Factors Influencing Effective Learning in Instructional Skill Training for Vocational Instructors

Learning for change - a Case of Training Institute for Technical Instruction (TITI), Bhaktapur, Nepal.

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ACRONYMS

TREAT: Training Rural Extension and Transformation

CTEVT: Council for Technical Education and Vocational Training

TITI: Training Institute for Technical Institute

IS training: Instructional skills training

TEVT: Technical Education and Vocational Training

NGO: Non government Organization

BTTC: Balaju Technical Training Centre

JTS: Jiri Technical School

LTS: Lahan Technical School

PTTC: Pokhara Tourism Training Centre

TOTEM: Transfer of Training Evaluation Module

PG: Performance Guide

TSLC: Technical School Leaving Certificate

TRG: Training

ABSTRACT

This study was based on Instructional Skills (IS) training module which was imparted by Training Institute for Technical Instruction (TITI) Nepal to improve the performance of vocational instructors. Instructional skill training is a three months training course split in to three modules; each module is for one month. TITI as a training institute has a great confident on Instructional skill training to enhance instructor's capacity but instructors were seen less effective in acquiring skill and knowledge from Instructional skill training. Testing this hypothesis was important to find out the hindering factors in real world situation, which would be useful for future improvement of this training.

16 instructors from four technical schools, eight class observations and three TITI trainers were selected for interviewed for primary data collection. Five issues such as organizational issues, individual motivation, adult learning strategies, group learning issue and issues related to course content were found influencing factors for learning in IS training. These factors are analyzed in details for the discussion.

In the organizational level, termination of Swiss support from TITI was an important factor. Decreased financial resources trim down the incentives and staffs found unmotivated for quality training. Many experience trainers left the organization during this period.

It was found that 66% instructors have learning plus other secondary interests in the training. It is because there is no any scope of this training for further development of their career. There is no difference between trained and untrained colleague in terms of promotion, incentives, recognition and placement. These were the personal issues that instructors were not found much keen and motivated for the training.

TITI adult learning strategy is also found less problem solving and less learners centered rather formal and controlled by Trainers. Similarly heterogeneity of participant's educational level, faculty, experience, age differences, working areas were other hindering factors of group learning.

Learning goals of Instructional skills training which are more practical and useful in daily work were selected to test the relevancy of training content and transfer of learning. It was found more theoretical, some concepts were difficult to learn and many of them were unrealistic to use in their schools. So, the instructors pass over to learn. Teaching materials being in English, and the course being too general were some other constraints for effective learning. Lower rate of transfer was also other indication of less learning in IS training.

In contrary to the TITI's claim of outstanding performance of its training, it was found that, the quality of IS training to be decreasing each year. The pre-training knowledge of instructors was found to be very good because they learned by sharing with trained colleague, own experience, observation and self study. Adults should get chance to analyze and realize their problem themselves and should find out the solutions as well. IS training attempted to prove its competencies by using sophisticated methods and media, where as experiential learning was overlooked in real practice.

CHAPTER ONE: INTRODUCTION

This study has been conducted as an end-thesis research for the Masters degree on Management of Development (MOD), specialization, Training Rural Extension and Transformation (TREAT) at Van Hall Larenstein University of Professional Education in Wageningen, The Netherlands. This research will provide insight into the constrains of learning on "Instructional Skill Training (IS)" which is imparting by Training Institute for Technical Instruction (TITI), Sanothimi, Bhaktapur, Nepal to vocational instructors to improve their teaching quality.

Chapter one is about the background of study, research problem, justification of study, objectives, research questions and research methodology in details. Sampling instructors from different technical schools, TITI trainers and methods of class observation is described as the data collection techniques. Data analysis methods are also described in this topic. Chapter two gives overview of conceptual ideas for the study. Learning, adult learning, groups learning and factors support or hinder learning and transfer are the main conceptual base for the study. Chapter three is about research area, Vocational Education in Nepal, Council for Technical Education and Vocational Training (CTEVT), Training Institute for Technical Instruction (TITI) and the Instructional Skill Training (IS) are introduced in this chapter. These terminologies might be new and difficult for the readers so such terminologies are well defined. Chapter four is about the results and discussion based on findings from the field work, observation and secondary information. Chapter five is about conclusions and recommendations of the study.

1.1 Background

There are 18 government and more than 200 private technical schools in Nepal under Council for Technical Education and Vocational Training (CTEVT) system. These technical schools are responsible to produce middle and low level vocational man power in the country. Instructors who are teaching on those technical schools have the main responsibilities to trained unskilled people from different areas of the country and make them technicians. Competent manpower can only be produced, when these instructors are competent themselves and are able to transfer their knowledge to their students.

Training Institute for Technical Instruction (TITI) is the training center of CTEVT. This organization is responsible to build up the competencies of the vocational instructors by imparting Instructional skills (IS) training. TITI believed that Instructional Skill (IS) is a major training for vocational instructors to improve their teaching competencies.

Instructional skill (IS) is three months training course split in to three modules, each module is for one month. This training includes wide range of instructional concepts and skills such as instructional foundation, instructional planning, instructional organization and management, instructional method, instructional evaluation and microteaching. Wide varieties of methods such as lecture, modeling, illustrated talk, small and large group activities, oral questioning and brainstorming are used to accomplish the competencies.

During training some training techniques and skills are provided like learning philosophy, nature of training, good instruction, effective coaching and feedback techniques etc to teach in technical schools more lively and creative manner.

This training finally expects to achieve some learning goals after the training completion. Adult learning practices, lesson plan preparation, designing training session, use different Media and methods for effective teaching etc are some examples of such learning goals. Major focus of training is on that Instructors could perform their skill practically back to their working organization.

1.2 Research Problem

Vocational instructors are adult learners. Adults are autonomous and self directed learners. They are goal oriented, relevancy oriented, practical and acknowledge respect as well. Adults have barriers against participating in learning because of lack of time, money, confidence, interest, information about opportunities, scheduling problems, family care, learning environment etc.

Training Institute for Technical Instruction (TITI) as a training institute for vocational instructors has a great confidence on IS training. This training mainly focuses on group based learning to improve the performance of the instructors. Instructors are the main actors to increase the quality of vocational education by producing quality students to serve the community. But instructors are seen less effective in acquiring skill and knowledge in IS training. They are less able to empower themselves and impart their learning to the students. In this regards this training has less contribution to improve the quality of vocational instructors.

Though IS training is delivered by using adult learning strategies and emphasize to increase the competencies of instructors, the training evaluation report shows that there is not satisfactory learning for knowledge building. The result of multiple issues such as group learning, course contents, learning environment are the major hindering factors. The diversified group of participants from different experiences, faculties, age working regions, qualification showed the different learning capacity of instructors. Such differences in capacity are also the other hindering factors for effective learning. Less learning and lower transfer of training cause less achievement of training objective, less fulfillment of learning goals and leads to bad performance of the instructors in their schools.

1.3 Justification

Instructional Skill (IS) training is selected for this study because I am working with this training and training organization for 12 years. Training evaluation reports and my own experience working with vocational instructors realized the problem of learning in IS training.

TITI has a major duty to design, develop and implement the instructional programs to meet the needs of vocational instructors to improve their skills and quality. At the end of the course, participants are expected to perform and apply some basic skills and knowledge to their working organizations. Some of such expected competencies are, apply principles of adult learning, plan and practice training activities, develop performance guides, evaluate performance procedure and products, demonstrate a skill, develop skill to provide feedback, design training sessions, develop instructional media etc. Though these basic competencies are intended to be learned and transferred by Instructors, but it is not seen in real practices.

TITI has a great trust over the instructors' competencies after IS training but what the training institute can do if participants are not willing to participate actively in the learning process? So, it seems very crucial to diagnose and explore the problems and issues inside as mentioned above.

1.4 Research Objectives

- To identify the hindering factors of learning in IS training at TITI.
- To explore the benefits of IS training to the vocational instructors

1.5 Research Questions

1. What factors are hindering the instructors from learning in the instructional skill training at TITI?
2. How effective is instructional skill training to build up trainees competencies?

1.6 Research Methodology

The purpose of this study was to explore constrains of learning for vocational instructors and its relationship with the perception and expectation of the different actors involved in the IS training. In this respects following methodology was followed to find out the factors influencing learning.

1.6.1 Study Area

This research was carried out in technical schools and TITI which are the organizations under the domain of Council of Technical Education and Vocational training (CTEVT). This is because technical school's instructors and TITI trainers were the problem owner. Instructors were selected from the different geographical areas and educational background. The essence of comparison was to get the different environment of learning. The differences will be focused in the discussion.

1.6.2 Research Design

It is a case study. Deeper information was obtained from the study which later served as a representation for the study. Major actors and events identified were:

a. Vocational Instructors

Instructors from different technical schools were the main actors. This research is focused on their knowledge building from the training. They provided information on how they learned or not learned in the training. They were also requested to describe learning, how it took place as well as explain the way they formulate and express their information and knowledge from the IS training.

b. TITI's Trainers

They were the key players for instructors learning. Learning dependent on their coaching, guiding, practices they made and based on the environment they were been created during the training. They were requested to explain their information and experiences how learning took place during IS training. They further requested to explain the problem they faced with the different dimensions of IS training.

c. Class Observation

Class observation provided information on the application of some common skills and knowledge instructor acquired from the IS training and change it into practice. It also gave the information on comparative performance of trained and untrained Instructors. This gap helped to discuss how IS training was effective for learning. Class observation was also used to cross check the information provided by the instructors and trainers during interview. It was further helpful to encountered with respondent's ideas in the following interview after class observation.

1.6.3 Sampling Procedure

I purposively choose the technical schools by using own experience working in the organization for 12 years. On the other hand because of time limitation, schools to easier access were selected. Principals of technical schools assisted to provide information for the selection of IS trained instructors and arranged the class observation.

1.6.4 The research units

a) These consisted of 16 vocational instructors from four different schools as below:

Table 1.1 Sampled technical schools and instructors

Technical Schools	Instructors Teaching Background				Total
	Agriculture	Health	Engineering	Tourism	
Balaju Technical School Kathmandu	-	-	2	-	2
Jiri Technical School Jiri,Dolakha	2	2	1	-	5
Pokhara Tourism Training Centre, Pokhara	-	-	-	4	4
Lahan Technical School, Lahan	2	2	1	-	5
Total	4	4	4	4	16

b) Three TITI trainers were purposively selected basing on their availability and willingness to provide information.
c) Two class observations were done in each technical school. One observation for IS trained instructors and next one for untrained instructors was carried out in each school.

1.6.5 Data Collection Method

The data was collected from three identified units; however both collective and individual responses were taken into considered. In many cases the information provided by other stakeholders (Technical School's Principals, TITI staffs, other instructors) were also considered to analyze the learning.

a) Semi structured interviews guided by checklists with both open ended and closed questions to the instructors to capture their different view points on learning.
b) Observation made by researcher in reference to expression of the instructor's individual situation, confusion, confidence etc. This showed influence of different factors on the learning process.
c) Information obtained from the instructors and two class observations was made for the verification of obtained information in real work situation.
d) Semi conversational interview guided by checklist with open ended questions to the TITI trainers was made. It was useful to verified and noticed the contradicted information obtained from the schools. It was further helpful as probing on the constrains were point out by the instructors in previous interviews.

1.6.6 Data Analysis

It was both qualitative and quantitative approach, mostly descriptive analysis with references. Gathering and generating ideas from available training needs analysis record of TITI, training evaluation forms, baseline study reports were relevant for the study to obtain more information. Kolb's learning cycle and different theories related to constrain in learning were referred to relate the findings with literature. On the last TOTEM form which is commonly used by TITI for learning evaluation was used to analyze some transfer rate as an indicator of effective learning.

CHAPTER TWO: THE CONCEPT OF LEARNING: A REVIEW

This chapter presents literature review about chain learning, adult and experiential learning in IS training. The intended result of my research is to made recommendation for good learning environment in instructional skill (IS) training and point out the hindering factors for effective learning. The object is the learning phenomena of IS training, where vocational instructors are the main problem owners because their involvement in the training is not the real sense of participation but involvement. (Verschuren and Doorewaard, 2005).

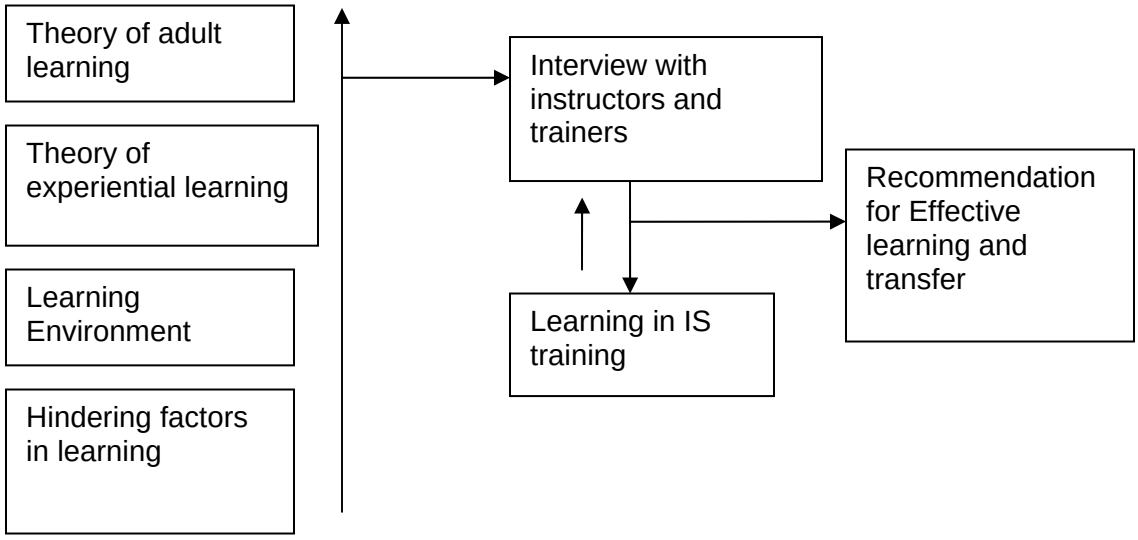

Fig: 2.1 Conceptual Framework of Learning in IS training

Analysis, interviews with the Instructors and the trainers are main perspective because they are the key stakeholders in the whole process. Besides this, class observation, also a possible perspective to notice the practice of “learning by observation” by the participants. Class observation also gives the insight in my study about learning environment which reinforced for modelling in learning. The nature of my research is diagnostic because adult learning and group learning constitute social, educational and psychological elements. So, the major theoretical framework selected for my research is theory of learning, group learning, experiential learning, learning environment of IS training and transfer of learning from training.

2.1 Training

Training is the formal procedures which a company utilizes to facilitate learning so that the resultant behavior contributes to the attainment of the company goals and objectives.

- Training is a technique to increase skill, knowledge and attitude.
- Technique to improve human performance.
- Technique to improve organization result.
- An expensive program in term of time and resources. (IS training manual,2005)

2.2 Chain Learning

The whole learning and transfer system in CTEVT is based on the principles of chain learning. The goal of IS training is to build the instructional capacity of vocational instructors. Instructors are in the center of chain learning incase of IS training. Three learning chain partners are exchanging their experiences and expertise to developed mutual benefits from the training chain (KIT, Faida and IIRR, 2006).

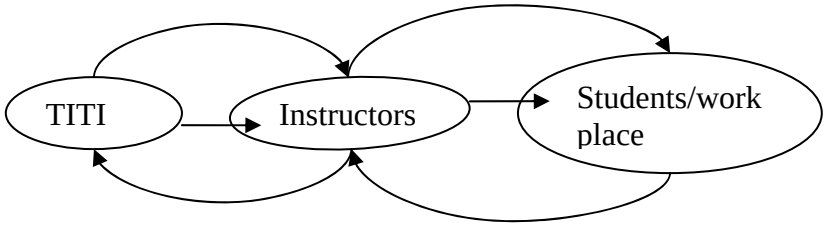

Fig: 2.2 Chain Learning

TITI is providing training supports for the vocational instructors. The trained Instructors are using such learning in to their workplaces i.e. technical schools. Whatever problems they faced in transfer in their real work place they again carried back it in TITI as an issues for another training. The problem now became a common problem among the group of diverse groups of instructors, they with the help of their trainers discussed for the solution of their problems. In this way, IS training is a platform for experiential learning among the instructors.

2.3 Learning

Learning is a relatively permanent change in behavior or potential behavior that results for experiences (Rollinson, 2005). Learning can not be observed directly but only inferred by behavior. IS training intends to bring such changes for a instructors teaching experiences.

Aptitude Change

It is a change what a person will be able to do if given the required training (Rollinson, 2005). It can be measure by observing the progress between achievement tests (pre knowledge) and transferring progress of instructors after IS training. Sometimes people learn but do not show in performance, it is termed as potential behavior. But for the behavior that provide evidence that has taken place to be exhibited.

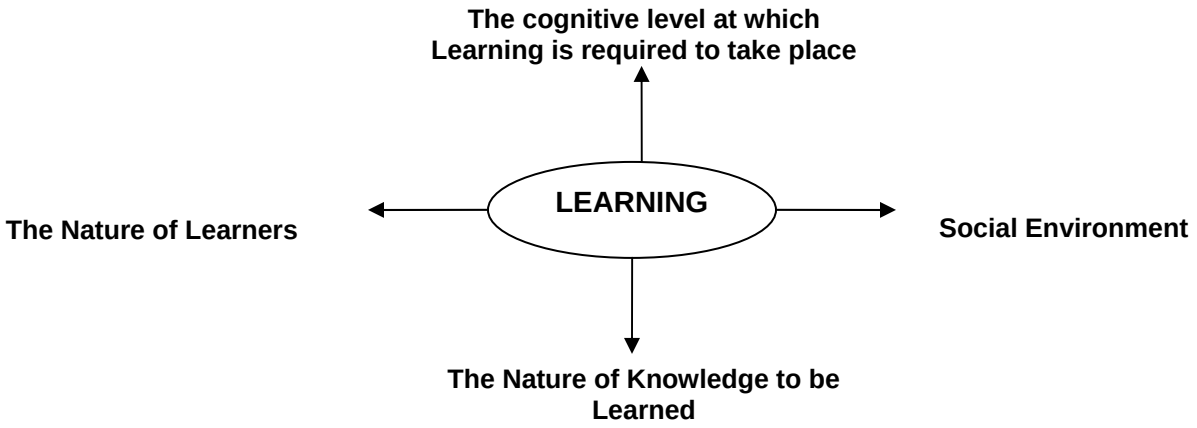

Fig 2.3 Factors Affecting Learning (Rollinson, 2005)

This figure explains about factors affecting learning. Nature of learners' nature of knowledge to be learned, environment, pre knowledge are the factors that affect the learning.

When we mention learning in the context of training, we are not talking about compulsory classroom situations, where teachers try to foster and test learning on a fixed curriculum. TITI training is different than the other training because here learning is often more voluntary, and is immediately connected with the working problems of different interests and groups of learners. Learning and transformation in TITI training is different then other extension system. In first step it passes through TITI trainers to technical schools instructors. In second step the Instructors pass the knowledge to the vocational students. These students in real sense will be the real field base workers in future.

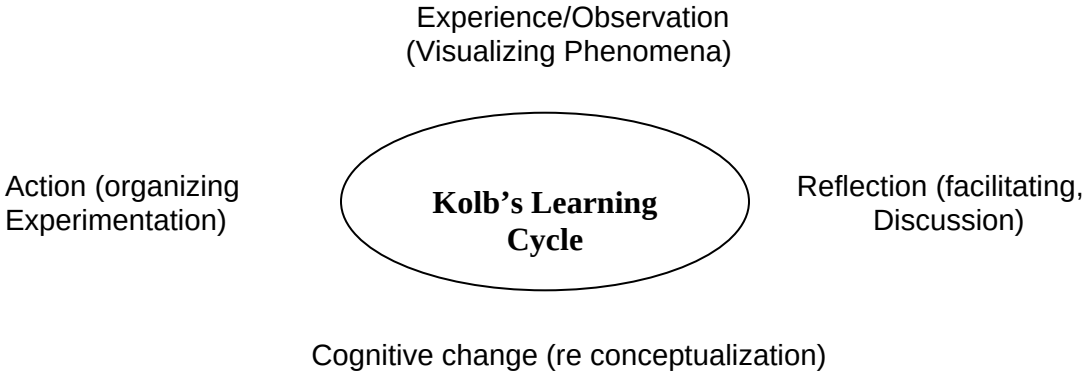

Fig: 2.4 Experiential Learning Cycle (Cited by Jarvis, 2003)

Instructor's learning in IS training is reflected in Kolb's (1984) model of 'experiential' learning. This model describes how people learn through their experience. This type of learning is very 'powerful' it appears that conclusions drawn by people themselves on the basis of their own experience attend to have a greater impact than insights formulated by others. It is also referred to as 'learning by doing 'or 'discovery learning'.

This model indicated that learning occurs from a continuous interaction and iteration between thinking and actions. Concrete actions results in certain experiences, which are reflected upon subsequently generate cognitive changes, from which new actions can emerge. This model implies that learning can be enhance by actively supporting the basic steps and translations that take place during learning, and by offering new learning opportunities.

In Instructional Skill training (IS) instructors come with different experiences from their intuitive knowledge. They tried to observe and reflect their intuitive knowledge with their new learning in IS training. Mixing with intuitive and newly learned knowledge participants formulate and conceptualized abstract concept. This stage is for knowledge building in IS training by instructors. In the last phase Instructors has to test and experiment this knowledge to the vocational schools in real practice.

2.4 Adult learning

IS training course is designed to provide additional skills to the vocational instructors. All participants are adults. Adults are voluntary learners if the environment is unfavorable they switch off learning (Pretty et al., 2002). Adult learning is based on active participation of learners because adults have a particular problem with learning it is that as we grow older our short term memory become less efficient and more easily disturb. We find it harder to translate what we see or hear long term memory. So, adult learning occurs when learners are wholly and actively involved in learning all the time. According to David Kolb there are four different kinds of abilities that learner's need for effective adult learning.

- Involve themselves fully, openly and without bias in new experiences. Concrete experience
- Reflect on and observe these experiences from many perspectives. Reflective observation
- Create concepts that integrate their observations into logically sound theories. Abstract conceptualization
- Use these theories to make decisions and solve problems. Active experimentation (Pretty et al., 2002)

It focuses on active learning environment for technical instructors by introducing some creative skills in different training module as an important part to make the session more lively and practical. If motivation is not supported they will switch off or stop learning. Adults learn best when the content of the training is close to their own task/job. Trainer's skills in using different techniques, methods can make them involve for effective learning. "Besides the Theoretical knowledge a good trainer needs some additional skills for higher involvement of participants which brings the groups/participants together and makes the training session live without damaging the training spirit (Cafferella, 2002)." Those interactive learning tips would help the trainer to make friendly, interactive and enable the instructors to handle the training session smoothly. Different methods and media can be used to make session interactive. The figure below explains about it.

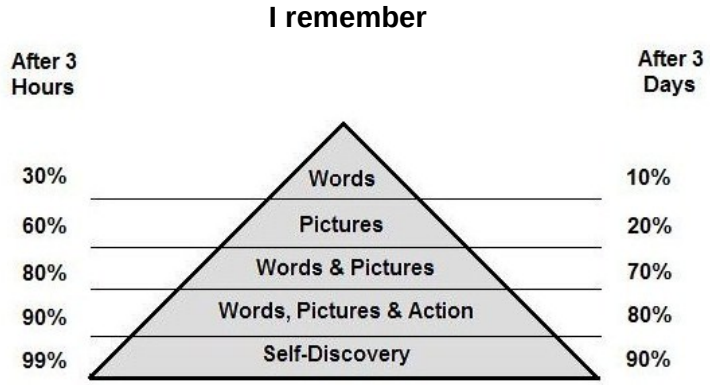

Fig 2.5. Effective Learning Methods in Adult Learning (Swiss Contact,2005)

Above figure indicates that using different media and methods with words are important for adult learning. But the powerful way of adult learning is self discovery. Adults should get chance to analyze and realize their problem themselves and should find out the solution as well. This figure also explains that 90% learning will achieved for long term, if adult learn from their own discovery.

2.5 IS Training and Group Learning

"Social learning is less of a goal in itself, is often more voluntary, and immediately connected with diverse human interest and change in professional practice. Experimental learning is widely used as a basis for organizing communication for innovation. This type of learning is very powerful" (Leeuwis, 1974).

Social learning is defined as "Process and pattern of communication and communicative interaction between network building, social learning and negotiation" (Leeuwis,2006). Leeuwis definition of social learning is somehow near to social networking for mutual benefits. In IS training instructors involved as a compulsory requirement or as a part of their instructional career. There are no any rules and effort of building network among the trained instructors for sharing each other after IS training intervention.

"The term social learning conceals great diversity. The relevant concepts of social learning are learning by individuals that take places in social setting and /or are socially conditioned; for others it means learning by social aggregates" (Wals,2007).

Learning from other people and alongside them, in our social relationship involves the relations between teachers and learners and between the learners themselves. Supportive social relations, whether in classroom, family or workplace are significant factors in the motivation to learn. Social relations may promote or inhibit effective learning. Cultures, society, socialization process, schooling are the primary function of learning .It is not as social adaptation but as social action and reaction (Jarvis, 2003). This definition seems closely interrelated to the context of learning in IS training. It is more appreciating than other definitions because specifically it mentions about the classroom and working places as learning centers.

There are three important aspects of social learning: collective process, knowledge sharing and communication and relationship building. First social learning describes the collective process where by a particular group share and accumulates new knowledge. Social learning is characterized by a continuous dialogue and deliberation among users to explore problem and their solutions. This implies that interaction among social learning participant's foster mutual understanding and trust. Working together towards shared goal is thus not only beneficial but also generates confidence for further collaboration (Bandura, 1973).

Though there are many arguments in social learning there are some points which bring all ideas together and these ideas are the guiding ideas to relate social learning inside IS training. These ideas help learning together to manage together that is to say, all learning by all stakeholders to manage issues in which they have a stake. This definition of Wals summarizes the ideas in brief "Social learning is learning taking place in groups, communities, networks and social systems and it is characterized by an optimal use of the problem solving capacity which is available within the groups or communities .It is basically experiential and characterized as learning by doing. It depends on four different learning dimension i.e. action, reflection, communication and negotiation (Wals, 2007)."

For my research I want to take the Wal's definition for consideration which is based on optimal use of problem solving capacity within the groups characterized by learning by doing. Balance between different social system and composition like large or small groups, homogenous or heterogeneous groups, internal and external challenges, high pressure or low pressure, young or old system and other particular contexts are related with my context of learning. The social learning in IS training is also depends on the above mention characteristics. Instructors have different groups composition, experiences , faculties, bigger participants size and smaller size, homogeneous and heterogeneous groups with men and women participants, willingness of learning and their own working environment favor for learning, class, assignment, groups and homework pressure, older and new composition of training courses, training delivery are the environments of social learning.

2.6 Learning Styles

This section briefly highlights major learning styles. There is no universal learning style developed for all learners. In this study, Instructors are adult learners they learn from different ways. Those learning styles are useful to take as the concepts for this research as well.

Abstract Versus Concrete

Some people learn easily with the help of abstract concepts, while others learn more effectively through concrete sensorial experiences (Jarvis, 2008).

Diverging Versus Converging

Some people tend to jump to conclusions quickly on the basis of certain experiences (i.e. they converge easily),whereas others tend to diverge into all sorts alternative explanations that require further testing and elaboration, and find it difficult to arrive at solid inferences. Such people run different risks (changing too quickly versus not changing at all) and may want or require different forms of support (Jarvis, 2008).

Holistic Versus Reductionist
Partly overlapping with the previous dimension, some learners are more inclined to learn about 'parts' whereas others have a greater affinity with looking at 'wholes'.

Individual Versus Groups
Some people have a clear preference for learning with others, ;while others are less inclined to involve other sin their learning process. Some farmers, for example, like to discuss problems and experiences in a study group or group meeting , while others tend to avoid group sessions and prefer to figure things out by themselves, or through bilateral contact only. I some instance this seems to be associated with having a cooperative versus a competitive outlook on the issue at hand (Jarvis,2008).

External Versus Internal Motivation
Depending in part on the issues at hand , people may experience an 'internal' drive to learn about something, or feel more or less 'forced' by others to engage in it. In other words, they may have or develop a real interest in a topic and be enthusiastic to learn more about it, or they may learn mainly because they fear negative consequences if they do not (Jarvis, 2003).

Factors that may Hinders Learning
We live in a dynamic society and ecosystem, which implies that there are many situations in which human learning is required. Despite the need for learning, however, groups and/or individuals are often not inclined to learn, or only start leaning when problems have become immense. In general terms, the question of why people learn or not can be understood with the help of considered as a practice as well. In other words, here too factors like frame of reference:

i. Social Environment
ii. Self efficacy

We will highlight and translate some issues that are specifically important in relation to learning. First, it is important to recognize that learning takes effort, energy and time. This means that learning can be considered a 'scarce resource'. In other words, people are selective in their investments in learning. A factor often mentioned in motivation to learn. This variable expresses that in order to take on a particular learning challenge; people must be motivated to do so. What interrelated factors and processes may influence people's motivation to learn?

Learning requires first of all that people experience a problem which means that in their frame of reference there must be a tension between their aspirations and their perception of reality. Depending on the priority of the aspirations involved, and the perceived magnitude of the tension between the desired state of affairs and the current state of affairs, people may define a problem as relatively important and serious, or not. In principal, people can be expected to select the more serious problems for learning, provided that they have some confidence in the possibilities of solving the problem. However, serious problems may also be ignored when they are somehow experienced as highly threatening (Leeuwis, 2006).

Distractive Tendency for Learning

Distractive tendency is one of the major hindering factors for learning. According to Jarvis the following are the distractive tendency, which are commonly found in all learning process. "Providing too much or 'right' data rather than supporting learners imperfect attempts at dealing with their data, increasing own discipline, detachment , feeling anxious from doing no more than that etc(Jarvis,2003) .

2.7 Training Success Criteria

This figure explains about the measurement of vocational training level and value in to four steps. More the result in organization level higher the training success rate which is hard to achieved.

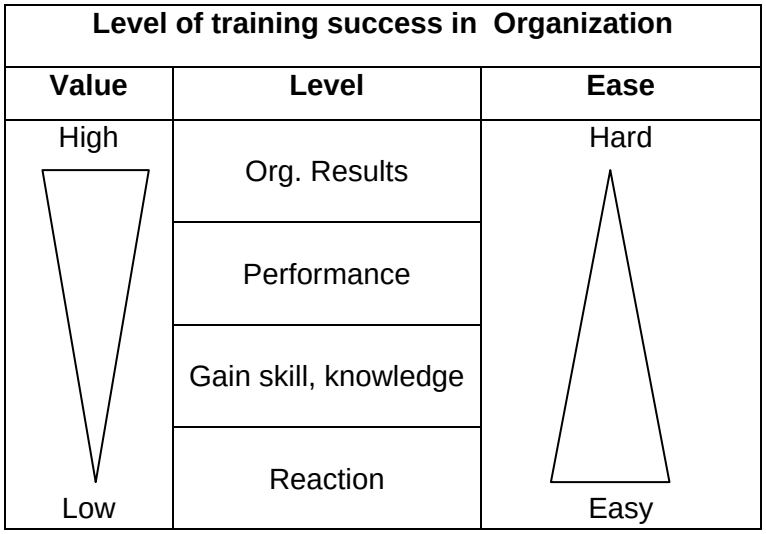

Fig 2.6. Level of Training Success (Kirkpatrick, Cited in IS-2, 2007)

Some tools have been developed to measure the success in Technical Education and Vocational Training (TEVT) training. It is very clear that a TEVT system has one external measure of success to train people with the skills demanded by business and industry and to assist graduates in obtaining gainful employment in the field in which they were trained (IS-2, 2007).

Four major criteria's to measure a training success:

1. Participant reaction
2. Gain in skill, knowledge and attitude (learning).
3. Performance back on the job.
4. Organizational results. (Kirkpatrick,Cited in IS-2, 2007)

An easy way to measure training success is to ask participants how they feel about the training. Simple questionnaire can be used to collect the data and on the basis of those data it can be said that 75 % participants rate their feeling about the training, training is success/not success. To measure successful gain of skills and knowledge, realistic targets for minimum level of knowledge and skills should be scored before training. Then it can be said that 9 trainee out of 10 got 80%knowldge of certain skill in the test. Performance data can be obtained from the actual work done on the job after training .Good performance is different than the good demonstration during training. Final result of training would be seen in performance and productivity of department. It is in fact difficult job to measure performance of training in organization level (TITI, 2007).

CHAPTER THREE: BACKGROUND OF VOCATIONAL TRAINING

This chapter explains about scopes of vocational training in Nepal. CTEVT, TITI and its stakeholders are explained as the key players. Different technical schools which were sampled for study are briefly introduced. IS training is highlighted as an important training of TITI. This chapter further explains some related terminologies which makes easier to understand the scope of this study.

3.1 Vocational Training in Nepal

Formally vocational education in Nepal was started in 1989 when the Council for Technical Education and Vocational Training (CTEVT) was started. In particular, CTEVT is concerned with basic and middle level technical education and vocational training. Until the date there are more than 250 technical schools and polytechnics are providing vocation education for 15000 people each year.

The globalization and emerging world labor market provides opportunity for CTEVT and vocational training activities. Developing access of communication technology and information makes easier to exchange ideas even in poor country like Nepal among the remote areas of the country. They are looking for the opportunity to empowered themselves to become salable as a skilled labor in international labor market. In the present days labor exchange between undeveloped and industrialized countries is increasing rapidly. There are 650,000 labors working in Golf countries only from Nepal and majority of them are unskilled. CTEVT training can provide opportunity for those labors to sell their skill in the good wages rather than their unskilled colleague. For example many people are getting driving, mechanics, and electricians, plumber training from CTEVT and increasing their scope in labor market as a skilled labor.

Nepal is earning larger amount of remittance by using this opportunity of selling labor forces in international market. This leads Nepal towards remittances economy rather than agriculture based. As a positive result of this transformation of economic source, livelihood of Nepalese people was not became economically vulnerable even in the situation of long civil war in the country.

3.2 Council for Technical Education and Vocational Education (CTEVT)

Council for Technical Education and Vocational Training (CTEVT), constituted in 1989 A.D. (2045 BS), is the policy formulation and coordination body for Technical Education and Vocational Training (TEVT) programs in Nepal. It is a national autonomous body committed to the development of human resources for the Nepal. In particular, CTEVT is concerned with basic and middle level technical education and vocational training. It has an assembly with 24 members and a governing board of nine members, which is known as Council. Minister of Education chairs the Assembly and the Council. The Council has a full time Vice-Chairman and a Member-Secretary and its headquarters is located at Sanothimi, Bhaktapur. The system has about 850 personnel to carry out its functions.

Goals

CTEVT has set the following goals:Ensure organizational stability and continuity, Develop policies for managing TEVT sub-sector, Coordinate TEVT stakeholders for enhancing efficiency, effectiveness and responsiveness. Provide services to TEVT sub-sector and maintain quality of its programs and services. Increase self-reliance through income generating activities. Prepare competent workforce for TEVT sub-sector. Promote training and basis of employment. Broaden the access and equity in TEVT activities. Encourage participation of business and industry in TEVT activities.

Guiding Objectives

The programs and activities of CTEVT are designed as mentioned below. CTEVT will: Improve the quality and cost efficiency of the TEVT sub-sector. Fulfill its social obligations towards broad access and poverty alleviation. Use "rate of employment" as its primary measure for training program success. Become a more customer focused and service-oriented organization. Shift its focus from implementing to guiding, facilitating and regulating. Contribute to the protection of the national job market.

To achieved such objectives CTEVT has different divisions such as

1. Planning and Policy Formulation Division 2. Curriculum Development Division

3. Technical Division 4. Examination Division 5. Accreditation division

6. Vocational Training and Community Development Division 7. Polytechnic Division

3.3.TITI (Training Institute for Technical Instruction)

TITI is located in Kathmandu valley, the capital of Nepal. TITI was established as a Nepali national institute in 1991. TITI is mandated for its programs and services by an act of the Council for Technical Education and Vocational Training (CTEVT). TITI is supported by the Swiss Government through Swiss contact, the Swiss Foundation for Technical Cooperation.

TITI provides training for trainers, technical instructors and managers, and occupational curriculum development specialists through regular programs and modules or through customized trainings. The high quality and unique instructional materials used in our modules have been adopted by numerous countries in Asia and world-wide. Effective and efficient training schemes require trained instructors, managers, curriculum developers. Training is an investment leading to a quality life. Thus, if somebody is interested in becoming a competent trainer manager, curriculum developer, instructor, teacher if they are already in the profession and wished to improve their skills, TITI is the place to improve their competency.

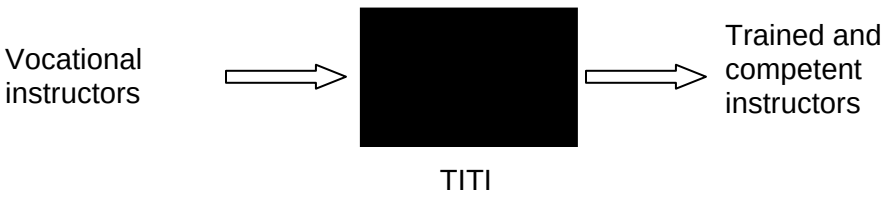

Fig. 3.1 Role of TITI

Clients of TITI

- Technical schools, training centers and polytechnics operating under CTEVT, universities, government departments, agencies and private technical and vocational training institutes
- NGOs and INGOs with a TEVT focus;

Vision: TITI is a *"Center of Excellence"* for TEVT trainers and managers training in developing countries in Asia.

Mission: Training is our business. The mission of TITI is to improve the quality of technical education and vocational training in Nepal.

TITI's Achievements so Far: Being in the business for the last ten years, TITI has trained over 4000 instructional and managerial people from various countries: Nepal, India, Bangladesh, Pakistan, Bhutan, Sri Lanka, Vietnam, Albania, Kosovo, Switzerland, Zimbabwe, Uganda, Mali and Burkina Faso. TITI has provided Technical Education and Vocational Training consultancies and other services to Technical Cooperation- Federal Republic of Germany(GTZ), Netherlands Development Organization (SNV), ILO/UNDP, UNICEF, SDC and other national and international organizations in Nepal and abroad.

3.4. CTEVT Technical Schools

Over a period of 15 years, eighteen training institutions have been established with the cooperation of various TEVT development partners. These institutions provide training in various areas such as agriculture, construction, health, mechanical, electrical, tourism and sanitation etc. One of the functions of CTEVT is to facilitate the private technical schools and provide services to maintain quality of programs. TEVT sub-sector is a huge area in which CTEVT alone cannot fulfill the national needs. Accordingly, it has granted provisional affiliation to over 160 private institutions to run TEVT programs. Total enrolment capacity of these institutes is about 12,000. Private institutes offer training programs mainly in agriculture, engineering, health, electronics, food technology etc. Level of training courses can be categorized into 3 broad classes; short-term training courses, Technical School Leaving Certificate (TSLC) and Diploma level programs.

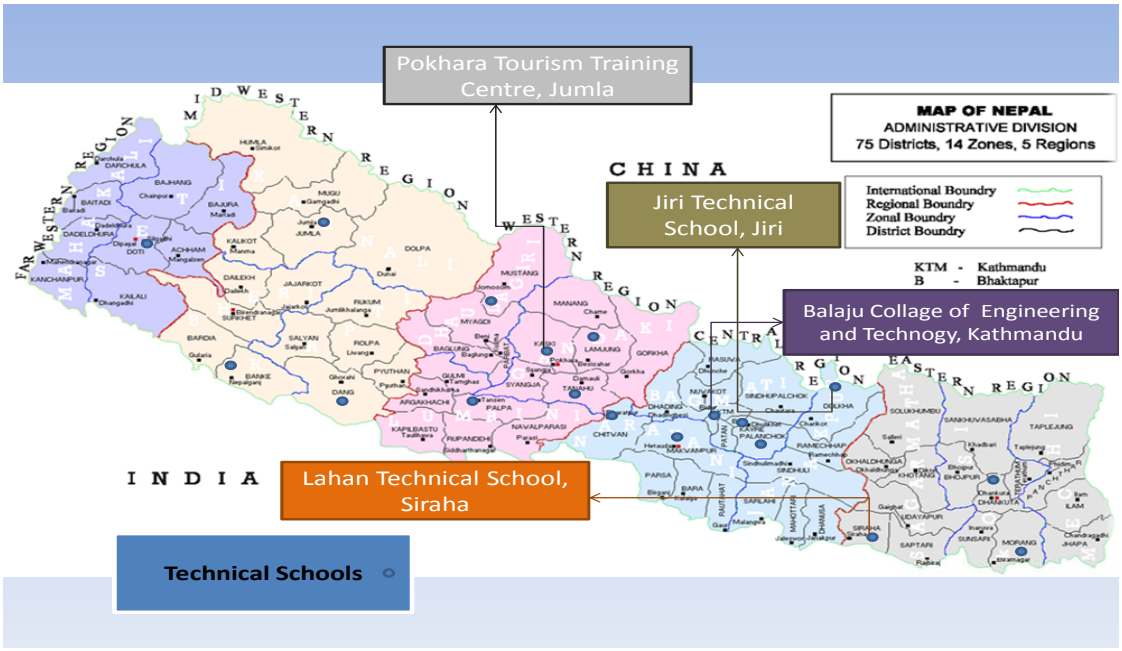

Fig 3.2 Map of Nepal with Sampled Technical Schools

1. **Balaju Technical Training Centre:** This technical school is situated in Kathmandu valley. TSLC level Mechanical, electrical and sanitary subjects are trained in this school. Besides this many short term training related to those subject are conducted in this school.

2. **Jiri Technical School:** This school is situated in hilly region of Nepal. Agriculture, Health and Engineering subjects are trained in this school. Besides these long courses many short term training are conduct in these centres.

3. **Lahan Technical School:** This Technical School is situated in Terai region of Nepal. Agriculture, Health and engineering are trained in this school. Besides these long courses many short term training are conduct in these centres.

4. **Pokhara Technical School:** This technical school is situated in central valley of Nepal . Tourism and Hotel management training are conduct in this School.

Trainers : Trainers are TITI employee, responsible to conduct the different training. They are the resource persons for CTEVT instructors.

Instructors : Instructors are the employee of both government and private technical schools. The quality of vocational education is highly depends on the performance of instructors in technical schools.

3.5. Instructional Skill (IS) Training

Instructional skill training is believed as the major training to build up the competencies of the instructors to improve their teaching quality. Instructional skill training includes wide range of instructional concepts and skills to build up instructor's competencies. Instructional foundation, instructional planning, instructional organization and management, instructional method, instructional evaluation and microteaching are the

major concepts of this training module. Wide varieties of methods such as lecture, modeling, illustrated talk, small and large group activities, oral questioning and brainstorming are used to accomplish competencies. There are some important goals which IS training aims to impart to the instructors. The documents of TITI named several goals as well as expected skills, knowledge, and attitude to be gained by the trainees from the IS training program. These learning goals are selected for the study because instructors are expected to apply them in their regular work.

The main learning goals of IS training are:

- Developed instructors skill to prepare performance guide (PG) after training
- Developed demonstration (modeling skill) after training .
- Developed feedback skill.
- Evaluate Test and their students
- Plan and design training session independently after the IS training by using 5D tools.
- Developed lesson plan for teaching in back their organization.
- Design and practice different media for instructions.
- Design and develop different methods for instruction.
- Recognize safety hazards

Skill Expected form IS Training
Following skills are the criteria for grading the performance of participants in IS training such as, training session and lesson plan designing, skill to develop performance guide, product rating instrument, 5 minutes course introduction, chalkboard layout, flipchart use, feedback, demonstration etc. In addition to these the following competencies are aimed as well:

- Use oral questioning.
- Give an illustration talk.
- Use brain storming.
- Manage small group activities.
- Conduct debriefing
- Give and receive feed back.
- Encourage learners involvement (TITI,2007).

Knowledge Expected form IS Training
IS-1 module focuses on performance in the workshop, lab and field, so knowledge is not tested but in IS-2 knowledge is tested on the basis of effective classroom instruction.

Attitude Expected form IS Training
Professionalism (based on the professional judgment of the trainers), Attendance and punctuality, Communication skills, Contribution to the overall training effort, Group participation, Leadership exhibited, Perceived effort, Preparation for class.

The Four Architecture of Instruction in IS training

- Receptive (lecture, reading)
- Directive(Programmed instruction, multimedia)
- Guided discovery (Simulation, case study)
- Exploratory (Internet, library)

The Condition for Learning in IS Training

As a training institute TITI assumed that the following conditions are needed for effective learning.

- Gaining attention
- Informing learners of the objective
- Stimulating recall of prior learning
- Presenting the stimulus
- Providing learning guidance
- Eliciting performance
- Providing feedback
- Assessing performance
- Enhancing retention and transfer (TITI,2005)

CHAPTER FOUR: RESULT AND DISCUSSION

This chapter explains about results and discussion of the study. The Instructional skill (IS) training program conducted by Training Institute for Technical Instruction (TITI) has not met the goals and objectives outlined by the institute. This is due to several constraints. Five issues are found which have hindering impact on vocational instructors. These issues were found on the basis of semi structured interviews with 16 Instructors, three TITI trainers and eight class observations was made during the study. Such issues were organizational issues, individual issues, adult learning strategies, group learning issues, and training content related issues. Besides these five issues some other important factors such as English language, trainers' behaviors, time and duration are also analyzed as constrains.

4.1 Organizational Issue

Five years trainee record showed 217 instructors were trained in Instructional skills training (IS) from Training Institute for Technical instruction (TITI). Their performance and grade are shown in table 4.1 and analyzed in fig 4.1. The below table shows the 5 years performance evaluation of IS trained participants in aggregate by categorizing A, B and C (Good – A, moderate – B, and poor – C).Only 38% instructors got 'grade A' in evaluation, 49% got B and 29 % got 'C' grade respectively. These are the contradicting outputs according to the performance claimed by TITI from IS training.

Table 4.1: Five years (2003 – 2007) performance of instructors in IS training

Year	No of participants	Grade		
		A	B	C
2007	10	2	4	4
2006	69	22	39	8
2005	81	29	39	13
2004	44	21	19	4
2003	13	8	5	-
Total	217	82 (38%)	106 (49%)	29 (13%)

Source, TITI

TITI claims that, IS training program is highly need based and potential to bring change to the trainees. "TITI can almost guarantee that any training program over a time will undergo some changes. The change could be depending in the duration of program" (TITI skill cards, 2005). But its own evaluation report could not prove the claim.

Fig 4.1 Explained the trend of poor performance in IS training. 62% participants got grade A in the year 2003 while only 20% participants got grade A in the year 2007. The grade B is considered as moderate grading. It is slightly increasing every year but in the year 2007 it also decreased sharply. Grade C is representing the poor performance of participants in the training which is significantly increasing in following year.

In case of practical and need based training like IS, only 38 % participants got grade "A." which is not the encouraging result to meet the program objectives. On the other hand the overall performance is continuously decreasing.

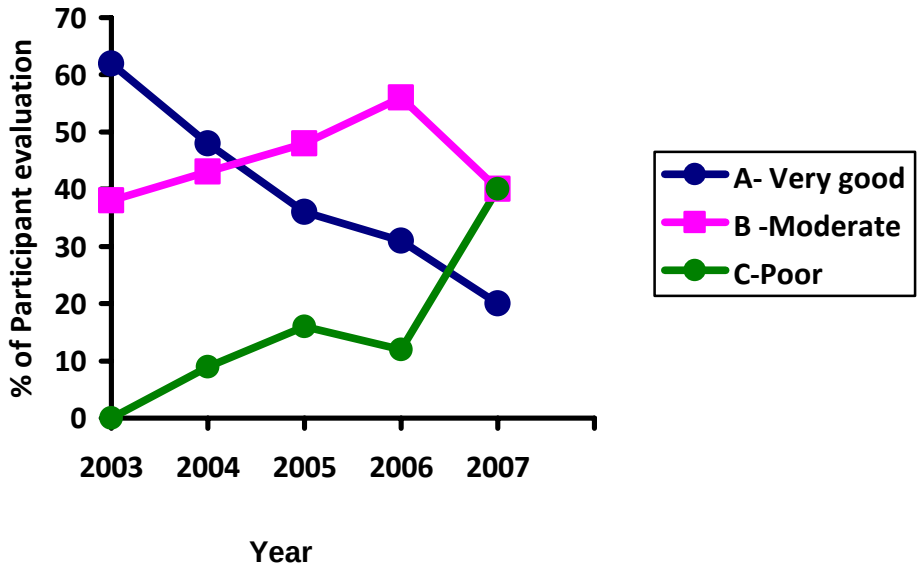

Fig: 4.1 Year wise performance of instructors in IS training

There was more incentives for the trainers and staffs in TITI, when Swiss support was continuous before 2004.When the support from Swiss contact was started to decreased many experience trainers leave the organization. New trainers and inexperienced trainers taken over the role and their domination started. No any new innovation has been carried out to improve the quality of training in the following years. The trainers are using the older training materials because of less resource. There is no any attempts has been made to improve the training materials. The motivation for work has been decreased from higher management to lower level staffs in the organization. Less monitoring and evaluation were carried out. These organizational issues lead to such poor results. On the other hand despite of such disappointing results, TITI said that its training quality is outstanding and meet the international standard (TITI brochure, 2007 vol. 9).

We precede our discussion to find out the other hindering factors of learning from the following topics.

4.2 The Individual Issue

Most of the instructors are not guided by learning motives. Only 33% instructors are joined the training with learning interest while 66% instructors were participated in the training with secondary interests such as, to meet the family and relatives, individual work, office work, purchasing things, to attend collage exams, allowances etc. Such different interests reveal that they may digress from the proper objective of learning in IS training. 27% instructors join the training because it is compulsory for all CTEVT instructors and 7% instructors said that school administration nominated them for training though they were not that much keen for the training. These instructors were participated in this training to fulfill quota of their school and to please their boss.

There were not any motivating factors for instructors to participate actively in the learning process. Because attending the training doesn't help for promotion, no any appropriate placement, no extra allowances, no any incentives differences between trained and untrained instructors.

Beside the above mentioned reasons there was no proper follow up of the training, no any review of the progress they made after training. The school management could not recognize the performance of trained and untrained staffs. These are the reasons that instructors do not entertain the proper learning in IS training. In other words instructors were involved in the training but they were not participating in the real sense.

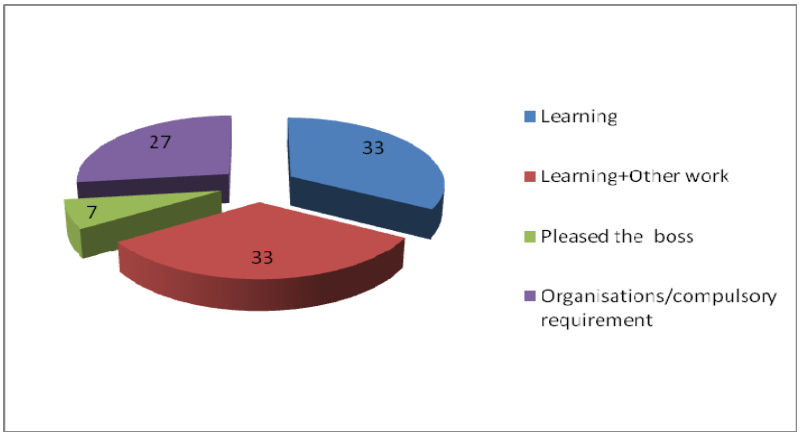

Fig 4.2: Different interests of instructors to participate in IS training

Adults are voluntary learners. They perform best when they decided to attend the training for a particular reason. The learners first should be clear on their objective. Learners' motivation stems from their objective. Unless trainees are not motivated they will not learn. A key element of motivation is strong self esteem in participation (Pretty et al, 2002). When they are disturbing with such factors like family tension, individual works etc. and are not guided by any motivation, there is disturb in learning. Similar to this finding, TITI report said that, 31% instructors perceived IS training as an instrument for achieving organizational goal rather than instructors capacity building" (TITI, follow up report 2005, p.2)

Two above examples indicate poor grading and lower motivation of Instructors in IS training. Now we are preceding our analysis on adult learning strategies.

4.3 Adult Learning Strategies

There are three major strategies for adult learning (TITI, 2007), which are followed by TITI in IS training. This study showed such strategies are not supportive for instructors. Adults learn best when the content of the training close to their own task/job. Trainer's skills in using different techniques, methods can make them involve for effective learning (Jarvis, 2006). The topic below further explains about the adult learning strategies.

4.3.1 Motivation Strategy

Under motivation strategy there are three criteria's such as interest/curiosity, immediate application and problem centered but instructors are not agreed with the problem centered aspects of IS training. They said that this training provided specific ideas of effective teaching but not the solution of their problem which they had to face in their daily work. IS training pretends as instruction is the major problem for instructors but instructors has to faced many other problems related to student's behavior, management of excursion program, department management etc. which are the part of their daily work. It means IS training more focused to the instruction where as it is not the solution of all problem. So, these factors cause less motivation to instructors from learning and seen less practice of adult learning.

4.3.2 Curriculum strategy

The curriculum strategy of adult learning should be built on a pre-assessment of the participant's expectation. But it is not possible to do pre-assessment to IS curriculum because it includes a large numbers of training from different faculties. IS curriculum is not relevant, it neglects the big diversity of instructors, qualification, faculties, and experiences, position etc. IS is developed as a general course for all instructors and put them in a common box of instructional skill training. So it is found that, this training is not pre assessment based to address the instructors' expectation.

4.3.3 Class Room Strategy

TITI trainings are teacher centered in practice. It is not student centered approach because there are frequent tests, formal grading system which creates trainers domination in training. These formal approaches are the negative aspects.

TITI Trainers claimed that 80-90% exercises are based on adult learning. According to them group learning, individual and project work, brain storming, demonstration, different media and methods used are the means of adult learning.

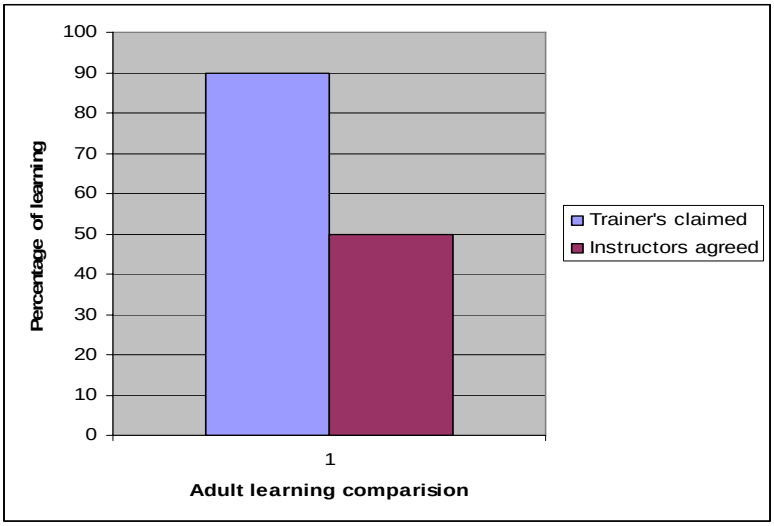

Fig 4.3 Adult Learning Practice in IS Training

53% instructors are agreed that they knew about adult learning before training.
Only 20% more instructors learnt adult learning strategy after training. In the same line TITI training follow up study report 2005 has written that TITI training is successful to meet 60% of the participant's expectations. "I really felt overloaded by assignment and

exercise during the training." one of the respondents expresses his view as an example of poor practice of adult learning. So, poorly practiced adult learning strategy without respect

4.4 Group Learning Issue

4.4.1 Age of the participants

33% participants said that they feel problem in group learning because of age variation among their colleague. Rest of the participants also realized that it has slightly affected their learning. According to trainers very old and young participants have an attitude to neglect the training. They are often violent regarding the rules and discipline of training, which influence the whole learning environment.

4.4.2 Different Educational Level

TITI involve Instructor in IS training from different educational levels. Trainers realize the different educational status and diversity of faculties was one of the problem to deal with the participants, because highly educated instructors grasp the content quickly and easily whereas it is vice versa with the less educated. 73% instructors were also agreed on that different educational levels pose problems in sharing common ideas among the colleagues. Instructors perceived the things differently as per their academic status. The less educated showed lower level of understanding and don't learn properly.

4.4.3 Educational Background

Participants asked for the explanation and examples as pre their faculty specific topics, like health, agriculture etc. for example: agriculture instructor did not pay his attention when there is example and exercise related to tourism.

Instructors from non technical background like English, Math, and Nepali have very less ideas about technical terminology and content. It is very difficult to motivate different participants with different background because of the difference in their objectives and disciplines.

Not only the participants but also the trainer with different background trained the participants, such as trainer from social science background trained all technical instructors.

4.4.4 Experience

Though participants agreed that positions have little influence in learning they agreed that different experience is rather a negative influence for learning. Their claim is that experience and positions are different things. A new officer might be less experience than his assistance. They appreciated the influence of learning by experience; the less experience instructors often found kept quiet and non interactive in class which hinders the group learning.

4.4.5 Geography

Instructor's placement in different geography (location of technical schools) also had some negative influence in learning. Though instructors from remote area have equal education, experience and position, they are less motivated in learning and sharing less than other in class. They complain that, they don't have access to such media and facilities in their remote schools. They often think that IS training is only a theory which is difficult to carry out in real practice.

4.5 Training Content Related Issues

IS training content itself is vague and complicated. In the interview 46% instructors were agreed that IS training course is good but impractical for them. They react that course should be design according to their real class situation rather than more principles components and sophisticated training environment in center. In other hand technology is changing very fast, so the TITI training should periodically revised its course content. Adults learn and perform best, if they know why the topic or session is important to them. Adults learn best if the context of the training is close to their own task or jobs.

4.5.1 Develop Performance Guide (PG)

Analysis showed that after training 67% instructors learnt to prepare and use of PG where as 47 % instructors already had knowledge about performance guide (PG) after training only 20% more instructors were able to developed PG (67% - 47% = 20%). On the other hand remaining 33% instructors were not found critical about their understanding about (PG) preparation. Those instructors were quite confusing and gave wrong interpretation about their understanding about PG. For example, they answered like "it helps little bit" " it gives me concept" "it is helpful for me etc". They could not explain how they have been developing PG to measure the success of their training session preparation and effective delivery. Some instructors even didn't understand what PG is? PG is useful tool to conduct the class and, evaluate the training. It showed the logical approach of skill delivery and step wise practices. Instructors are not learning this skill because it is not very essential for them to teach in the school. It is also noticed during class observation in technical schools during this research that no any instructors' were using performance guide for training delivery.
One Instructor said in interview that "It is not necessary skill for the experience instructors like us but needed for new colleague." But the hidden reasons are less self motivation and less recognition of their hard work which disappointed the instructors for learning.

4.5.2 Demonstration Skill

Instructors agreed that it is an important methodology followed by TITI in IS training, which helps them to apply demonstration skill on their job. Out of 15, only 2 (13%) instructors did not give specific answers about their learning on demonstration methods. Technical Education is based on more practical classes than theory. Instructors start demonstration right from the beginning of their first class. It is found that instructors were well known about demonstration before IS training from self learning and experiences. There are automatic demonstration in practical classes, field, lab and workshop. Instructors were seen using demonstration methods during class observation.

4.5.3 Feedback Skill

- 60% instructors were confident and satisfied with what they learn in IS training regarding feedback skill.

- One typical missing in learning from IS training was, instructors did not built up their competencies for receiving feed back and listening carefully to others.

30% respondents still have some problems to recognize the rules of feedback. In the discussion they focus more to the point to give feedback to others rather they forget the procedures of receiving feedback. These instructors hide behind defensive

reasoning, avoiding a confrontation with past experience and misunderstandings; by blocking their own progress (Pretty et al, 2002).For a instructors it is not important to receive feedback because of his supremacy amongst the students. Instructors don't feel to follow such systematic rules as they learned in IS training to give feedback to the students as well.

4.5.4 Test and Evaluate the Learners

All Instructors realized that IS training is giving satisfactory input to evaluate the learners' knowledge. Quality questions, skill based test items and develop some evaluation criteria to evaluate the learners. One important remark obtained from the discussion with instructors that they were well practiced in this subject before coming to training. Evaluating the trainee is a part of their daily work. They paid less attention in these objectives because evaluating learners is not new content for them.

4.5.5 Design Training Session

It is an important goal of IS training that instructors should be able to design training session after the completion of training. But the analysis showed only 27% instructors were confident and understood about designing training session. 60% instructors answered that they were not well skilled to design training session and 13% instructors showed their ignorance about training session designing by using 5D.

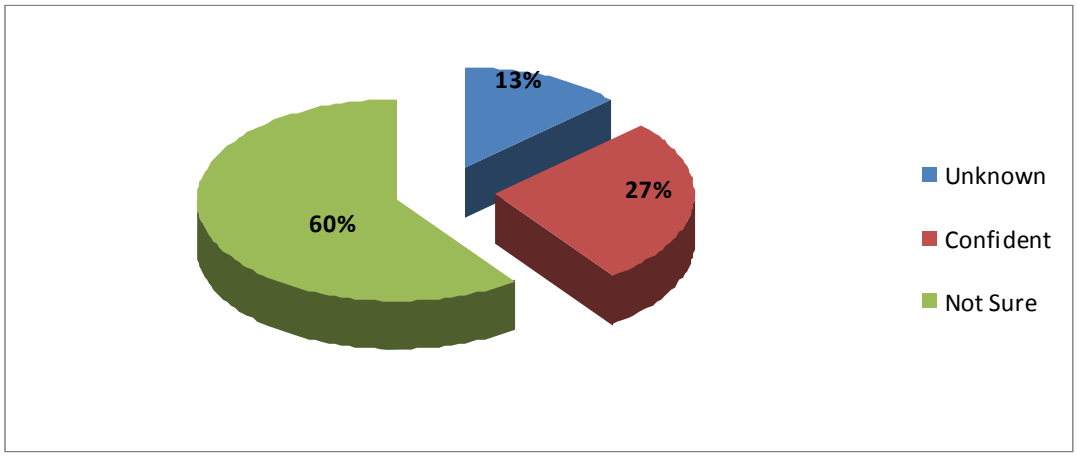

Fig 4.4 Confidence of Instructors for Designing Training Session

73% Instructors who had been experience in training field for more than 20 years could not showed their confidence to this professional skill and were missing one important skill of IS training. Instructors argued that training designing is not need to them in daily practices. It might be true but the technical schools are also conducting many short duration vocational training for different organizations, training designing skill is needed must for designing short term modular training. As a vocational instructor, training designing skill is attached with their career. Instructors found to be more habitual to teach the readymade courses and they did not feel the need to design training session regularly. This trend decrease their self initiation and innovativeness. It can be said that IS training is contributing to made a good instructor but not a good training professional. The training session designing is complex and comprehensive packages. It is the team work of different training expert like training designer, subject matter expert, instructors, planners etc. It is also the skill of combining different training components like training objectives, contents, techniques, learning objectives etc. (Caffarella, R. S. 2002, p. 167).

4.5.6 Developed a Lesson Plan

Lesson plan designing skill was found quite good in IS training. 93% instructors were confident to their skill for lesson plan designing after training. The comparison of two skills "designing lesson plan" and "designing complete training session" give clear idea that IS training is more focus towards increasing the skills related to their immediate need rather than developed instructors as a complete training professionals. This types of limitation in training hinders the capacity of trainers to be a dynamic training manpower in CTEVT system.

It is interesting to see the learning between immediately needed skills (lesson plan designing and other less important skill (training session designing).

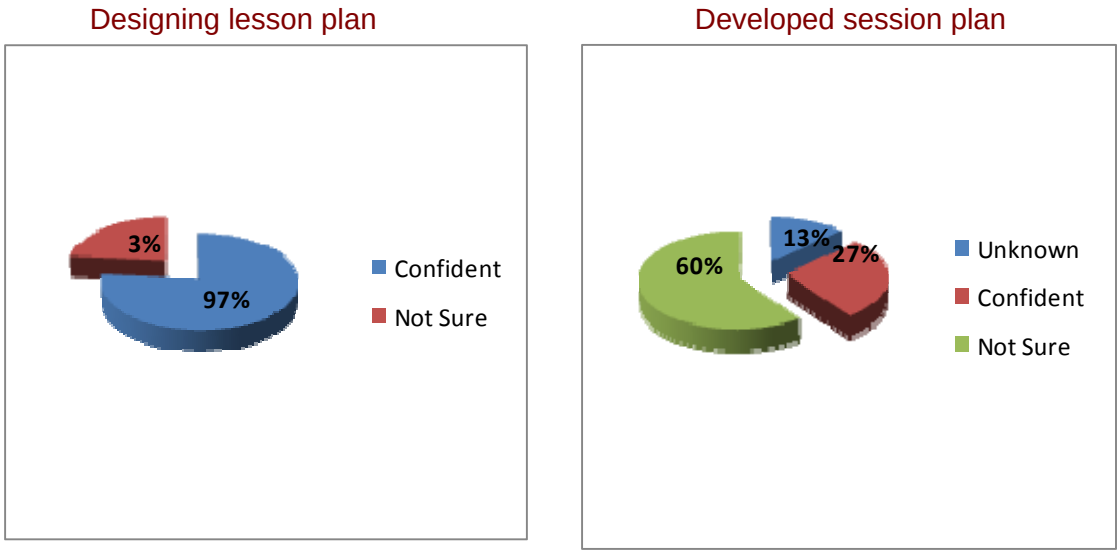

Fig 4.5 Comparative study between Training session Designing and Lesson Plan

Fig 4.4 explains 97 % of instructors found confident for lesson plan designing where as 73 % instructors were not confident on training session designing. It requires sufficient time for preparation for design training session and also needed creativity. For the successful training design, one must have a clear picture of the performance that is expected from the learners. Training session designing is not found useful for those who are teaching long courses such as (2.5 years technical SLC level or 3 years diploma level). Designing training is not necessary in long courses. These courses are often academic in nature and somehow are course book based. So, they paid less attention and learned less. But TITI trainers claimed that, training session designing skill is rather useful to conduct short term training for all instructors. If instructors are not giving more preference and saying it is not needed in their daily work, TITI has to revised and modified such content from the IS module.

4.5.7 Training Methods

After discussions about "designing training session and lesson plan I narrowed down my discussion on the learning of different methods used from IS training. Different methods used in adult learning. 93% instructors were found confident in their competencies about different methods used in their work before training. After training also no any change had been noticed from class observation for using different methods. The learning and application trend remains the same as before training. It is because instructors were using demonstration, group exercise, field practices etc for the training delivery. On the other hand all participants expressed that TITI is using varieties of training methods which they cannot practiced into schools.

4.5.8 Media Used

Same as the methods, 93 % of instructors were found confident in their competencies about media use in their work before training. After training the learning percentage also found same. But one remarkable finding is that IS training has very less or no contribution to make instructors competent for using different media in IS training.

A successful training depends upon how well the trainer and trainee communicate. Well used media can help to increase quick and easy communication and understanding. Many visual media can be used for effective training delivery. The commonly used media are chalkboard, flipcharts, meta cards, diagrams, etc.

4.5.9 Recognize Safety Hazards

The study shows that all the instructors were not equally aware about safety hazards before taking IS training. 67% instructors were well known about the safety hazards before taking training. After the training the rate of increment is 80% which is only 13% more than before. Though they have to worked with tools, equipments, electricity, fire etc. 37% instructors were not aware of safety hazards. After training most of them were agreed that they were giving more preference to take precaution on such risks.

Though the instructors know the safety measures, they further said that it is difficult for them to apply in their work because of less resources and facilities available in the schools. Some instructors also said that it is not equally important for all subject.

Figures shows the comparison among ten learning objectives before and after training

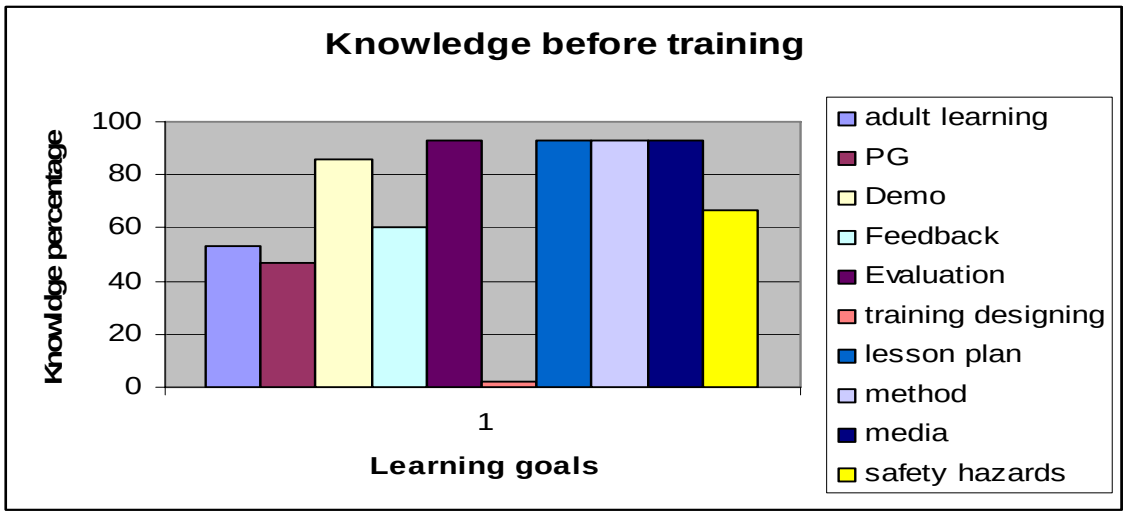

Fig 4.6 Learning Status before Training

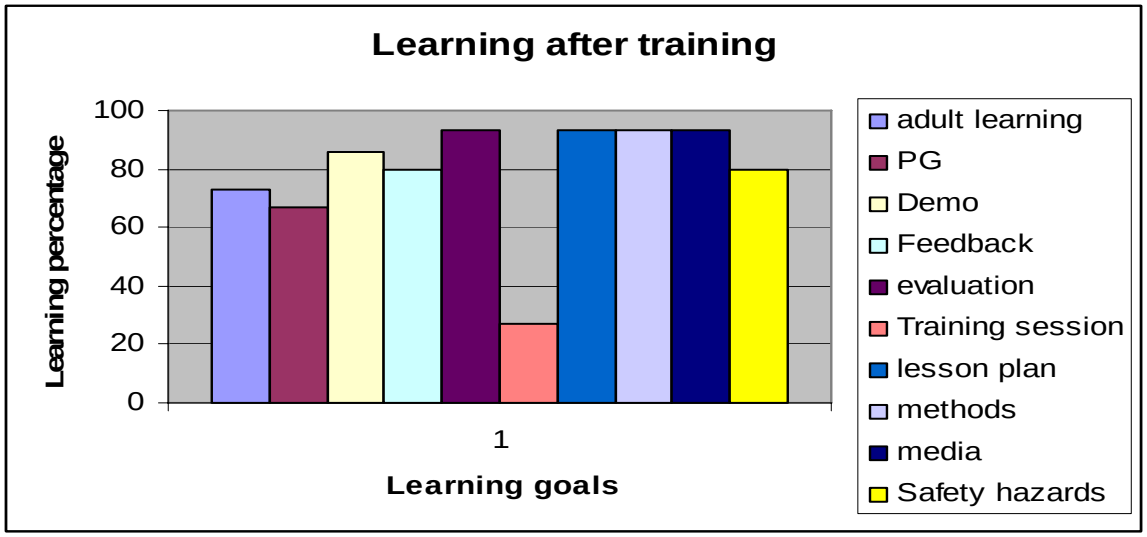

Fig 4.7 Learning Status afterTraining

As we discussed onwards these figures show the knowledge of Instructors before training and increase in learning after training. IS training has very less or no effects for such objectives which instructors are using in their daily practices. Such as evaluation of trainee, lesson plan designing, using different methods and media, demonstration etc. IS training contributed to increased instructors competencies on adult learning practices, PG preparation, feedback skill, training session designing and safety hazards in some extents. Learning on these subjects is observed because instructors were not aware and not using these objectives in their daily work. From this analysis it can be concluded that instructors are learning when the subject is new and useful for them in their daily work. So, prior knowledge about the training is also a de motivating factors for learning. This figure below is based on my findings that instructors are getting pre -training knowledge from three sources i.e. self experiences, self study and consulting with their colleague.

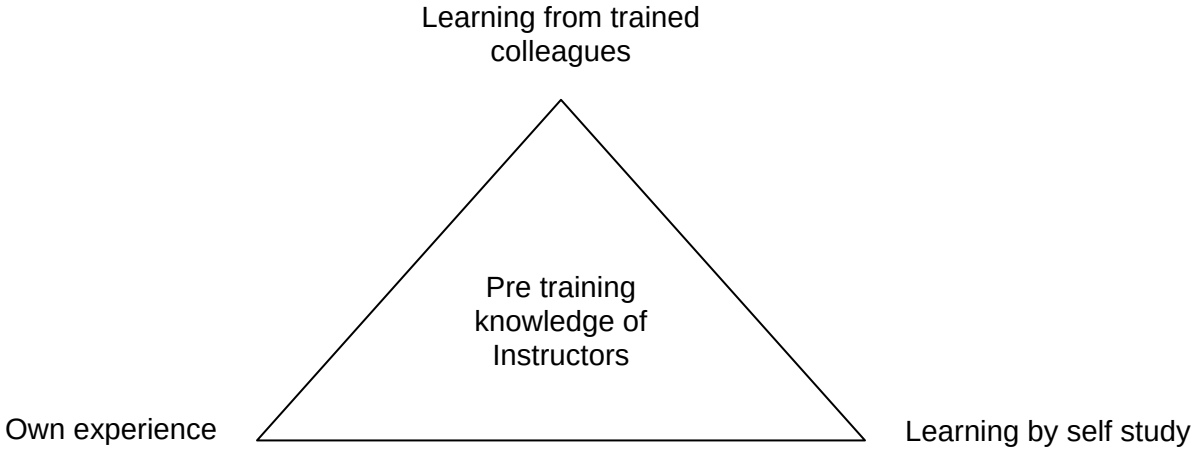

Fig: 4.8. Experiential Learning of Instructors

In conclusion teaching is not difficult for vocational instructors in school but IS training presented it in complicated way. Instructors are self competent in most of the learning objectives by experiential learning. So, experiential learning is more powerful than the

formal training. Pre knowledge about training and same content and course are also some hindering factors which affect during training.

4.6 Other Factors Hinders Learning

Beside five major hindering factors of learning, the field study revealed that there are some other small but important hindering factors behind the poor learning. The other factors are discussed below.

- **English Language:** The skill cards, concepts cards, guideline, books all learning materials were developed in English. The English proficiency of all instructors was not found equally good. Some participants preferred Nepali translation of all study materials which was often difficult in the context of TITI. Many instructors have only high school level educational status. So, trainees often do not grasp the essence of the content.

- **Too general Content for all:** As I discussed in above topics, Technical schools having different faculties such as agriculture, engineering, health, hotel management. The trainers are from different technical and non technical background. The general course content of IS training module might not fit in all. Trainers are in favor of specific contents and examples according to their professional background.

- **Trainers Behavior:** Some instructors said that sometimes trainers are also problems for learning. Aggressiveness of trainer, new trainers and some other complexity with trainers has influence in learning. Very less instructors (13%) complains that trainers behavior is also a problem to them for learning. Less enthusiasm seen in the trainers, lack of clear pronunciation, less respect to the learners, sometimes single trainer takes whole day class and some of them show their anger during the training session it is the problem for adult learners.

- **Other:** Other minor problems are duration of training (20%), un appropriate time of training organization i.e. pick teaching period in school, exam time in school, teacher crises time in school (12%), strikes, vehicle problem, difficult for timely arrive on training have (25%) influence.

  IS training indeed involves the group of highly heterogeneous professionals in terms of age, professional background, official status, position, educational level, experience and their working areas. One of the major methodology followed in IS training is group activities or, group learning. Social learning theory focuses on the learning that occurs within a social context. It considers that people learn from one another, including such concepts as observational learning, imitation, and modeling. People can learn by observing the behavior of others and the outcomes of those behaviors (Ormrod, 1999).

  From the above discussion it is concluded that, IS training attempts to proved its outstanding performance referring to different media, methods, environment and trainers, but self discovery learning is in shadow. TITI follows teacher centered strategy in IS training, where discovery learning is not adopted.

4.7 Transfer Shows the Learning

Transfer of learning itself is a large area of study, but I narrow downed the transfer and analyzed some learning goals to find out the learning in IS training. It is logical to said that if there is more transfer the learning is also effective. TITI has been developed a simple tools TOTEM to measure the transfer of training in real work place. I followed the same tool to measure the transfer rate.

Training effectiveness is both learning and transfer of learning. This part of this research determine the extent of effectiveness of the instructional skills training in terms of retention and application the knowledge and skill from the training to the job in technical schools.

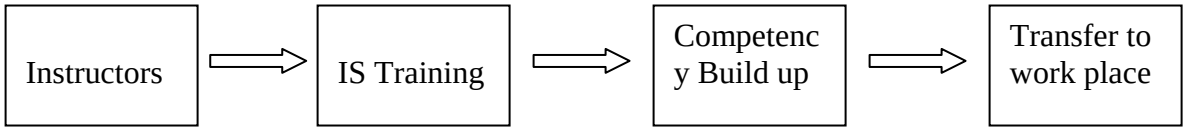

Fig 4. 9. IS Training Transfer Chain

Transfer effectiveness of the individual performance objectives was assessed through

* TOTEM (Transfer of Training Evaluation Model)

Transfer of training evaluation model (TOTEM, 1995) was initially develop for the waste isolation decision (WID) of the US department of energy. It was then pilot tested and validated. The model which was available to organizations through their technology transfer program (Subedi, 2002, cited from TOTEM 1995). This model is selected for this study as a measuring tools because of it's simplicity and comprehensiveness in measuring training effectiveness. TOTEM is very commonly practiced in many training organizations to assessed training transfer performance. It also commonly used in TITI.

the use of interview and self reporting questionnaire. TOTEM (Transfer of Training Evaluation Model) form was used to measure the transfer rate (See Appendix 2).
Ten learning goals which were tested to judge the learning are performance objectives (X) selected to analysis transfer of learning as well.

4.7.1 Measurement of Transfer of learning

Transfer of learning can be measured by using some techniques. Caffarella in her book “Planning Programs for Adult Learners” wrote that transfer of learning can be measured by some qualitative techniques such as individual techniques, group techniques and individual or group techniques. These techniques are more qualitative and based on description given by the trainer. But TITI as a professional training institute is using TOTEM form to evaluate the training. For my study I am also using TOTEM as a tool to measure transfer of learning in IS training. As we wrote below TOTEM is more concrete, accurate and quantitative tool.

4.7.2 Methods to Collect Responses

We can see columns 2, 3, 5 and 6 in TOTEM form. This form was filled based on the interviews with the instructors according to the guidelines given on the top of the TOTEM form. The meanings of each response are as follows:

Xa (Yes) -Pre-training knowledge/ skill of the instructor was ok
Xa (No) Did not possess that skill/knowledge before
Xb (Yes)- Instructors can now perform the sill/ Knowledge in their job
Xb (No) -Instructors didn't learn & can't transfer in their job
Xc (0)- Instructors couldn't apply the skill/knowledge because of same version
Xc (1,2) -Partially transferred the skill & knowledge in their job
Xd- Reasoning for Xc, '0' why didn't they apply the skill & knowledge

Table 4.2: Objective Wise Responses Collection on TOTEM form

Objectives (X)	**Did you know about it before taking training (Xa)**	**%**	**Can you apply now ? (Xb)**	**%**	**Put the numbers 0-5 How often you applying learnt knowledge skill? (Xc)**	**%**	**Reasons if you have never(0) applies (xd)**
1	8(yes)	50	11 (Yes)	68	10 (1)	62	
2	7 (yes)	43	10 (yes)	62	8 (1)	50	
3	13 (yes)	81	13 (yes)	81	12 (1)	75	
4	9(yes)	56	12 (yes)	75	11 (1)	68	
5	14 (yes)	87	14 (yes)	87	13(1)	81	
6	0	0	4 (Yes)	25	4	25	Not my jobs
7	14 (yes)	87	14 (yes)	87	12(1)	75	
8	14 (yes)	87	14 (yes)	87	13 (1)	81	
9	11 (yes)	68	13 (yes)	81	13(1)	81	
10	10 (yes)	62	12 (yes)	75	10 (1)	62	Not aware
	Total % of $\frac{Xa}{10} = 62$		Total % of $\frac{Xb}{10} = 73$		Total % of $\frac{Xc}{10} = 66$		

4.7.3 Interpretation of Transfer of Learning

From the analysis, it can be interpreted that the average rate of knowledge (Xa) to the instructor before training was 62% in each objectives. This range of average learning is also similar to the learning rate discussed in qualitative analysis. Instructors' were well known about the content before joining the training. It is because they were already known before join in the training from other colleagues, their own experiences and self study. Other findings of this research is instructors are improving their competencies from IS training only by 11%, then their existing skill and knowledge. Jarvis (2003) in his book explains learning can be enhancing offering new learning opportunities.

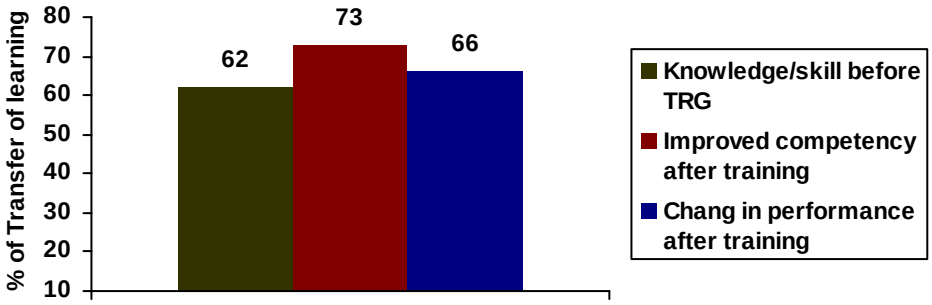

Fig:4.10 Transferred Rate of Learning

Instructors came in training with different experiences from their intuitive knowledge. The training is unable to address their new need and expectation rather repeated the things which instructors were doing in daily work. They tried to observe and reflect their intuitive knowledge with their new learning. Mixing with intuitive and newly learned knowledge to formulate and conceptualized abstract concept.

This process is important for knowledge building in IS training but IS training failed in this point. There is very less (11%) new learning for them, because of repeated concepts. Pointing out this slight progress of IS trainees, one of the TITI trainer Basanti Roshan Shrestha" remarked that, "IS training is applicable specially for the new instructors then the experienced one."

Though instructors are increasing their knowledge about 11 % there was only 4% knowledge, skills is transferred in real world situation after back from training. Though Instructors learned something new they have not been transfer such knowledge in to practice. As we mentioned in theoretical concepts part, "final result of training could be seen in performance and productivity of department" but one question is still there that, how many % contribution can a IS trained instructors made for the better organizational result? If there is 11 % learning and 4 % transfer of learning. It would be really negligible. It is the reason that thousands of technical instructors have been taking IS training from TITI. TITI and all technical schools have a team of well trained instructors. Every year TITI and technical schools published the data of their total graduates in number but no any organizations still have claimed that we changed in our quality by adapting those techniques, from this level to that level in vocational education.

CHAPTER FIVE: CONCLUSION AND RECOMMENDATION

In this chapter, the main ideas summarized from the previous chapter regarding problem for learning in IS training. The findings point out some issues which have impacts on the learning resulted lower performance of the instructors in IS training program.

5.1 Conclusion

Council for Technical Education and Vocational Training (CTEVT) is concerned with basic and middle level technical education and vocational training in Nepal. Until the date there are more than 250 technical schools and polytechnics are providing vocation education for 15000 people each year. TITI is the one and only training organization of CTEVT. TITI provides training for trainers, technical instructors and managers through regular programs and modules. IS training is one of them which is believed as the major training to build up the competencies of the instructors to improve their teaching quality. Instructional skill training includes wide range of instructional concepts and skills to build up instructor's competencies. These vocational instructors are teaching (providing training) in the different technical schools in the country.

Training Institute for Technical Instruction (TITI) as a training institute for vocational instructors has a great confident on IS training. This training mainly focuses on group based learning to improve the performance of the instructors. Instructors are the main actors to increase the quality of vocational education by producing quality students to serve the community. But instructors are seen less effective in acquiring skill and knowledge in IS training. They are less able to empowered themselves and impart their learning to the students. In this regards this training has less contribution to improve the quality of vocational instructors.

TITI claimed that IS training is need based and outstanding in quality to enhance skill, knowledge and attitude of instructors but from the study it was found that instructors were not guided by learning motives in the IS training. Five issues were found behind the hindering interests of instructors which resulted less learning. These issued found from the study which are summarized below

Organizational issue was pointed out as a hindering factor for learning. From 2004 when Swiss supports for TITI had started to decrease, experienced trainers left the organization. New trainers took over the training roles, which affected the training quality. Lack of training materials lead to more classroom and theory based training, which was not productive for effective learning for the adults. Less incentives resulted less motivation to the higher managers to Junior staffs in the organization for proper management and monitoring of training.

As an individual issue this study point out the personal motivation of instructors in learning. Most of the instructors were not guided by learning motives only 33% of the instructors were joined the training with learning interest. While 66% instructors were participated in the training with secondary interests such as, to meet the family and relatives, individual work, office work, purchasing things, to attend collage exams and for allowances. Some instructors were there, to fulfill the quota of their school, to make their boss happy etc. attending the training doesn't help for promotion, no extra allowances, no any incentive differences between trained and untrained colleagues and no recognition of trained instructors for placement in good position.

Weak adult learning strategies and teacher centered strategies resulted on less practice of self discovery learning of the participants. Less supporting exercises for adults were also pointed out as constrain for learning in IS training. Heterogeneous groups of participants such as educational level, educational faculties, level of experience, job placement were found as hindering factors of group learning. TITI paid too much attention to the performance and less attention to the teaching and learning.

The limited competencies of the trainers have contributed to the difficulties of learning by trainees. For instructors teaching is not difficult job in their schools but IS training presented its content and materials into complicated way. Trainees often do not grasp the essence of the content. The training was more theoretical, many skills and concepts were difficult to learn and apply in their schools. So, the instructors pass over to learn. Lack of new contents, teaching materials in English, too general course content for all faculties, training duration was found as the other constraints for effective learning.

IS training attempted to proved its competencies through different media, methods and environment used in the training but in teacher's domination, the self discovery learning part was found in shadow.

5.2 Recommendations

Based on the findings the following recommendations are offered for IS training effectiveness, and for future researchers in this area of interest:

1. A thorough revision of the contents and objectives is needed. It can be done by involving instructors of all faculty and TITI training experts. Courses better to be offered to homogeneous groups for greater extents of training success.

2. IS training should use the easy and accessible teaching materials which are available in the technical schools. Some teaching materials are needed to be developed in Nepali language.

3. Incentives such as promotion, right placement, recognition should be given to the trained instructors.

4. Monitoring and action planning for the application of knowledge and skills is needed.

5. Newly appointed Instructors should be invited to the training in their early career.

6. Coordination and interaction between TITI managers, trainers, CTEVT training experts, schools principals should be needed to improve the IS training.

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APPENDICES

Appendix 1 : Interview Checklist for Instructors & Trainers

Name of the instructors:
Technical school:
Faculty:
Age:
Work experience:
Position:
Qualification:
Year of training attending: a IS1 ---------- b. IS2 ---------- c. IS3 ----------

A. Process and methods

1. How you were selected for training?

a. You were interested b. it is compulsory for all instructors c. principal forces you

2. Why you were interested to attend IS training?

a. Only for learning b. Learning and side work (office, family, other business) c. Rest from schools

3. In what level IS is the need base training for instructors?

b. High b. Medium c. Low

4. In what sense IS training is different then other trainings for Instructors ?

B. Learning

1. To what extent IS training gave you knowledge about adult learning?

   a. Sufficient b. Moderate c. Little d. Not at all

2. How does IS training helps to developed performance guide?

3. How does demonstration was effective in learning for IS training?

4. To what extent do you develop the feedback skill?

5. To what extent do you develop the skill of appropriate test and evaluation of learners?

6. To what extent IS training helps you to increased the following competencies?

Content	Sufficient	Moderate	Little	Not at all
Adult learning				
PG preparation				
Evaluating participants				
Demonstration skills				
Feedback skill				
Designing training session				
Designing lesson plan				
Using methods				
Using media				
To follow safety Hazards				

8. As an instructor how do you evaluate your performance before and after IS training?

Content	Before training				After Training			
	Excellent	Good	Normal	Poor	Excellent	Good	Normal	Poor
Practiced adult learning								
Understand the IS content								
Working with diversified groups								
Transfer the learning								

C. Learning Environment

1. In what extent group learning is practiced in IS training ?
2. How you improve learning from friends ?
   a. Improve me 100 % b. I improve me 50 % c. I improve me 25 % d. No improvement

3. How do the following factors influence your group learning in IS training?

a. Diversity of groups

Factors	Very much	moderate	less	No influence	How?
Age of colleagues					
Educational status					
Senior/Junior complex					
Experiences					
Working schools (geography)					

b. Course module and methods

Factors	Very much	moderate	less	No influence	How?
Complex city with course model					
Methods used					
TITI environment					

c, Other factors

Factors	Very much	Moderate	Less	No influence	How?
Complexity with trainers					
Duration of Training					
Difficulties in course content					
Timing of school					
Other factors (timely arrival, strike etc.)					

3. What are the constrains for learning in IS training?

D. Transformation

1. How much you are applying the principles of adult learning in to practice?

   a. Sufficient b. Moderate c. Little d. Not at all

2. To what extent you are applying this learning into practice?

Content	Sufficient	Moderate	Little	Not at all
Adult learning strategy				
Training content Learned				
Dealing diversified groups				

4. What are the problem faced by instructors in transformation learning ?
5. Where you faced more problem in IS training Learning and Transformation? how ?
6. What is your suggestion to make IS training more effective ?

Checklists for Trainer

Name of the Trainer:

Institute:

Department:

Age:

Work experience:

Position:

Qualification:

1. How you can acknowledge the IS training as a important training for instructors?
2. To what extent adult learning principles and practices are followed in IS training?
3. What indicate the effective learning in IS training by trainees?
4. Where you feel difficulties to deal with trainees?
5. Why it is difficulty?
6. Where you feel problem in IS training course and practice?
7. To what extent diversity of participants hinders learning?
8. What are your new idea to make IS training more effective?
9. To what extent it is applicable in school context?
10. What are the three strengths and three weaknesses of of IS training ?
11. What is your ideas to improve IS training more ?

Appendix-2 TOTEM: Table

QUESTIONNAIRE FOR TRANSFER OF TRAINING EVALUATION MODEL (TOTEM)

- If the answer for a given objective in column 3 is YES, Please do not fill in the column 4, 5, & 6 for such objective(s).
- If answer of the objective(s) in column 4 is NO, please do not fill in the column 5 & 6 for such objective(s).

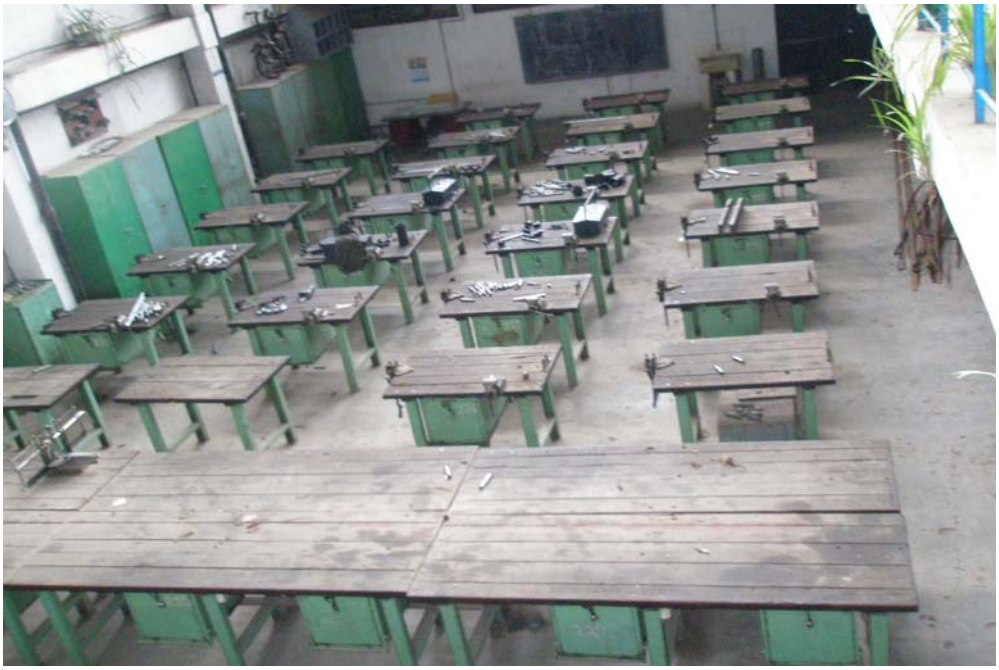
…… TECHNICAL SCHOOL

Participant's name
Course name: IS-1
Course conducted:

Obj. No (X)	Objective (2)	Put the number 1 for Yes and 0 for No		Put the number 0-5	Reasons, if you have never (0) applied (Xd)
		Did you know about it before taking training? (Xa)	Do you know or can you apply? (Xb)	How often are you applying learnt knowledge & skill? (Xc)	
(1)	(2)	(3)	(4)	(5)	(6)
1	Principles, practices and strategies of adult learning followed by TITI in IS training.				
2	Developed in instructors skill to prepare performance guide (PG) after training				
3	Developed demonstration (modeling skill)after training				
4	Developed feedback skill.				
5	Test and evaluate their students				
6	Plan and design training session independently after the IS training by using 4D tools.				
7	Developed lesson plan for teaching in back their organization.				
8	Skill to developed and use different media for instructions.				
9	Skill to use different methods for instruction.				

Appendix-3 Pictures

Interview with an Instructor for this Study



A workshop in Vocational School

Instructors in IS Training

A Technical School in Rural Area of Nepal