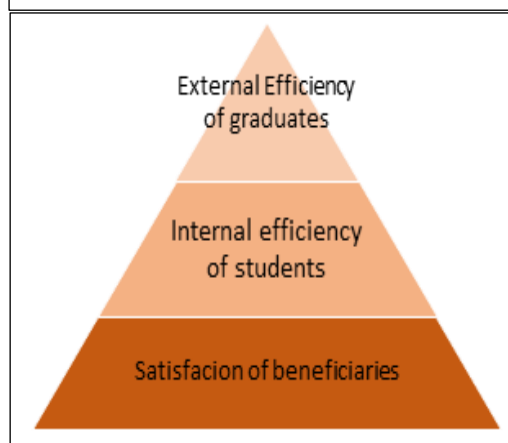
SUMMARY, CONCLUSION AND RECOMMENDATION

4.1 Summary of findings

This part of the report includes summary of the analysis and findings discussed in chapter two and three; conclusions drawn under the basis of analysis and findings; and some recommendations based on these conclusions. TITI as a national professional institute is being devoted to meeting the nationwide needs of professional development of teaching and non teaching staffs; and other professionals working in TVET subsectors of Nepal. This study has assessed the impact of the capacity development programs organize by TITI including short term training to long term academic courses under three approaches. These approaches are (a) satisfaction of attendees towards the delivered programs and its application in workplace; and (b) increment in internal efficiency of students and (c) external efficiency of graduates because of the delivered programs.

Effectiveness and impact of these training programs are visible not only in the form of enhanced instructional skills of teaching staffs but also upgraded managerial competencies of TVET managers, increased relevancy of curricula, effective management of TVET programs and appropriate monitoring and supervision of aforesaid activities.

Chart 4.1: Dimensions of training impacts



4.1.1 Satisfaction of training attendees

Instructors, staffs and other TVET professionals as a direct beneficiaries of these training programs are found highly satisfied by the contents, technical modalities and implementation approaches of training courses. Moreover, the supervisors of respective trainees attendees are also found satisfied by the enhanced competencies of these beneficiaries as their subordinates staffs.

The training programs designed by TITI have noticeable positive impacts on the aforementioned areas of TVET programs. The analysis or assessment presented in part II and III reveals sufficient evidences and facts that the training attendees are highly satisfied by these professional development training programs however, sufficient rooms are still there to make the programs further effective.

4.1.2 Application of acquired skills

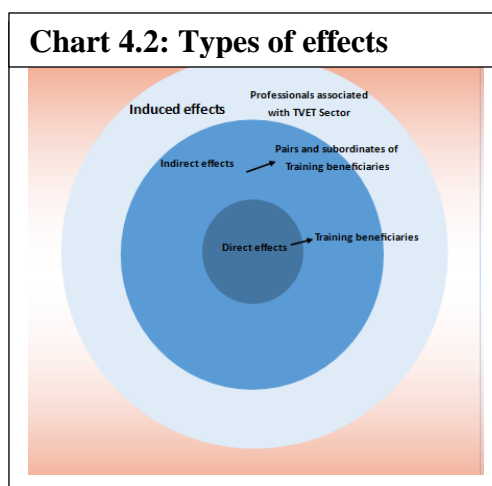
Significant enhancement of the instructional competencies of training attendees is clearly visible in the classroom. The opinion of trade heads and principals/vice principals as supervisors and students as ultimate beneficiaries of training program provides sufficient basis

which justifies that such enhancement could be largely attributed to the professional development programs of TITI. But, there is still notable gap between the desired expectation of supervisors and existing practice of training attendees. Supervisors are not found satisfied by the performance of attendees in the same level as attendees themselves satisfied with training courses.

Insufficient learning facilities and infrastructures in institute, unjustified workload of staffs, lack of proper motivation from management and limited availability of refreshment training from TITI are some of the demotivating factors pointed out by respondents that limits the practice the acquired skills in the workplace. These situations are more challenging in case of TECS and private affiliated institutes than for constituent institutes.

4.1.3 Realized benefits of the programs

The various professional development training programs catered by TITI have found direct, indirect and induced effect to the whole TVET sector of the country. The effects of TITI delivered training courses are found significantly visible in enhancement of instructional competencies of teaching staffs working in various TVET institutes. Moreover, the gradually changing TVET atmosphere of the country and enhanced level of TVET quality could also be attributed to these professional development trainings.



This study has figured out several direct and indirect benefits of these professional development training for TVET professionals and also analyses its effects for enhancing teaching and learning environment of the TVET institutes. These effects are further classified and analysed under three ways as presented hereafter.

Direct effects: The following skills, knowledge and ideas imparted to participants directly from the organizers as a result of training could be considered as a direct benefits of the training programs which cause immense effect to enhance the quality of TVET programs as well as teaching and learning environment of the institutes.

- preparation of lesson plan and session plan;
- making classroom interactive or sufficient discussion with students;
- making attractive and effective power point presentation;
- assessing level of understanding of students alongside teaching;
- promote self esteem and confidence;
- applying demonstrative teaching approach in class room like flip chart, multi-media, smart board etc.;
- applying effective instructional skills and approach;
- upgrading occupation relevant core technical skills emerging in the market;
- providing platform to share knowledge among the people of same profession;

- enhancing presentation skills;
- managing time properly in classroom;
- acquiring other life skills valuable for personal life;

Indirect effects: Beside those individual who directly participate in training programs, other non-participants staffs of the TVET institutes and other professionals working in the TVET sector are also found indirectly benefited by the professional development training programs organized by TITI. Of the aforesaid direct benefits, some benefits are also transferred to non participants by various means including formal sharing events organized in the trade/departments, demonstration effect of enhanced performance of trained staffs etc. The major indirect benefits of such professional development training programs explored by the study are as hereunder.

- preparation of lesson plan and session plan;
- making classroom interactive or sufficient discussion with students;
- applying demonstrative teaching approach in class room like flip chart, multi-media, smart board etc.;
- making attractive and effective power point presentation;
- applying effective instructional skills and approach;
- acquiring other life skills valuable for personal life;

Induced effect of training

Training courses like IS-I, II and III, TOT, Master ToT and Occupational TOT etc. seems have direct effect on the quality of TVET programs, whereas other programs related to Development a curriculum, Management and leadership, Management skills seems to affect quality of education indirectly. Instead of these direct and indirect effects, induced effect of TVET programs has been being appeared in large volume. The analysis in this report explores several evidences to justify the induced effect of these training programs could be multiple times of the direct effects.

Induced effect is appeared under various ways – (a) influencing other untrained participants to acquire training (b) spilling of the acquired skills by trained individuals over to untrained individuals by formal and informal sharing and discussion (c) trained trainers works on various institutes and teaches various groups (d) the training other than instructional skills makes enabling environment of institutes for quality enhancement; (e) effective policy analysis and revision becomes possible as a result of enhanced competency of professionals.

In this line of thinking, all of the staffs working under TVET system or indirectly associated with it are more or less benefited by these training programs as a result of inducted effect. The following direct and direct benefits of these training programs are more responsible to create induced effect in the TVET subsector.

- Higher relevancy of developed curricula;
- Effective monitoring and supervision system;
- Effective TVET management;

- Increased quality due to effective monitoring;
- Developed leadership and coordination skills of managers;

As mentioned earlier more than 33,000 individuals are the direct beneficiaries of TITI courses till the end of fiscal year 2077/78. Because of the spill over effect, other large number of instructors/trainers are also found indirectly benefited by these training programs. The ratio of trained and untrained staffs and existing formal and informal practice for sharing knowledge and skills in the institutes, application of acquired skills and knowledge in the workplace and the discussion with participants in FGDs and KIIs provides sufficient ground to estimate that knowledge and skills are transferred to 2-3 untrained individuals from a trained participants. In this ground, it could be supposed that another 65,000-90,000 peoples are indirectly benefited by the TITI delivered training programs.

These direct and indirect benefits have multi dimensional impacts to enhance the quality of TVET programs in the country as an induced effects of these benefits. Effectiveness or impact of TVET programs could not be limited within the participants or direct beneficiaries of training. All of the teaching and non teaching staffs or professionals either working in TVET institutes or its regulatory bodies or persons associated with TVET sector seems to be benefited by these professional development training in one or other way.

4.1.4 Increment of assessment result and employability

Significant increment in assessment results of students of TVET programs in general and that of participants' institutes in specific is clearly visible as an outcome of the professional development training programs. The opinion of corresponding trade heads, vice-principals and principals explored and analyzed in this report verifies this claim. Moreover, the direct, indirect and induced effect of this training programs jointly contributes on quality of TVET to large extent which is observed in the increased assessment result and employment rate after graduation.

4.2 Conclusions

Based on the above mentioned analysis and findings, it could be concluded that the professional development training delivered by TITI are instrumental to enhance overall TVET sector of the country. The benefits of professional development training delivered by TITI are found spilled over to larger areas of TVET sectors while considering its indirect and induced effects by means of training participants as direct beneficiaries. The training courses which are in practice have not found any remarkable limitation, but challenges are still there to upgrade and maintain its quality as well as addressing the ever increasing training requirement.

TITI should also pay proper attention towards the blame that it is quite behind to update with advanced technologies as a witness of 21st century skills and address the emerging needs of labour market.

The programs of TITI seems insufficient to address the increasing demand of professional development training of the sector. Although TITI has already crosses the boundary of constituent institute of CTEVT to deliver its programs, it is still not sufficient. The existing organization structures and available human resources is not also supporting to address the

need of ever expanding TVET sub sector of the country. Some specific conclusions and recommendation are provided hereunder for enhancing the relevancy, effectiveness, access and quality of its programs which ultimately increases the impact of training programs in totality.

Beside these broader conclusion, some specific conclusions are also drawn from the analysis which are mentioned as hereunder;

- ⇒ The proportion of trained instructors and staffs is found significantly varies among provinces and types of institutes. This suggests either the training opportunities are not available in logical or reasonable proportion or our system could retain the trained instructors in the institute located at remote parts of the country or both. Bridging of such gap would be preferable for assuring the quality of TVET programs.
- ⇒ Significant gap is observed between the training programs conducted by TITI and need of the training seekers. On one hand, TITI is striving to fulfill the number of participants for the training. The instructors of large number of TECS and private institutes are complaining TITI for not organizing training programs as per their interest and need. The existing infrastructure and human resources of TITI also seems insufficient to address the existing training needs. Large number of instructors, managers and other professionals of private affiliated and TECS institutes are beyond the access of TITI training programs.
- ⇒ Quality education is not only the function of performance of teaching staffs but also the performance of managerial staffs who creates conducive environment for effective teaching and learning environment of the institutes. Training opportunities for administrative/managerial staffs still seems limited which is justified by the lower share of administrative staffs in training attendees' pie.
- ⇒ TITI is more focusing its activities towards the constituent institute than TECS and private affiliated institutes which occupies only 5.6% share in total number of institutes (61 of 1106). The quality of TVET could not be improved keeping large share of population out of priority.
- ⇒ Respondents having a single training found more satisfied with their training programs than those having multiple trainings. This suggests that the effectiveness of training programs decreases as per the number of training increases. Increases of training base rather than height is preferable to increase aggregate satisfaction of respondents
- ⇒ The major push factors for respondents towards training courses are the personal interest, necessity of current position and future career. Significantly lower proportion of respondents have reported that they were counselled by their seniors and supervisors which further suggests lack of conducive environment in the institutes to aware and motivate instructors toward acquiring professional development trainings.
- ⇒ Relatively lower rating score on "Learning opportunity of emerging skills and technologies in the respective occupation" and "Duration of training relative to the course/curricula" suggest that attention paid by TITI in these two areas are insufficient. Proper need assessment with subsequent correspondence and interactions with

institutes is preferable for need identification before designing and conducting training programs.

- ⇒ Institutes lacks enabling environment for discussing and sharing learning achievements among the pairs and subordinates. This further hinders the process of spilling over of learning achievement to wider circles. Practice on sharing on learning achievements increases the impact and effectiveness of TITI training programs in limited cost
- ⇒ Some revision in the traditional implementation modality of TITI is preferable alongside the revision of its concept card and skill card, group work/exercise, presentation modality etc.

4.3 Recommendations

Based on the aforementioned conclusion, some recommendation are made for increasing effectiveness and impacts of these professional development training programs. The recommendations mentioned here are of two categories. First categories of recommendations could be implemented immediately and does not require significant investment whereas the next categories of recommendations requires significant preparation time and budget to implement.

4.3.1 Recommendation for immediate action

- ⇒ TITI should focus on linkage with industries and work based modalities as well as incorporating use of e-learning modalities in its implementation approach.
- ⇒ Service entry training programs is suggested to all newly appointed staffs in general and teaching staffs in specific immediately after their recruitment and short orientation programs to all instructors at the time of implementing revised curricula.
- ⇒ Maintaining proper channel to nominate participants in training programs with formal consultation to related institutes and supervisors is most not to disturb the class schedule of the institute as well as properly address the institutional requirement.
- ⇒ Proper attention should be paid on engaging resource persons and master trainer with diversified qualities and industrial exposure. More trainers are to be developed targeting to some specific training e.g. IS-II, OSU and Occupational ToT.
- ⇒ Training programs should be designed and implemented focusing on the institutional need rather than personal need of individual instructors or staffs. Personal needs doesn't always represents positional requirements of the staffs so institutional needs would not be addressed.
- ⇒ TITI should have priority for equipping peoples with at least one appropriate training than providing multiple training to single person which increases the gross satisfaction of participants and effectiveness of training in totality.

4.3.2 Recommendation for longer term actions

- ⇒ Surgery training for the instructors of veterinary science, advance level taught, tally and CGAS training for accountants, training on ultrasonography, Auto CAD, Drone and DGPS etc. are some of the demanded training. These programs should be gradually implemented after proper need assessment and course development.

- ⇒ Policies and strategic plan of CTVET should have strict provisions for all types of institutes to recruit and retain certain proportion of trained instructors and effective regulatory and monitoring mechanisms to assure its compliance.
- ⇒ Training related to technical institute management found as needy training for senior administrative staffs of CTEVT, principle of TECS institutes and managers/ owners of private training institutes. Such types of training makes these officials and managers aware on the importance of continuous professional development of instructors for quality TVET. This also prepares enabling environment for teaching staffs to work in fullest potential.
- ⇒ TITI should diversify its efforts to other institute as well to trained their staffs. The requirement of additional fund could be managed under the cost sharing approach among the organizer, institute and individual trainee.
- ⇒ Replacement of paper based presentation modality by multimedia and other advanced technologies. Individual presentation instead of group presentation should be preferred in some specific training programs.
- ⇒ TITI should develop a online training information system under digital platform so that it could be updated with the need of individual institutes and staffs and helps to design and organize demand based training courses. Similarly, needy people could be regularly updated with the program schedule of TITI and choose training as per their requirement.
- ⇒ TITI should pay sufficient attention to develop physical infrastructures as well as competent human resource to cater the increasing needs of professional development programs for TVET professionals. Moreover, TITI should pay proper attention to organize refresher training in every two years for each instructional staffs and every five years to other managerial staffs.
- ⇒ Revision of monitoring framework and tools to incorporate training status of staffs is preferable which creates some pressure for technical schools either to recruit trained staffs or capacitate its existing staffs. TITI should coordinate CTEVT and province office to revise these framework and tool in this line.

ANNEXES

Annex I: Additional analysis tables

Table 1: Satisfaction level of participants by types of institute

SN	Types of institutes	Mean	N	Std. Deviation
1	Constitution Institutes	2.7574	68	.53902
2	TECS and Partnership Institutes	2.9475	40	.51540
3	Private affiliated institute	3.0389	18	.56583
	Total	2.8579	126	.54308

Table 2: Satisfaction level of participants by types of institute

SN	Indicators of quality training	No change		Slight Change		Significant Change		Distinct Change	
		N	%	N	%	N	%	N	%
Changes on behavior and performance of participant-staffs.									
1	Seriousness on responsibility	2	7.7	5	19.2	9	34.6	10	38.5
2	Activeness and punctuality	3	11.5	2	7.7	8	30.8	13	50.0
3	Enthusiasm to learn	2	7.7	5	19.2	10	38.5	9	34.6
4	Friendliness towards new and innovative technologies	3	11.5	6	23.1	7	26.9	10	38.5
5	Learning intention and attitude	3	11.5	3	11.5	11	42.3	9	34.6
6	Engagement with students	2	7.7	4	15.4	10	38.5	10	38.5
7	Effectiveness of classroom performance	1	3.8	4	15.4	8	30.8	13	50.0
8	Engagement to prepare lesson and session plan	1	3.8	6	23.1	9	34.6	10	38.5
Changes on performance and behavior of students.									
9	Activeness of students	2	7.7	5	19.2	11	42.3	8	30.8
10	Discipline of students	2	8.0	3	12.0	13	52.0	7	28.0
11	Learning attitude	2	7.7	5	19.2	12	46.2	7	26.9
12	Attendance and punctuality	4	15.4	3	11.5	14	53.8	5	19.2
13	Homework preparation and submission	2	8.3	5	20.8	12	50.0	5	20.8
14	Performance on assessment	2	7.7	6	23.1	10	38.5	8	30.8
15	Reduction on dropout rates	3	12.0	8	32.0	12	48.0	2	8.0
16	Involvement in extra curricula activity	2	8.0	7	28.0	11	44.0	5	20.0

17	Use of new and innovative technologies	2	7.7	7	26.9	10	38.5	7	26.9
Changes on overall teaching-learning environment of students.									
18	Interaction in class room		0.0	1	5.0	8	40.0	11	55.0
19	Preparing and following academic calendar		0.0	4	20.0	10	50.0	6	30.0
20	Following continuous assessment system		0.0	3	15.8	8	42.1	8	42.1
21	Regular faculty trade meetings		0.0	3	16.7	6	33.3	9	50.0
22	Students' enrolment rate	2	10.5	4	21.1	9	47.4	4	21.1
23	Graduation rate of students (Pass out rate)	1	5.3	3	15.8	7	36.8	8	42.1
24	Employment rate	1	5.3	3	15.8	10	52.6	5	26.3
25	Overall satisfaction level of students		0.0	4	20.0	10	50.0	6	30.0
26	Overall satisfaction level of parents		0.0	5	25.0	8	40.0	7	35.0

Table 3: Respondents by involvement in nomination process

Status of nomination	Responses		Percent of Cases	
	N	Percent		
Bases of nomination	I am fully authorized to nominate subordinates for training	9	20.5%	26.5%
	I am fully authorize to recommend sub ordinate for training	9	20.5%	26.5%
	Sufficient discussion was held before nomination among the management team	14	31.8%	41.2%
	I am occasionally consulted while nominating staffs for training	11	25.0%	32.4%
	Principal will select or nominate staffs directly without my recommendation	1	2.3%	2.9%
Total	44	100.0%	129.4%	

Table 4: Graduates by employment status

SN	Employment status	Frequency	Percent
1	Unemployment	5	33.3
2	Wage employed	6	40.0
3	Self employed	2	13.3
4	Fully involved in further study	2	13.3
	Total	15	100.0

Table 5: Participants by institutes and types of training

		Number of Training program			Total
		Single training	Double training	Triple training	
Types of institutes	constituent Institutes	28	20	20	68
		41.2%	29.4%	29.4%	100.0%
	TECS and Partnership Institutes	19	14	7	40
		47.5%	35.0%	17.5%	100.0%
	Private affiliated institute	12	5	1	18
		66.7%	27.8%	5.6%	100.0%
Total	59	39	28	126	
		46.8%	31.0%	22.2%	100.0%

Table 6: Training attendees by institutes

SN	Name of Institute	Number	Percent
1	Korea Nepal Polytechnic Institute, Butwal, Rupandehi	14	11.1
2	Tansen School of of Health Science, Tansen, Palpa	12	9.5
3	Bheri Technical School, Nepaljung, Banke	11	8.7
4	Janapriya Secondary School, Chisapani, Makwanpur	10	7.9
5	Nepal Banepa Polytechnic Institute, Banepa, Kavrepalanchowk	10	7.9
6	Shankharapur Polytechnic Institute, Sankhu, Kathmandu	9	7.1
7	Rapti Technical School, Rapti, Chitwan	7	5.6
8	Butwal Technical Institute, Butwal, Rupandehi	6	4.8
9	Balaju School of Engineering and Technology Balaju, Kathmandu	5	4.0
10	Jiri Technical School, Jiri, Dolakha	5	4.0
11	Bageswori Secondary School, Bhaktapur	3	2.4

SN	Name of Institute	Number	Percent
12	Deurali Janta Prabidhik Shikshyalaya, Butwal, Rupandehi	3	2.4
13	Diwakar Memorial Polytechnic Institute, Madi, Chitwan	3	2.4
14	Lord Buddha College, Nepalgunj, Banke	3	2.4
15	Narayani Polytechnic Institute, Bharatpur, Chitwan	3	2.4
16	Nepal Polytechnic Institute, Bharatpur, Chitwan	3	2.4
17	Nepalgunj Nursing College, Kohalpur, Banke	3	2.4
18	Sanothimi Technical School, Sanothimi, Bhaktapur	3	2.4
19	School of Health Science, Bharatpur, Chitwan	3	2.4
20	Nepal Rastriya Chandra Ganga Secondary School, Birendranagar, Surkhet	2	1.6
21	NPI-Narayani Samudayik Hospital, College of Nursing, Chitwan	2	1.6
22	Budhanilkantha Secondary School, Kathmandu	1	.8
23	Nepal Rastriya Technical School, Birendranagar, Surkhet	1	.8
24	Shree Tribhuvan Higher Secondary School	1	.8
25	Star Academy Lalitpur	1	.8
26	Star Academy, Sanepa, Lalitpur	1	.8
27	Tribhuvan Model Secondary School, Kohalpur, Banke	1	.8
	Total	126	100.0

Annex II :Questionnaires and checklists

Council for Technical Education and Vocational Training
Training Institute for Technical Instruction
 IMPACT ASSESSMENT OF
 TRAINING INSTITUTE FOR TECHNICAL INSTRUCTIONS (TITI) TRAINING
 PROGRAMS

QUESTIONNAIRE FOR TRAINEES/PARTICIPANTS

A. Personal Information:

Name of Respondents (Optional):

Institute/Organization : Present Position :

Professional category:

(a) *Teaching Staff* (b) *Managerial/Administrative Staff* (c) *Supporting Staff*Gender: (a) *Male* (b) *Female* (c) *Sexual Minorities***Address of institute:**

Province: District: Rural/Municipality:

B. Training Related Information:

- 1. Please provide the following information of training programs you attended from TITI in last three years.**

SN	Name of Training	Duration*	Completion date (Year in AD)	Funding #
1				
2				
3				
		(a) <i>Less than a week</i> (b) <i>One week</i> (c) <i>1-4 weeks</i> (d) <i>4-8 Weeks</i> (e) <i>Long term</i>		(a) <i>Fully funded by organizer</i> (b) <i>Partly funded by organizer</i> (c) <i>Fully funded by own institute/organization</i> (d) <i>Partly funded by own institute/organization</i> (c) <i>Fully funded by own self</i>

Group C: Training assessment

2. Could you please rate these training programs you acquired in terms of given indicators.

{ Poor (0); Fair (1); Good (2); Very Good (3) and Excellent (5)}

You are requested to assess the mentioned area of your training in rating scale, where 'Poor' is the lowest rating equivalent to 0 and 'excellent' is the highest rating equivalent to 4.

SN	Indicators	Rating Scales				
		0	1	2	3	4
1	Relevancy of the contents with your occupation/career					
2	Practicality of the contents/methods to be applied in your real workplace					
3	Competency of coordinator/resource persons to deliver the given contents					
4	Delivery skills of coordinators/resource persons in class room					
5	Duration of training relative to the course/curricula					
6	Sequence and flow of classes					
7	Engagement in practical activities during the training programs					
8	Learning opportunity of emerging skills and technologies in your occupations					
9	Administrative management of training events					
10	Punctuality and seriousness towards schedules					

Group D: Motivation and Linkage

3. How did you attend these training programs? (Multiple response is permitted)

- (a) Using personal approach & network
- (b) Nominated by own institution
- (c) Nominated by organizing institution
- (d) If others

4. Why did you attend these training programs? (Multiple response)

- (a) Personal interest
- (b) Necessity of present position
- (c) Motivation of seniors/supervisors
- (d) Necessity of present career
- (e) Opportunity for alternative career
- (f) If others, mention

5. How have you found these trainings against your previous expectation?

- (a) Highly fruitful than expected (b) As fruitful as expected
- (c) Less fruitful than previous expectation

Group E: Questions Related to Classroom Performance)

(Only for those who are involve in teaching occupation)

6. What types of immediate advantages do you feel from these training programs for enhancing class room performance?

- (a) Helps to draw attention of students/trainees (b) Helps to make class more interactive
- (c) Helps to explore innovative ideas of teaching (d) Provide further knowledge on subject matter
- (e.) If others, please mention

7. Have you involved in teaching same group of students before and after attending training/course/program?

- (a) Yes (b) No

If yes, what is your impression regarding changes in the behaviors and performance of the students because of the training?

- (a) I have found some notable changes.
- (b) I have not found any notable changes.

If you found notable changes, what types of changes do you found in overall classroom performance because of the training/program?

- a) Students become more interactive
- b) Students become more interested in subject matter
- c) Attendance of students has been increased
- d) Students’ assessment result has been increase
- e) If any other, please mention

Group F: Questions related only for Non-teaching Staffs)

For those who involved in non-teaching occupations)

8. What types of immediate benefits of these training programs do you observe to improve overall effectiveness of TVET programs ? (Multiple response is permitted)

- (a) Provide further knowledge on subject area of my occupation

- (b) Makes me capable to apply effective and innovative techniques and procedures
- (c) Helps to create conducive working environment
- (d) Provide crucial support for management on planning, and programming
- (e) Enhance effectiveness on monitoring, supervision and assessment system
- (f) Establish good working relationship among internal team
- (g) Establish good coordination and networking with and among other external stakeholders
- (h) Provide constructive feedback/support to subordinates
- (i) Effectively manage overall institutions/projects
- (j) Acts as a refreshers to perform overall responsibility
- (k) If any, please mention

9. Have you involved in managerial role in the TVET institutes before and after attending training/courses/programs?

- (a) Yes, I have involved in management of same institute
- (b) Yes, I have involved in management of different TVET institutes
- (c) No, any of these situations is not applied in my case

If yes (a or b), what is your impression regarding changes in overall performance level of institutes due to impact of training?

- (c) I have observe some notable changes.
- (d) I have not observe any notable changes.

If you have observed some notable changes, what types of changes do you feel because of the training in overall performance level of students?

- f) Students become more disciplined and active
- g) Attendance of students has been increased
- h) Record keeping and documentation becomes systematics
- i) Students' assessment result has been increase
- j) Overall environment of institute improved
- k) Program management become systematic
- l) If any other, please mention

Group E : Both For Teaching and Non-teaching Groups

10. What is your opinion regarding the impact of these training programs on the employability of students' after graduation ?

- a. Training increases the employability but but could not be noticed

- b. Training increases the employability but can't be justified by evidences
- c. Training increases the employability and also justified by evidences.

If you feel any noticeable impact of these training programs on the employability of students ? what factors make you feel like this?

- (a) Graduates tracer study report
- (b) Personal conversation with graduates
- (c) It is my general impression

11. Would you recommend your friends to take such and similar training programs organize by TITI?

- (a) Surely, I will highly recommend them
- (b) I will slightly recommend but choice is their own
- (c) I will inform them but do not directly recommend
- (d) No, I will not recommend other friends
- (e) If others please mentioned

12. How do you feel the advantage of these training programs in your personal and professional career?

- (a) Helps to choose appropriate career
- (b) Helps to be promoted in the same career
- (c) Helps to be more communicative
- (d) Increases the clarity in expression
- (e) Helps to provide administrative support for management
- (f) Increase goodwill of the institutes
- (g) If others, please mention

13. Do you think these training programs have some spill over effect on enhancing overall teaching learning scenario of the institutes?

- a. Yes, It has some spill over effect
- b. No, not at visible level

If yes, how does it provide?

- a. Inspires other (faculty members) staffs to participate in the training programs;
- b. Provide conducive environment to manage sufficient teaching learning facilities in the institutes;
- c. Inspires other faculty members to apply the tools and techniques that applied by trained instructors;
- d. If others, Please mention

14. Do you have any specific suggestion to enhance the effectiveness of specific training programs usually organize by TITI?

- (a) Yes (b) No

If Yes,

Please mention the name of training that you have specific suggestions for,

.....

Please mention your specific suggestions regarding the training program you indicated.

.....

15. Do you have any other suggestions for TITI to improve the training delivery mechanism for better effectiveness of programs?

.....

.....

Thank you for your time, information and support !

Council for Technical Education and Vocational Training
Training Institute for Technical Instruction
 IMPACT ASSESSMENT OF
**TRAINING INSTITUTE FOR TECHNICAL INSTRUCTIONS (TITI) TRAINING
 PROGRAMS**

QUESTIONNAIRE FOR SUPERVISORS

Group A: Personal Information:

- i. Name of Respondents (Optional):
- ii. Institute/Organization :
- iii. Present Position :.....
- iv. Address of institute:
 - a. Province:
 - b. District:
- v. Category of Profession:
 - (a) Teaching Staff (b) Managerial Staff (c) Supporting Staff
- vi. Gender of Respondents:
 - (a) Male (b) Female (c) Sexual Minority
 - (b) Age of Respondents:

Group B: Training Related Information:

1. Please provide the following information of trainee-staffs who have attended training programs from TITI in last three years and works under your supervision.

SN	Name of staffs	Name of Training courses	Duration*
1			
2			
3			
			(a) Less than a week (b) One week (c) 1-4 weeks (d) 4-8 Weeks (e) Long term

Group C: Training Assessment

2. You are requested to assess the mentioned area of TITI catered training programs in rating scale from poor to excellent, where 'Poor' indicates the lowest score equivalent to 0 and 'Excellent' indicates the highest equivalent score equivalent to 5.

(a) Poor (0), (b) Fair (1) (c) Good (2), (d) Very Good (3) (e) Excellent

SN	Indicators	Rating Scales				
		0	1	2	3	4
1	Relevancy of the training course with their positional responsibility					
2	Practicality of the process/techniques could be applied in institution.					
3	Duration of training relative to the requirement and compatibility with academic plan.					
4	Conversation with school management/supervisors during the process of nomination and course development.					
5	Sharing and conversation in team after completion of training					
6	Enthusiasm among staffs applying the acquired knowledge and skills after training					

3. What is your role to recommend/nominate staffs for training programs?

- a. I am fully authorize to recommend
- b. I am regularly consulted while nominating staffs for training
- c. I am occasionally consulted while nominating staffs for training
- d. If others, please mention.....

4. What is the major basis of nomination ?

- a. Nomination was made under the basis of inclusiveness
- b. Nomination was made under the basis of requirement
- c. Nomination was made under the basis of class schedule and responsibility of teachers
- d. If others, mention

5. How have you found the trainings against your previous expectation?

- (a) Highly fruitful than previous expectation
- (b) As fruitful as expected previously
- (c) Less fruitful than previous expectation

GROUP E : QUESTIONS RELATED TO CLASSROOM PERFORMANCE

6. What types of immediate benefits do you feel from these training programs for classroom performance?

- (a) Helps to draw attention of students/trainees
- (b) Helps to make class more interactive
- (c) Helps to explore innovative ideas of teaching
- (d) Provide further knowledge on subject matter
- (e.) If others, please mention

7. Have you involved in supervising same staffs or group of staffs before and after attending training?

- (a) Yes
- (b) No

If yes, what is your impression regarding changes in the behaviors and performance of the students because of the training?

- a) I have found some notable changes in their performance level.
- b) I have not found any notable changes in their performance level.

If you found notable changes, what types of changes do you found in overall classroom performance because of the training?

- a. Students become more interactive
- b. Students become more interested in subject matter
- c. Attendance of students has been increased
- d. Students' assessment result has been increase
- e. If any other, please mention

8. What types of immediate benefits of these training programs do you observe to improve overall effectiveness of TVET programs ? (Multiple response is permitted)

- a) Provides additional knowledge on subject area of my occupation
- b) Makes staffs capable to apply effective and innovative techniques and procedures
- c) Helps to create conducive working environment
- d) Provide crucial support for management on planning, and programming

- e) Enhance effectiveness on monitoring, supervision and assessment system
- f) Establish good working relationship among internal team
- g) Establish good coordination and networking with and among other external stakeholders
- h) Provide constructive feedback/support to subordinates
- i) Effectively manage overall institutions/projects
- j) Acts as a refreshers to perform overall responsibility
- k) If any, please mention

9. Have you supervised same staffs before and after attending training?

- (a) Yes, I have supervised same staffs before and after attending TITI training
- (b) Yes, I have supervised different staffs with and without TITI training
- (c) No, any of these situations is not applied in my case

If yes (a or b), what is your impression regarding changes in overall performance level of staffs due to impact of training?

- (e) I have observe some notable changes.
- (f) I have not observe any notable changes.

Group F : Level of Change of TVET Environment

If you observe some notable changes, what types of changes do you feel because of the training in overall performance level of students?

{0-No Change; 1- slight change; 3- Significant Change; 4-distinct change }

SN	Statements	Degree of Change				NA
		0	1	2	3	
Indicators Related to staffs						
1	Seriousness on responsibility					
2	Activeness and punctuality					
3	Enthusiasm to learn					
4	Friendliness toward new and innovative technologies					
5	Learning intention and attitude					
6	Engagement with students					
7	Effectiveness of classroom delivery					
8	Engagement to prepare lesson plan and session plan					
9	Engagement to prepare/manage teaching materials					
Indicators related to students						
1	Activeness of students					

SN	Statements	Degree of Change				NA
		0	1	2	3	
2	Discipline of students					
3	Learning attitude					
4	Attendance and punctuality					
5	Homework preparation and submission					
6	Performance on assessment					
7	Reduction on drop-out rates					
8	Involvement in extra-curricula activity					
9	Use of new and innovative technology					
Indicators related to overall effectiveness of Institutes						
1	Interaction in classes					
2	Preparing and following academic calendar					
3	Following continuous assessment system					
4	Regular faculty/trade meetings					
3	Students' enrolment rate					
4	Graduation rate					
5	Employment rate					
6	Overall satisfaction level of students					
7	Overall satisfaction level of parents					

10. How do you opine regarding the impact of these training programs on the employability of students' after graduation ?

- d. Surely, It impacts but could not be noticed
- e. Slight impact could be noticed but can't be justified
- f. Level of impact is significant and justified

(i) If you feel any noticeable impact of these training programs on the employability of students ? what factors make you feel like this?

- (d) Graduates tracer study report
- (e) Personal conversation with graduates
- (f) It is my general impression

11. How do you feel the advantage of these training programs in your personal and professional career?

- (a) Helps to choose appropriate career
- (b) Helps to be promoted in the same career
- (c) Helps to be more communicative
- (d) Increases the clarity in expression
- (e) Helps to provide administrative support for management
- (f) Increase goodwill of the institutes
- (g) If others, please mention

12. Would you recommend other subordinate staffs to take such and similar training programs organize by TITI?

- (f) Surely, I will highly recommend them
- (g) I will slightly recommend but choice is their own
- (h) I will inform them but do not directly recommend
- (i) No, I will not recommend other friends
- (j) If others please mentioned

13. Do you feel some spill over effect of these training programs on the overall teaching learning scenario of the institutes?

- c. Yes, It provides to some extent
- d. No, not at visible level

If yes, how does it provide?

- e. Inspires other (faculty members) staffs to participate in the training programs;
- f. Provide conducive environment to manage sufficient teaching learning facilities in the institutes;
- g. Inspires other faculty members to apply the tools and techniques that applied by trained instructors;
- h. If others, Please mention

14. Do you have any specific suggestion to enhance the effectiveness of specific training programs usually organize by TITI?

- (b) Yes
- (b) No

If Yes,

Please mention the name of training that you have specific suggestions for,

.....
Please mention your specific suggestions regarding the training program you indicated.
.....

15. Do you have any other suggestions for TITI to improve the training delivery mechanism for better effectiveness of programs?

.....
.....

Thank you for your time, information and support !

Council for Technical Education and Vocational Training

Training Institute for Technical Instruction

IMPACT ASSESSMENT OF TRAINING INSTITUTE FOR TECHNICAL INSTRUCTIONS (TITI) TRAINING PROGRAMS

QUESTIONNAIRE FOR STUDENTS

I. Personal Information:

Name of Student (Optional):

Gender :

Name of Institute :

Address of institute:

Province: District: Rural/Municipality:

Trade:

Program:..... Year/Semester:

Category of Students: (a) Regular Students (b) Course Just Completed (c) Already Graduated

Years of Graduation (*Only for graduates*):

II. Training Related Information

1. How much are you satisfied with the quality of training programs you have attended?

- (a) Fully satisfied (b) Partially Satisfied (c) Unsatisfied

2. In your experience, what are the factors that determine the quality of training ? Please order the under mentioned factors as you feels appropriate.

- a) Physical and educational infrastructures of institutes
- b) Qualification, experience and training of teachers/instructors
- c) Curricula and teaching materials
- d) Assessment or examination system

3. In your opinion, which factor is more decisive on the effective performance of the teachers? Please rank them as you feels appropriate.

- a) Educational qualification of teacher/instructor
- b) Teaching experience of teachers/instructor

c) Instructional skills related training/instructors

4. Are/were you equally satisfied by the class-room delivery of all of your instructors ?

d) Yes (b) No

5. Could you provide satisfaction level of your teachers as per your subject of the study ?

(You are request to mention the satisfaction level of your subject teachers ranging from highly unsatisfied to highly satisfied. Where (-2) indicates highly Unsatisfied; (-1) for unsatisfied, (0) for Neutral; (1) for Satisfied; and (2) for Highly Satisfied.

SN	Subject	Rating scale of Satisfaction*					Training Status of Subject Teachers (Official information)
		-2	-1	0	1	2	1-Trained 2-Untrained
1							
2							
3							
4							
5							
6							
7							
8							
9							

Note @ : This information is to be filled based on the administrative record or discussion with administration team

6. Do/did you have any opportunity to observe the performance level of instructors before and after they got training?

(a) Yes (2) No

If yes how do you compare their class-room performance ? (Multiple response)

- (a) Teachers/instructors are/were found more expressive and clear after training
- (b) Teachers/instructors seem/seemed more updated and confidence on subject matter after training
- (c) Enhancement on their instructional skills could be realized after training

(d) I could not find any visible differences in their instructional activities even after they got training

(e) If others please mention

7. Do/did you have any opportunity to be trained by both trained and untrained instructors?

(b) Yes

(2) No

If yes how do you compare their class-room performance ?

(f) Trained teachers are more expressive and clear than untrained

(g) Trained teachers are found more updated on subject matter

(h) Training have better instructional skills than untrained

(i) I don't find any visible differences of classroom performance between them

Group E: Questions to be answered by graduates

8. What is your present status ?

(a) Wage or Salaried Employed

(b) Self-employed

(c) Fully Involved in further Education

(d) Unemployed

9. Do you think the quality of your educational programs is mainly responsible for your present status?

(a) Yes

(b) No

(c) May be, to some extend

10. Based on your own case, do you believe that trained teachers could play decisive role to enhance the quality of training?

(a) Yes, I agree and also fully matches with my case.

(b) Yes, I agree and also matches with my case to some extent.

(c) Statement may be true in general but it does not matches with my case

(d) No, I didn't believe in this statement.

Thank you for your time, information and support !

Council for Technical Education and Vocational Training
Training Institute for Technical Instruction
IMPACT ASSESSMENT OF
TRAINING INSTITUTE FOR TECHNICAL INSTRUCTIONS (TITI) TRAINING
PROGRAMS

CHECKLIST FOR FGD &KII

A. General guidelines for conducting FGD

- Involve experts and professionals of similar nature of job responsibilities whether they are directly or indirectly related or benefited by TITI Training programs. Do not mix up informants of different groups in the same FGD;
- Eight to twelve is considered as the standard number to participate in FGDs
- First introduce your self and take the introduction and formal attendance of the participants;
- Delineate the purpose and objectives of the assessment as well as specific expectations from this FGD/KII before starting discussion;
- Conduct voice recording of the discussion taking verbal approval from the participants or take note of major points of discussion;
- Do not interfere on the discussion but ensure the discussion is on track.
- Encourage each and every participants to express their ideas and opinions
- Assure confidentiality on the participants that his response and the options reflects their real feelings.

B. Major Contents that the discussion should focus on

- Is their any notable difference in the instructional skills among the instructors before and after attending the TITI training program?
- Is there any notable difference in students' satisfaction level before and after attending training program?
- Is their any visible increment in output and outcome of institute due to training programs?
- How has the training course helped instructors in the delivery of class?
- What activities in the training programme helped trainees to best perform their responsibility?
- Was the training effective?

- What part of the training programme are found less fruitful in the work life of participants?
- Which special components would you suggest to add in the training programme that could further enhance the effectiveness of TVET programs?
- Was there adequate focus on practical exercises during the training program?
- Are there any other indirect benefits of training programs than increase in class room delivery skills?

Annex III: List of Participants of FGDs and KIIs

Annex IV : Pictures related with FGDs and KIIs



Focus group discussion among the instructors of Nepalgunj Nursing College



Focus group discussion among the instructors of Janajyoti Secondary School



Focus group discussion among officials of CTEVT Karnali Province Office



Focus group discussion among Rastriya Technical Institute, Surkhet