



## NEWS LETTER

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### Occupational Skills (OS) Upgrading Program in TITI

TITI started the OSU program in 1993. Several trade-related OSU programs are continuously conducted to enhance the knowledge and skills of TVET instructors in the areas of newly innovative skills, technology and knowledge of different occupations. The main objective is to equip the TVET professionals with the emerging skills and knowledge of related trades. The programs are conducted especially on the basis of the needs of instructors and TVET professionals.

TITI conducts OSU training with the coordination of government organizations, CTEVT, universities, colleges, related industries and private institutions. In the fiscal year 2078/079, TITI conducted 20 events of OSU training for different occupational areas in collaboration with different occupational-related industries and institutions, where more than 200 trainers were trained. Engineering related courses are more in demand than other trades. TITI has already conducted OSU training for more than 1000 TVET professionals. The duration of OSU is not predetermined and fixed; it is based on the needs of TVET professionals. OSU trainings range from one to four weeks in length, depending on the need and budget constraints. The demand for these types of courses is increasing day by day. OSU training: -

- helps us to identify gap in teaching learning and helps fulfill it through OSU packages.
- Update the instructors in newly emerging technology, skills and knowledge.
- Help instructors for effective transfer of learned skills, knowledge and attitude
- Help to apply ADDIE model in instructional process.
- Supports instructors to be confident.

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*VET Instructor practicing in OSU on Animal Breeding and Artificial Insemination (AB & AI) Training*

## From the Executive Director's Desk



### Teachers' Quality

Quality is the totality of features and characteristics of a product or service that bear on its ability to satisfy given needs. (American Society for Quality) Quality, an inherent or distinguishing characteristic, a degree or grade of excellence. There are five major

approaches to the definition of quality that can be identified:

- 1) the transcendent approach of philosophy;
- 2) the product-based approach of economics;
- 3) the user-based approach of economics, marketing, and operations management;
- 4) the manufacturing-based and
- 5) value-based approaches of operations.

In TVET, the quality of service initially stems from the teacher. Therefore, the very first approach, as per the eastern belief, is a teacher as a bridge to connect God and disciple. And all the other four approaches are very materialistic. Therefore, quality starts with benchmarking, excellence and satisfaction. The measurement of quality requires some standards. In TVET, the standards are industry-led curricula, teachers' standards and work-based learning. These three components all support the measurement of curriculum implemented, pedagogical delivery and the evaluation of teaching and learning. In all three components, teachers are at the central stage. The development of the teachers is the primary concern of the quality. For this, various approaches to training are available: pre-service and in-service. The pre-service training for teachers is occupational instructional skills (OIS), which mainly focuses on the platform and the pedagogical learning skills. This is the pre-requisite training for teachers before joining the profession. In TITI, there are eight weeks of OIS, or pedagogical training, classified into three parts. IS part 1 (3 weeks), IS part 2 (2 weeks, and IS part 3 (3 weeks). This series of training can be completed in a maximum of 6 modules.

The next category of training is professional development for teachers, and it can be for a maximum of 8 weeks. It comprises mainly curriculum, pedagogy, management, assessment and e-learning. This training, if coupled with quality assurance, can help the TVET profession during the monitoring and evaluation of the program. If this training is associated with the performance appraisal of the teacher, it may also have non-monitory benefits.

Similarly, the occupational skill upgrading (OSU) trainings, which are mainly for the improvement of organizational performance, can provide both monetary benefit and non-monetary benefit. Entire initiatives and investment should be oriented towards OIS, PDT and OSU to make teachers competent and confident in terms of the five approaches to quality, i.e., transcendent, product-based, user-based, manufacturing-based and value-based.

Furthermore, teaching practice and the experiential attachment will increase the value of the teachers and the employers' engagement in training. This can also be a good motivation for pre-service and in-service training, if institutionalized through legal arrangement and recognition. The teachers' service commission has already initiated the work for quality teachers in general education, now it is imperative to initiate and expand it in vocational education to enhance the competence and reputation of the teacher not only for the profession but also in quality. Let's be optimistic that educational leaders, policy makers and employers, along with the donor community, will drive in that direction.

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## Innovative Practices in Training and Development

### Artificial Intelligence (AI) and its effectiveness in Instruction

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions. The term may also be applied to any machine that exhibits traits associated with a human mind such as learning and problem-solving.

The internet and mobile phones are two interconnected technologies that affect our daily lives. While there's an active debate among psychologists, educators, and parents on the amount of screen time children should be limited to. There's another technology growing rapidly with the potential to change the face of the education sector massively. AI can automate basic activities in education like grading. Educational software can be adapted to student needs. It can point out places where courses need to improve. Students could get additional support from AI tutors, AI-driven programs can give students and educators helpful feedback. Data powered by AI can change how schools find, teach, and support students and AI may change where students learn, who teaches them, and how they acquire basic skills.

Artificial intelligence will be a powerful challenge to innovate in training. The goal is to make learners' self-study more effective and equip trainers to guide and support them. The book "Artificial Intelligence in Education" Holmes, Bialik and Fadel put forward an initial taxonomy for AI based education. It consists of Three use cases for applying AI to training.

1. Student teaching (Mainly Instructionism)
  - Intelligent Tutoring System (ITS)
  - Dialogue-Based Tutoring System (DBTS)
  - Language Learning apps
2. Students Supporting (Mainly Constructivism)
  - Exploratory Learning Environments (ELEs)
  - Automatic writing evaluation (formative)
  - Learning network orchestrators
  - Language Learning apps
  - AI collaborative learning
  - AI continuous assessment
  - AI Learning companions
3. Teacher Supporting
  - ITS+
  - Automatic writing evaluation (summative)
  - Student forum monitoring
  - AI Teaching Assistants
  - AI as a research tool to further the learning sciences

This taxonomy shows three fields in which AI can be applied to:

- 1) A training **activity or course**, using data and analyses to continually adapt the user's learning path;
- 2) The **learning environment**: AI guides the learner to the right people and provides support for all of the non-training tasks (like a virtual concierge service);
- 3) **Optimizing the learning process**: AI becomes the trainer or course designer's assistant. It provides specific recommendations for each learner or group and relieves the trainer or course designer of tasks with no added value in training terms.

Many of the products and services we use every day are already leveraging AI to improve the user's experience. Amazon uses AI to recommend products to you based on information it has collected. Google Home, Apple's Siri and Microsoft's Alexa use AI heavily in speech-to-text conversion and optimization. Your email service probably uses AI to fight spam emails and prevent them from landing in your inbox.

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*"Who questions much, shall learn much, and retain much." – Francis Bacon*

## TITI Costumer's Column

**Name of the Organization:** CTEVT Province 1 Office

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With the vision of "Skilling youth for employment and prosperity" and the Mission to "Operate TVET system to develop competent workforce for global market needs". CTEVT Province Office, Province No. 1 was established after the promulgation of the new constitution in 2072 B.S. as the country adopted the Federal System of Government. It is one of the seven provincial offices. Initially, this office was called East Regional Office, which was established in Ashadh of 2065 B.S. in Itahari-5, Sunsari and was renamed CTEVT Province Office Province No. 1 in 2076 B.S.

CTEVT Province 1 Provincial Office is committed to provide need based, market oriented short and long-term vocational education and training giving special opportunity to the disadvantaged groups. It is a provincial autonomous apex body of Technical and Vocational Education and Training (TVET) sector committed for the production of competent technical human resources required to the province, nation and beyond. It mainly involves in quality control, various research studies and training needs assessment in local and provincial level. Its main functions are to:

1. Provide advice to the Provincial Government regarding TVET policy and program.
2. Maintain quality of TVET in the Province.
3. Built rapport and co-ordinate with local Government/GO's and NGO's/CBO's.
4. Facilitate, co-ordinate and maintain the standard of training.
5. Conduct monitoring and supervision of TEVT institutions of the province and report to the center.
6. Conduct/Assist in accreditation process of long term and short course training provides in the province.
7. Conduct examination of TEVT institutions of the province, prepare and submit results for approval.
8. Carry out research activities in the field of TVET including training needs assessments/job market analysis and follow up studies.
9. Conduct the short- and long-term training / seminar / workshop to produce skilled human resources.
10. Explore and mobilize national and international assistance needed for the development of TEVT sector in the province.
11. Conduct skills/occupations test.
12. Conduct/ Coordinate/ Assist in the activities of NSTB/NVQS
13. Conduct/Coordinate/Assist in the activities of TITI.

### Customers' speak:

Ms. Alisha Jha, currently working at the Technical Training and Research Institute, Lagankhel, attended the Occupational Skill Upgrading (OSU) on Animal Breeding and Artificial Insemination (AB&AI) conducted from May 23rd to May 30th, 2022. Ms. Jha found out about the training through her institute.

Ms. Jha was quite satisfied with the training and thanked TITI for providing such an opportunity. She was also impressed with how she could apply for the training online. She said, "Before attending the AB&AI training, I had already attended the training of O-ToT (Livestock) and ML for TVET Professional

Training." So, I was quite familiar with TITI and its services. Furthermore, she added, "The training of AB&AI, indeed, was very fruitful for me. Additionally, TITI should put greater emphasis on these kinds of practical workshops in all of its OSU programs. The attendees would benefit more from these hands-on activities. She also suggested that TITI should disseminate information regarding its services, as most people don't know about the services and training provided by TITI.

## Occupational Skills(OS)...

The areas of OSU trainings are:

- Engineering (Civil, Electrical, Automobile, Mechanical, Electronics, IT, Learning, Management System)
- Agriculture (Livestock and Plant Science)
- Hospitality Management (Food & Beverage, Barista, Bakery, Laundry, Travel and Ticketing)
- Health (Nursing, General Medicine, Lab)

Account and Office Management (Tally, CGAS, TIES, Administration and Office Management)

## From the Executive...

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Are we aware of these issues? Can we advocate these issues to the policy makers and agencies engaged in employment? Can we articulate them with clear philosophical, psycho-social and economic underpinning that these are the right things to do and we have to follow them? Can we associate the policy makers, TVET professional and employers for this very purpose? Can we go for action in this specific order for execution? This is what TVET leadership entails. This will only serve the objective of bringing technology and education together in TVET. It will not only make our efforts fruitful, but also make it trustworthy both in domestic and regional markets. These endeavors, if taken into considerations, will take the teaching profession to "by choice" from "by chance" and people will proudly accept and select instruction as an occupation. This is what the Council for Technical Education and Vocational Training (CTEVT) and Training Institute for Technical Instruction (TITI) has to develop and lobby for.

**Mahesh Bhattarai (Er.)**

## Innovative Practices in...

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Teaching, Learning and development (TL&D) professionals need to stay on top of fast changing technology to optimize the learning experience and outcomes, developing new learning strategies and methodologies that take advantage of these improvements, especially when it comes to AI. AI is going to have a huge impact on the TL&D industry, Organizations have a huge amount of data available to them, which they can analyze and use to optimize training programs and learning curriculums, Content can be personalized to suit the learner's needs, focus on weaker areas of the learner, recommend suitable content based on past behavior, predict needs based on their role, and even auto-generate content using various content creation algorithms.

To enhance quality in TL&D and ongoing teaching practices, AI plays vital role. CTEVT has main responsibility to include AI related curriculum in almost all trade to overcome technological effect on producing manpower. Recently, TITI is using LMS system to record, assess, content creation, progress tracking, materials development for both learner and trainer. TITI has enough infrastructure (KOICA supported IT building and E&E laboratory) and human resource (IT personnel) to conduct basic AI related training, TITI need to conscious about AI based training and its implementation, which will be the beneficial for us to tackle future domination of AI in training and development sector.

**Kiran Poudel (Mr.)**

*"Minds are like parachutes, they only function when they are open." – Thomas Dewar*

## Trainer's Profile



**Mr. Kiran Poudel**  
- Trainer

Since 2019, Er. Kiran Poudel has been a trainer for TITI in the E-learning department. Currently, his areas of training on TITI are Electronics OSU, Electrical OSU, O-ToT, ToT Series, IS Series and other engineering as well as pedagogical training. Mr. Poudel is also currently involved in his areas of engineering such as electronics circuit design, embedded system design, robotics, mobile & wireless communication, software development, computer networking and industrial automation as a freelancer outside of TITI.

He received his BE degree in Electronics and Communication Engineering from Tribhuvan University (TU). Mr. Poudel is currently pursuing his master's degree in Computer Engineering at PU.

Before TITI, he had experience of industrial automation in various companies as a system engineer for around two years.

In the course of his career, Mr. Poudel has taken many training courses to enhance his horizons of knowledge and skills. Some major training consists of " AVR microcontroller training from HCOE, Advanced surveillance management system from Tiger Palace Resort and Casino. He has also received training on Electronics OSU, Electrical OSU, Cyber security training, LMS Admin/Trainers training, Master ToT training, IS-1 and IS-2 training from TITI.

Mr. Poudel believes that science and technology aid in the acquisition of 21<sup>st</sup> century skill and knowledge, which aid in the delivery of new training in technical and pedagogical sectors.



### Your Free Gift from TITI

Do you want to use a case study for the session "Apply Theories for Motivation " ?

If so, read the case study for the session "Apply Theories for Motivation". This is one of many case studies developed at TITI.

Case study helps bring a piece of reality into the training session. It helps to involve the learners in real world experience. This case study is about an organization and its culture. The change in the motivation of its staff due to various reasons is explained. The question at the end of this case study which is related to the learning goals will help improve the decision-making skills, problem solving skills and allows theories to be applied to real circumstances

## Upcoming Events at TITI

Activity Name
<b>Instruction Program</b>
Active Learner Methodology (ALM)
Instructional Media Development (IMD)
Instructional Skills – I (IS I – Field, Lab and Workshop Instruction)
Instructional Skills – II (IS II – Classroom Instruction)
Instructional Skills – III (IS III – Quality Training Sessions)
Learner Assessment and Evaluation (LAE)
<b>Management Program</b>
Management Skills (MS)
Facilitation and Moderation (FM)
Finance Budget and Accounts for Managers (FBA)
Entrepreneurship Development (ED)
Supervision of Instruction (SOI)
<b>Curriculum Program</b>
DACUM Facilitator Training (DACUM)
Job Task Analysis (JTA)
Technology Based Instruction Delivery (TBID)
Training Course Design (TCD)
<b>Community Development</b>
Community Based Needs Assessment (CBNA)
Community Facilitator (CF)
Foundation of Community Development (FCD)
Intervention of Community Development (ICD)
Occupational Instructional Skills (OIS)
<b>E-Learning</b>
Advanced Computer Application
LMS for Trainers
E-TABS Training
Basic Computer Application
Cyber Security
<b>Packages (Customized Courses)</b>
Advanced First Aid (1 week)
Training for Trainers (2 weeks)
Conflict Management and Peace Building (CMPB) – 2 weeks
Getting 70 Minutes out of 1 Hour (1 day)
Leadership through Relationship Management (3 days)
Office Management (1 week)
Proposal and Report Writing (1 week)
Skill Test Assessors' Training (1 week)
Time Management (1 day)
Presenting... You (1 day)
Supervise your Teachers, Trainers, Instructors (3 days)

**NOTE:** Training Packages can be conducted at any time during weekends, working days, public holidays depending on the request of the customers for which 12-15 participants are required. The training can also be conducted at customers' premises with minimum requirement of training facilities. **TITI** also provides free of cost training for one DAG person in each regular training program.

*Please, book for the courses and packages in which you would like to receive the training. Participate in the training, experience it and give us your feedback.*

*We welcome your feedback on this issue. – Editorial Board*

### Editorial Board

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