Inter-governmental International Organization
Colombo Plan Staff College
for Human Resources development in Asia and the Pacific Region

TRAINING MANUAL
on Technopreneurship

Preface

This document is intended to be a professional resource on training for TVET officers, faculty and trainers in the area of technology entrepreneurship – technopreneurship.

The purpose of this training manual is therefore to present the fundamentals as well as the modern concepts in a simplified and easily understood fashion how a training program be conducted in TVET on the abovementioned area that is becoming a popular endeavor in a growing economic society. However, so that creativity of the trainer or facilitator who will be using this manual will not be stifled, only specific topics and guidelines will be provided.

The topics are carefully chosen to fit the context of the training program in technopreneurship as it will provide a firm foundation for a more technical nature in the future.

In keeping with modernized training programs, the material begins with the training plan, methods that can be used in the training, and progresses to the design and components of a program book, conduct of a program, course evaluation and up until the closing of the program.

To enliven the participants' interest and heighten their appreciation of the topic at hand, some attention is given to initiatives for activities that can be conducted during the program in the form of group discussions, tasks, ice-breakers and may include one-day forum or conference where successful technopreneurs may be invited to share their journey in this respect. Additional initiative is for participants to be able to visit TVET or other learning institutions that host incubation centers.

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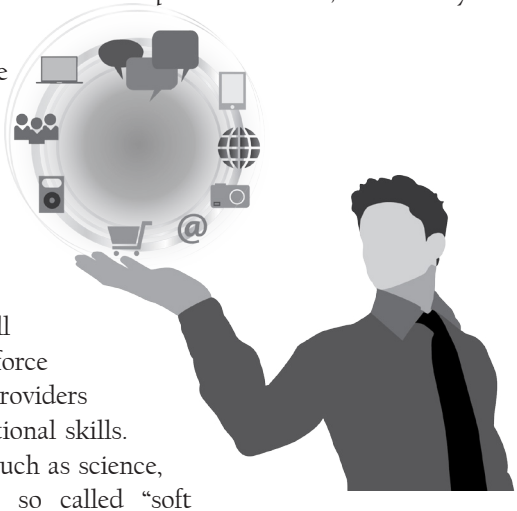
INTRODUCTION

Today, growing attention is focused on the impact of technology in almost every aspect of human life. Technology has invaded every aspect of our lives, changing how we work, how we learn and how we do things.

Technology is an absolute need we cannot escape from, it has a very big role in most aspects of our lives. In other words, it answers most of mankind's problems. Across centuries, technology evolves.

Technology is opening up a universe of opportunities, unimaginable before. And there is a growing number of talented young business-oriented people to deploy technology to level the playing field for everyone. Fueled by the power of imagination and the changeable nature of a sector that has become a byword for innovation, technopreneurship has transitioned not only from the fantasies but to the mainstream as well. Technopreneurs are riding on the wings of technology all around the globe to reshape, remodel and reinvent the way we live, work, play, learn, communicate, manufacture , name it ... the possibilities are endless.

Entrepreneurship in general is a key driver of any economy. Wealth and a high majority of jobs are created by small businesses started by entrepreneurially minded individuals, many of whom go on to create big businesses. Entrepreneurship is the process of starting a business or another organization. The entrepreneur develops a business model, acquires the human and other required resources, and is fully responsible for its success or failure.



The future workforce needs to be skilled, diverse and creative, putting great emphasis on meeting the demands of the marketplace (local, as well as global).

To do this, TVET cannot just look at the jobs that are currently available and it cannot predict the jobs that will be in demand in the future. Workforce development and TVET and other providers need to find ways to promote foundational skills. These include so called "hard skills", such as science, math, technology, reading, and the so called "soft skills", as problem solving, decision-making, teamwork,

communication, and entrepreneurship. Ideally, students should receive education that is well balanced in both hard and soft skills in order to meet the demands of future employers.

As a result, many experienced business people, political leaders, economists, and educators believe that fostering a robust entrepreneurial culture will maximize individual and collective economic and social success on a local, national, and global scale. It is with this mindset that Entrepreneurship Education that includes Technopreneurship be developed: to prepare youth and adults to succeed in an entrepreneurial economy.

Entrepreneurship education is a lifelong learning process starting early and progressing through all levels of education, including adult education and TVET. Entrepreneurship Education focuses on developing understanding and capacity for pursuit of entrepreneurial behaviors, skills and attributes in widely different contexts.

Entrepreneurship should be taught to TVET students in all disciplines in the institution. It is not out of place to say that many business ideas emerge from non-business disciplines but are often waved aside or ignored because students are not sufficiently educated in the knowledge and skills required.

A sustainable workforce contributes to the fate of people, profit, and planet alike. Such a workforce provides employers with human resources — skills, engagement, and retention — they need to generate a profit (which fuels the economy) and to innovate (which builds society). Sustainable work practices equip individuals and families with economic resources and opportunities for professional and personal growth, in an atmosphere that allows workers to attend to interests and responsibilities inside and outside of work. Ultimately, sustainable work practices help people find meaning through both work and non-work activities. By allowing access to happiness and fulfillment, they help people not only survive, but thrive. People who thrive give back to the economy, society, and the environment.

OBJECTIVES OF THE TRAINING MANUAL

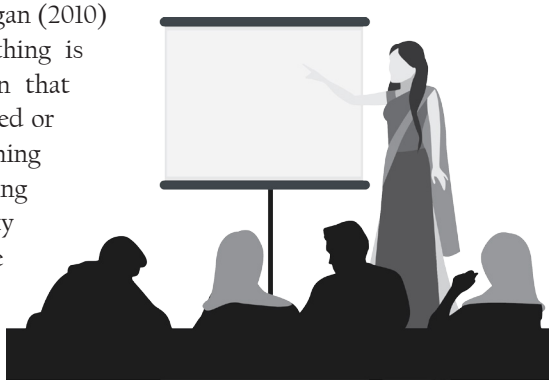
In general, this manual aims to provide information in planning and facilitating training workshop in the context of participatory processes towards developing skills in technopreneurship. Specifically, it provides:

- Experience in planning and preparing a training workshop on the subject matter of technopreneurship;

- Techniques and skills for a lively and positive atmosphere during a training workshop;
- Experience in the processes involved in providing a training session (e.g. lecturing and facilitating);
- Development of self-critical awareness about personal training/facilitation style; and
- Techniques for monitoring and evaluating the success of a workshop

CONTEXT OF THE TRAINING

Training context is defined by Lanigan (2010) as "the situation in which something is learned or understood, a situation that can impact how something is learned or what is taught". An example of learning context is the external learning environment including the quality of equipment and facilities and the training level of the teacher.



This handbook defines training "context" as the collection of situations and conditions that typify training in a domain of jobs and that determine, to a large extent, the nature and type of training conducted in that domain. By "training," we refer to the "andragogical (According to Malcolm Knowles, andragogy is the art and science of adult learning, thus andragogy refers to any form of adult learning) process intended to convey knowledge and skills".

In that sense, training is functionally similar to "education." Training and education are usually distinguished by two defining characteristics.

The first characteristic relates to the degree to which learning is expected to generalize across settings. Training is intended to impart the knowledge and skills that are directly related to specific job context, whereas education inculcates competencies that are applicable to general life situations.

The second characteristic relates to the context in which the pedagogical process occurs. Education is normally defined as the instructional process that occurs in traditional educational settings (i.e., in primary/secondary schools or institutions

of higher learning), whereas training is conducted outside of those settings, usually at or near the workplace.

For our purposes, we define training contexts as those instructional processes—however general or specific they may be—that fall outside of the traditional educational context.

By "context," we refer to the collection of training situation and condition that typify training in a domain of jobs and that determine, to a large extent, the nature and type of training conducted in that domain.

In this document, the context of training will include the following.

1. Individuals to be Trained
2. Training Venue
3. Training Development
4. Training Media, materials and equipment if needed
5. Required Competencies of the trainer
6. Reference Sources
7. Vocational Training

In a broad conceptual context, training can be viewed as one of several different methods designed to enhance job performance. Training enhances job performance by promoting the acquisition of relevant knowledge and skills. This alternative method for human performance improvement is related to training in that it potentially enhances or diminishes its effects. In other words, training is properly conceived as a single component of an interrelated array of performance enhancement techniques. Although the focus of this handbook is on training per se, the technique provides an important conceptual context for the design, development, and delivery of training.

TRAINING PLAN

The training plan will outline who will deliver the training, and when and where the trainees need to go to receive the structured component of the training. A training plan must be devised prior to the delivery of any structured training.

Treat the training plan as a working document. It should be flexible enough to meet all your needs. Remember that you can talk about this with your colleagues or training organization you will be collaborating with at any stage during the training.

What to include in the training plan?

The purpose of the design phase is to identify the learning objectives that together will achieve the overall goals identified. You will also identify the learning activities (or methods) you will need to conduct to achieve your learning objectives and overall goal/s.

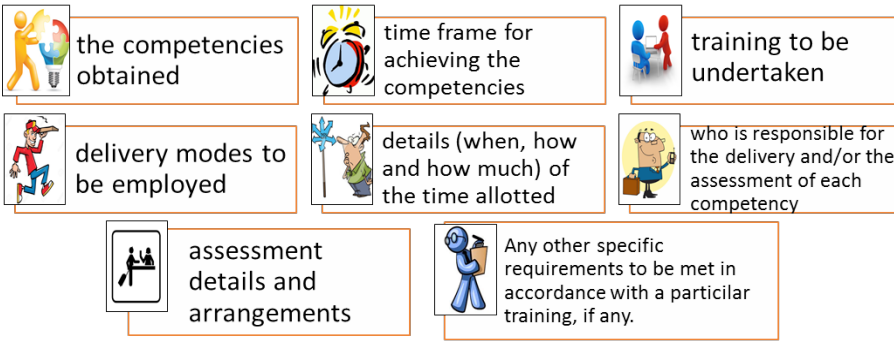


Figure 1: Training Plan Contents (White, n.d.)

The benefit of learning this information is to create professional looking educational tools that will serve your trainees well. It is important to implement the information within this manual in order to move your trainees to optimal levels of performances.

The table that follows depicts how learning objectives are associated with the training goals, learning methods/activities, evidence or indicators that learning took place and evaluation activities.

Table 1: Connection of training goals and learning objectives to other aspects of the training program (White, n.d.)

Training Goal	Learning Objectives	Learning Methods / Activities	Documentation / Evidence of Learning	Evaluation
overall results or capabilities you hope to attain by implementing your training plan	what you will be able to do as a result of the learning activities in this plan, e.g.,	what you will do in order to achieve the learning objectives, e.g., 1. complete the program	evidence produced during the learning activities -- these are results that someone can see, hear, feel, read, smell, e.g.,	assessment and judgment on quality of evidence in order to conclude whether the learning objectives were achieved or not

Training Goal	Learning Objectives	Learning Methods / Activities	Documentation / Evidence of Learning	Evaluation
	1. exhibit required skills in problem solving and decision making 2. exhibit required skills in delegation	2. address a major problem that includes making major decisions 3. Perform the tasks provided 4. etc.	1. Program assessment grade 2. Output presentations, action plans submitted 3. etc.	

METHODS USED IN TRAINING

During the training, the trainer/facilitators/resource persons use different methods to help the participants understand the important points and concepts. The trainer also attempts to bring the participants together so that they will feel free to express themselves, give honest feedback, share their own ideas or points of view and may even disagree with material/s presented. The trainer should try to create a comfortable climate of unity and enjoyment in being together as a group. Following are the ways in which this is accomplished.

The participatory curriculum design model of the workshop outlined in this manual is based on principles of adult experiential learning. According to Kaneenui, E. & Carnine, D. (1998), the underlying principle is that much of the content will come from the participants and that the workshop will serve as a framework for drawing out their experiences. Participants and facilitators commit themselves to engage in a process of mutual teaching and learning. The emphasis is on practical application and the development of strategies for action. Continued reflection and evaluation are central to the learning process. Transformative learning theory underpins the workshop content and process.

LECTURING

Lecturing method is one of the old and basic training methods used by many of the organizations. More and more training institutions are applying the lecture method for training. In this method the trainer is active whereas the trainees are passive. Though lecture method is not very much effective, some extent of informal lecture is inherent in the conduct of any training program to motivate trainees, provide explanation & analyze relevant exercises (Hubpages, 2011).

Considerations: The background, age, cultural difference, knowledge of subject, level of education, likes & dislikes of the audience should be considered for this method of training. Moreover the purpose of training & basic understanding of the trainees can make lecture method of training effective. Under this method the time available is an important consideration. It is necessary for the trainer to speak from his own experience and knowledge per the requirement of trainees. The contents of lecture should be simple, brief and direct to the point. The main theme of the lecture has to be developed in logical sequence. It is necessary to start with simple concepts and progress towards difficult topics.

Making optimum use of time should be important consideration for the resource person to deliver the lecture. The trainer must have proper planning of the lecture to create interest among the trainees by including examples, questions and humor according to requirement in the lecture to be delivered.

Merits: The lecture method of training has the following importance .This method is effective to train large number of trainees within limited time available

- Delivery of lecture is useful for communication of basic theoretical knowledge to the learners
- Lecture method is convenient to have one-way transfer of information without any interaction
- Lecture method is less expensive.

Demerits: The lecture method of training has the following important demerits.

- There may not be any scope for clarification of difficult parts of the lecture for the participants
- Repeated lectures may produce staleness and monotony resulting in less absorption of knowledge by trainees
- It becomes difficult to have proper feedback from the learners by following lecture method of training

In the event that a resource person is outsourced, it is important to take into consideration what your colleagues suggest, track record of whom to invite as a resource person as well as his/her background on the subject matter at hand.

Use questions to break up the lecturing process especially if you feel participants are becoming bored - and to check assumptions. Sometimes you might assume too much experience or knowledge among the participants and sometimes too little.

Ask questions to clarify whether everyone has a similar level of basic knowledge, before moving on to new knowledge or skills. Ask what participants know or feel about a particular topic. It can be helpful to clarify whether they have had any experience of the subjects being discussed.

Topics that can be delivered through lectures:

Definitions of entrepreneurship/technopreneurship, social entrepreneurship, econopreneurship, environmental entrepreneurship, extrapeneur, innovation, ideation, etc.

BRAINSTORMING

Classical brainstorming is a group technique to create new ideas. The group takes a specific problem and creates as many ideas as possible in a limited time. In a brainstorming session, we want every group member to speak out all ideas that come to his/her mind, no criticism is allowed, and the wilder an idea the better. Members are encouraged to use other members' ideas as trigger (input) to create/associate further ideas, and to combine ideas (Sachs, 2016).

Why and when use brainstorming?

We can use brainstorming to solve all kinds of problems (business, public administration, military, family, personal). It is important to have a problem that is specific and can be made into a question.

What do we need?

- A specific problem/challenge expressed as a question.
- A group of between 5 and 10 people. We want a mixed group of men and women, experts and non-experts. The group can contain the president, managers, workers, cleaners.... Everyone might have ideas that can help to solve the problem.
- A leader who ensures that a few basic rules are followed.

How to brainstorm?

1. The leader or another member introduces the problem. The problem is expressed as a question. (this can be done before the meeting, or as first step in the meeting)
2. The problem is explained in a way that all group members understand its essence.
3. Some facts/details about the problem are provided before we start brainstorming. A field trip or visit to the place where the problem occurs can help the group members to see and understand the nature of the problem.
4. The group meets in a half circle and starts to storm the problem. Everyone just speaks out his/her ideas. All ideas are welcome, simple ideas, crazy ideas.... We want as many ideas as possible. The more ideas, the better. No group member, including the leader, is allowed to criticize any idea. Everyone is encouraged to use other group members' ideas to come up with yet another idea.
5. All ideas are recorded by a note taker (can be the leader or another person) at a place where all group members can see the ideas. The easiest way to record the ideas is in form of a list on a flip chart or whiteboard. We don't note ideas word for word but try to use keywords or short phrases.

Four Basic Rules (as described by Osborn)

1. No criticism is allowed during brainstorming. (Evaluation of ideas after the brainstorming)
2. Quantity is important. The more ideas the better. (Don't worry about speaking out only "good" ideas.)
3. Wildness is good. Crazy ideas are welcome. (Many times the craziest ideas turn out to be the best ones.)
4. Combining other ideas and taking another person's ideas a step further or using them for yet another idea is good.

A brainstorming session lasts between 30 minutes and 1 hour. After the meeting, the list of ideas is copied and distributed to all group members. A good way to copy a whiteboard or flip chart is to take a picture with a digital camera or smartphone. Then evaluate the ideas collected and choose which will be discarded.

Brainstorming activities could focus on:

implications of technopreneurship to TVET; examples of technopreneurial projects; debate on whether technology is a friend or foe to sustainable development; social/economic development of society, etc.

GROUP WORK

Group work involves workshop participants working collaboratively on set tasks, in or out of the workshop room. Group work includes:

- any learning and teaching task or activity that requires participants to work in groups
- any formal assessment tasks that require participants to work in groups.

Group sizes can vary from pairs to large groups of participants. This guide deals with small groups (pairs and small teams of three to six). While the focus is on the face-to-face environment, much of the content also applies to larger groups or the online context.

A group work activity could be writing a group project proposal for technopreneurship;

INDIVIDUAL WORK

Individual work isn't just for those introverts out there. Sure, it is great for them to get a chance to think things through on their own, which is a comfier way to process new info for many introverts (which you can read a lot more about in this entire article about the needs of introverts and extroverts).

Still, it can be just as helpful for those who prefer group work to learn how to cope with the prospect of sitting still, keeping that noisy mouth shut, and puzzling out some answers without giving in to any and every distraction that comes along.

- Individual work can help participants
- Gain independence to think things through on their own;
- Improve confidence in working through a problem, even when they don't feel certain about every step;
- Work at their own level, rather than having to adapt to suit their group members;
- Practice self-control—both in staying focused on the task at hand, and in having the willpower to avoid turning to a neighbor or co-participant.
- Get more comfortable taking actions on their own;
- Gain creativity and effective thinking processes that can apply to problem solving across a range of subjects and types of issues;

Plus, it can be easier for the resource person/facilitator to assess an individual's work—at least, easier in a traditional sense, if you have an idea of the "norm" for the type of work you're looking for. Sure, it can be tough to assess an individual's skills and motivation all while being aware of inevitable comparisons with others. But be aware of those issues, and you'll be fine.

As for when to use it, individual work can be a good filler for a chunk of time when there's a set of problems or a big, hovering question that it would behoove everyone to ponder on their own. Plus, it can be a good way to re-focus or re-center a class, or get everyone on the same page (or at least, on their own personal parts of the same-ish page) before diving into a bigger project or discussion.

Why? Advantages of individual work are that the participants can edit the tasks for them in the appropriate speed and learning style. The tasks can be assessed individually and the level of details can be adjusted. Each participant is challenged to develop his own activity/ies in light of his environment or workplace and be able to share with the whole group.

When? All the time if it is necessary to support different level and experience.

How? In the individual work the resource person or facilitator provides for each participant a task, then they will process and settle the task problem by self each participant alone which will be shared to the entire group. The conditions for individual work are the participants' motivation, self-control ability and differentiation.

Any risk? Disadvantages of individual work, are that it can lead to isolation of individual participant that they have no social-educational component and run the risk of idling. Also, in the event that a participant lacks self-confidence or is inadequate in communication skills, the problem may result in idling or non-participation. To avoid such problems the facilitator or resource person should be very active in supporting and controlling individual work and must be alert to lend a helping hand.

ENERGIZERS, GAMES, ICE BREAKERS

Droopy eyes. Heavy heads. Wandering eyes. If you are conducting lectures, brainstorming meeting and witnessed any of these tell-tale signs, you'll recognize them as red flags that the meeting is lacking something every successful activity needs – energy! Whether it's due to an early morning start or trainees whose bellies

are full from a carb-loaded lunch, it's natural for a group to lose steam and for the brain to feel overworked and tired. The good news? It's actually very easy to wake up a drained team with energizing activities designed to stimulate brain activity.

Energizers *are short activities that last between 5-20 minutes that increase the energy level of a group and help the brain access its imaginative side.* Depending on your meeting length, it makes sense to plan for an energizing activity to start the meeting, another after the trainees return from breaks, and perhaps a final activity to end on a high note. Additionally, plan to have a few "back-up" energizers in case the room needs it at any point. Always keep in mind the physical make-up and comfort zone of your group to be sure the energizer won't make anyone uncomfortable.

Ice breakers *are activities, games, or events that is used to welcome and warm up the participants in a training session, team building session, or any other event.* Any event that requires people to comfortably interact with each other and a facilitator is an opportunity to use an ice breaker.

Games are ideal for awakening the "I," as well as the sense of "we" of the collective community of participants and staff. The seeming nonsense of energizer games works well for many occasions: in the beginning of a session to focus and connect a group, in the middle of the session as a transition point from one activity to another, and in the end of a session to leave the group with a stimulating experience as well as a positive adjournment. Energizers are short, direct, simple, and work well with all ages.

It is therefore suggested that you as the trainer make a compilation of energizers, games and ice-breakers to lead a training session alive and stimulating. You may refer to the internet for these or you may design your own. However, try to link any of these activities to the lesson at hand or to the concept of technopreneurship.

Site visits. A site visit is a trip made by training participants and a facilitator/ resource person to see or study something, for example a TVET institution that hosts an incubation center, an institution that has gained the reputation as a center of excellence, a factory or production center, a community-based industry, or a TVET as a factory, etc. The site visit is aimed at getting a clear picture of the activities revolving around technopreneurship.

THE PROGRAM BOOK

The program book is a printed guide of meeting events, a plan of action aimed at accomplishing a clear training objective or objectives, with details on what work is to be done, by whom, when, and what means or resources will be used, and other pertinent information pertaining to the conduct of the training. This guide is an adaptable resource to support trainers and trainees as they explore and engage with the topic at hand on technopreneurship that can be adapted to suit the learning needs and interest of the participants from teaching to supervisory in TVET.

It is the responsibility of the trainer to prepare the program book from designing the cover page to appendices if any.

COMPONENTS OF THE PROGRAM BOOK

INTRODUCTION

The introduction leads the reader to a particular topic of discussion. It establishes the scope, context, and significance of the topic introduced by simply giving brief understanding and background information about the topic, stating the purpose of the program highlighting its potential outcomes.

A good introduction should identify your topic, provide essential context, and indicate your particular focus in the training session.

Example:

> *Technology is opening up a universe of opportunities, unimaginable before. And there is a growing number of talented young business-oriented people to deploy technology to level the playing field for everyone. Fueled by the power of imagination and the changeable nature of a sector that has become a byword for innovation, technopreneurship has transitioned not only from the fantasist but to the mainstream as well. Technopreneurs are riding on the wings of technology all around the globe to reshape, remodel and reinvent the way we live, work, play, learn, communicate, manufacture, name it ... the possibilities are endless.....*

RATIONALE

The main purpose of this component is to rationalize why the topic is worthy of study. Introduce the topic with some indication of its inherent interest or importance, and a clear definition of the boundaries of the subject area.

In some instances, the introduction and the rationale may be merged depending upon the suitability of the trainer and can fall under one subtitle only.

OBJECTIVES

A broad statement is usually needed about the long-term expectation of what should happen as a result of your program (the desired result). It serves as the foundation for developing your program objectives. Objectives are important as they provide benchmarks and targets to aim for and performance indicators, which facilitate monitoring and measures for feedback and evaluation.

Objectives establish criteria and standards against which you can determine the program performance (MacNamara, 1998). You will need to identify objectives of the program to be able to evaluate it later at the end of the program. You usually need multiple objectives to address a single goal.

Criteria for writing the objectives: SMART attributes are used to develop a clearly-defined objective.

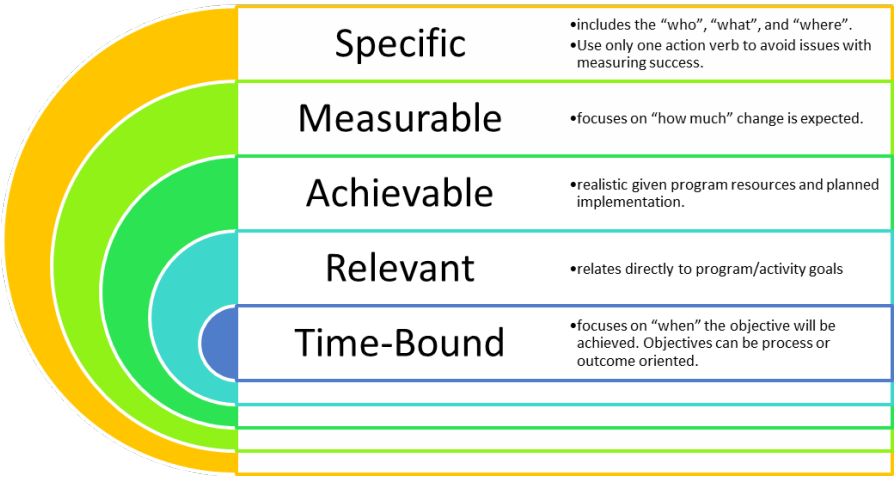


Figure 2: S-M-A-R-T Objectives

Example:

Objectives

This workshop/program will identify the distinguishing characteristics and aspects to create a clear picture of the technopreneur and capture his/her value to a firm or to a team.

Specifically, at the end of the training program you will be able to

- *Visualize what takes to be a technopreneur;*
- *Analyze the various attributes, characteristics, qualities that ascribes to a technoprenateur; and*
- *Propose a profile of a technopreneur drawn from the different graphical representations presented*

TRAINING CONTENT

In general, this section will help you design the content of your training session -- a process done in the days and weeks and even months prior to your training session. The next section will take you through the logistics of the delivery of the session itself -- what you do in the two or three days prior to the training , during the training itself, and as follow-up.

A note of caution: Designing a training session is hard work, and if it's done well, it can be extremely rewarding. Before you get started, if you don't find the format provided herein that fits your needs exactly, consider adapting one in a way that will work for you. The point is that organizing and running a first-class training session is enough work. You don't need to reinvent the wheel.

Because of the broadness of the coverage of the program, we encourage you to pick and choose from the ideas, instead of using every idea as is. That way, you'll be sure to design a training session that is ideal. The following topics are proposed:

- What is technopreneurship
- Who is the technopreneur
- Anatomy of an entrepreneur
- Anatomy of a technopreneur
- Definitions: intrapreneurship, social entrepreneurship, econopreneurship, environmental entrepreneurship, extrapreneur, cultural entrepreneur, innovation

- Basic Entrepreneurial/Technopreneurial Skills
- Technopreneurial Process vs Entrepreneurial Process
- Ideation or Idea Generation
- Relationship of Creativity & Technopreneurship
- Technoprenuership and its Implications to TVET
  - On Curriculum Development
  - On Instructional Delivery
  - On Facilities and Infrastructure Development
  - On Faculty Development
- Significance of Entrepreneurship/Technopreneurship Education
- Benefits from Technopreneurship
- Technopreneurship and Innovation
- Hosting an Incubation Center
- Importance of Incubation Centers
- Biographies of Renowned Entrepreneurs
- Sample Technopreneurial Projects
- Writing a Proposal for Technoprenuership/ Action Planning

Other Subtopics

- TVET-Based Incubators in Emerging Economies
- Technology Entrepreneurship: Challenge to TVET System
- Technopreneurship as a Game Changer
- Entrepreneurship Management
- Entrepreneurship and Economic Development
- Sustainability & Entrepreneurial Education
- TVET in Techno-entrepreneurial Workforce for Sustainable Development

GROUP/INDIVIDUAL TASKS

As the training/workshop gets going, be prepared to allow for any related discussion to flow – you may not need to intervene or contribute very much yourself. At some stage, however, there are several types of facilitation that could be required. Broadly speaking, the interventions you make will be directed either to the task of the group/ individual.

According to Silberman (1996), the trainer should ensure that everyone is contributing to the discussion because it keeps the lesson on tracm. When discussions are going on among the whole group (starting with the introductions at the beginning of each workshop or course), seat yourself and any co-facilitator, as part of the circle. When discussing a topic, especially when you want the discussion to build among participants - with less direction from yourself - sitting as part of the larger group gives a non-verbal message that you are giving up your position of authority for a while to allow a more open discussion.

Small group work may be used within the workshop. There are three characteristics that need to be present for small group work to be effective:

There should be active participation from all the members of the group

This should be established before small groups are asked to form. This is one very important way in which small group work differs from lectures or larger group discussions. Facilitators are able to oversee the process, across all groups, and provide a bit of a balancing influence: helping those who are reticent to contribute and helping others who are more voluble to leave some space for colleagues.

There needs to be a specific task

Irrespective of the length of the small group task, this needs to be established and clear to all before the small group is formed. Everyone needs to be aiming to achieve the same thing from the group work – otherwise it is unlikely that the group will be able to work as a unit. The task may require someone to note discussions and to feed back to the larger group. Ensure that a person is nominated before the group starts its task.

There needs to be reflection

This is crucial. The kind of learning that small groups can achieve goes deeper than just memorizing lists of facts or procedures. It arises from people's own experiences, and therefore tends to have greater meaning for people. Group members should be helped to think back over their own experiences, and

be prepared to share that with the rest of the group. This is the process of reflection. Allow sufficient time for participant to process their learning.

Note: Whether the task assigned to the participants is for an individual or group, just make sure that the task is to enhance the learning that took place, to strengthen the understanding of ideas and concepts or to clarify issues.

Example:

GROUP TASK

List of Suggested Projects and Research for Technopreneurship

Objectives

This task was designed with the purpose of making the participants develop topic proposals for a research or project aligned to the principles of technology entrepreneurship

Specifically, at the end of the training program, you will be able to

1. Identify projects/research on technopreneurship for possible funding grant
2. Apply principles and concepts learned in determining research/projects on technopreneurship
3. Develop team work skills

Input

- Special lecture
- Theme papers 1& 2
- Discussions and deliberations of issues and concerns

Task

1. Go through the papers presented and deliberate on the following points:
   - Definitions of technopreneurship, technopreneur
   - Importance of technopreneurship
   - Examples of technopreneurship
2. Brainstorm as a group on possible topics for research and projects on technopreneurship to solicit funding.
3. Prepare a powerpoint presentation of your group's output

Output

List of 5 research topics and 5 projects for technopreneurial activities to be submitted to a funding organization.

SCHEDULE OF ACTIVITIES

A schedule is a plan that gives a list of events or tasks and the times at which each one should happen or be done. You can use a schedule to refer to the time or way something is planned to be done. For example, if something is completed on schedule, it is completed at the time planned.

An example is shown below. You might like to design your own schedule of activities depending on your creativity. What is important are the activities, names of people responsible, time allocations, dates, etc.

Table 2: Sample Format of the Training Schedule

<table>
<tr><td>Day</td><td>0900-1030</td><td></td><td>1100-1230</td><td></td><td>1330-1500</td><td></td><td>1530-1700</td></tr>
<tr><td>1</td><td>Opening Program

CPSC Video

PKB Video

Program Orientation</td><td rowspan="2">T
E
A</td><td>Special Lecture

Technopreneurship as a vehicle to facilitate prosperity

Industry Expert</td><td rowspan="2">L
U
N
C
H</td><td>TP1

What Technopreneurship is & What does it take to be a technopreneur?

Program Coordinator/ Resource Person</td><td rowspan="2">T
E
A</td><td>Tasks
Listing potential projects and Assessing one's preparedness for Technoprerneurship

OnLine registration

Participants</td></tr>
<tr><td>2</td><td>Presentation of task outputs

Participants</td><td>TP3

TVET Hosting an Incubation Center and Why It is Important

Local Resource Person</td><td colspan="3">Site visit to a TVET Institution hosting an Incubation Center
Local Coordinator

Program Evaluation
Participants</td></tr>
<tr><td>Day</td><td>0900-1030</td><td></td><td>1100-1230</td><td></td><td>1330-1500</td><td></td><td>1530-1700</td></tr>
<tr><td>3-5</td><td colspan="7">International Conference

" TRANSLATING TVET FOR SUSTAINABLE ENTREPRENEURIAL WORKFORCE"

Closing Program</td></tr>
</table>

Legend: RP- Theme Paper

TRAINING PROGRAM FRAMEWORK

It is a framework that contain a broad overview, outline, or skeleton of interlinked items which supports a particular approach to a specific objective/s, and serves as a guide that can be modified as required by adding or deleting items.

In general, a framework is a real or conceptual structure intended to serve as a support or guide for the building of something that expands the structure into something useful. Usually, the program framework is represented graphically using the Input-Process-Output model.

An example of the training program framework based on the input-process-output model is illustrated below:

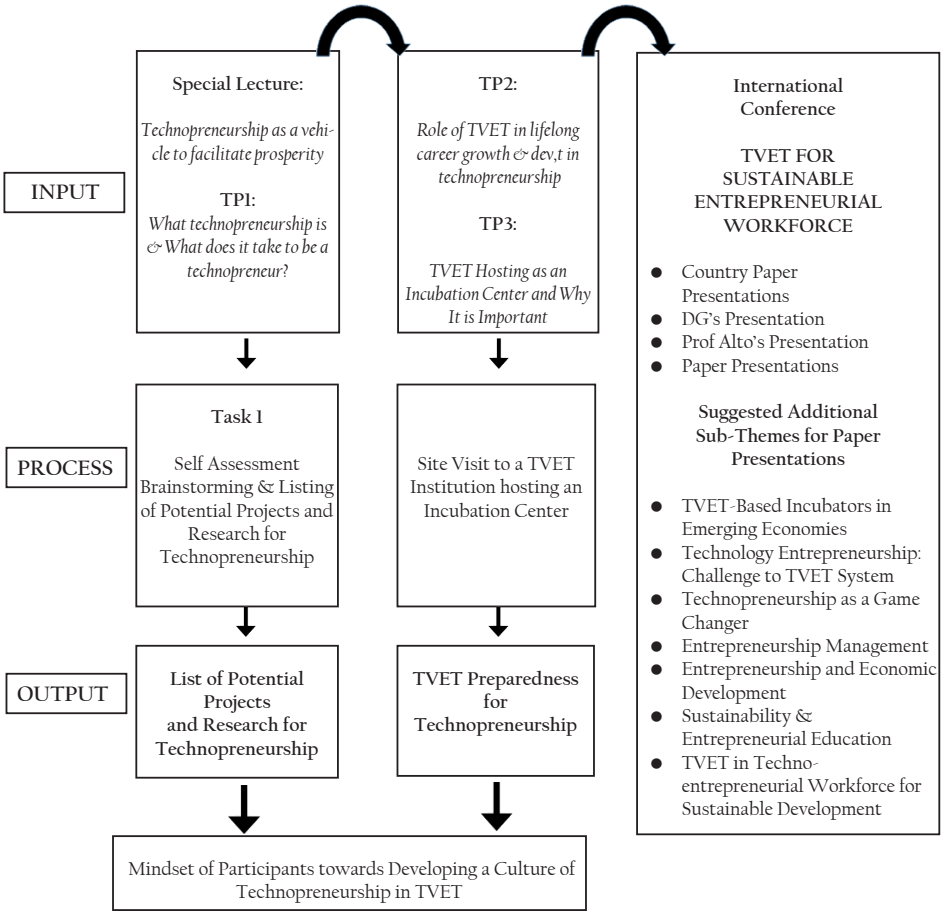


Table 2: Sample Format of the Training Schedule

TRAINING PROGRAM MANAGEMENT

Training management includes the personalities involved in the training program from planning to implementation. These are the program supervisors (CPSC and Local Supervisors, CPSC and Local Coordinators, CPSC and Local Resource Persons and Facilitators). Local Counterparts are included whenever training program is conducted outside of CPSC.

ANALYSIS OF THE TRAINING OBJECTIVES FOR RELEVANCE, ALIGNMENT, SEQUENCE AND EVALUATION

This is an exercise which is not a component of the program book but is essential to be done to make sure your training program is well prepared. Here are questions that will aid you in the analysis.

1. What sequence should the objectives be achieved?

   Usually, learning builds on learning. It may be useful to learn certain areas of knowledge and skills before learning new areas.

2. Will the objectives achieve the overall training goal(s)?
3. What are the best learning activities to achieve the objectives?
4. Do the methods match the participants' particular learning styles? Do the methods stretch their styles, too? Are the methods readily accessible? Do the methods take advantage of real-life learning opportunities?
5. Do the activities include ongoing reflections about learning?

   The learners will benefit from regularly taking time to stand back and inquire about what is going on in the training, what are they learning and what, if anything, should be changed.

6. What results, or evidence of learning, will be produced?
7. Who will verify that each of the learning objectives was reached?

   Ideally, the learning is evaluated by someone who has strong expertise in the areas of knowledge and skills required to achieve the training goals.

8. How will you evaluate the competencies of participants?

   Think about facilities, technologies, personnel, special expertise, etc. You may want to update the "Budget".

9. How will learners' manage time and stress during the learning?
10. What costs will be associated with developing and implementing your plan?

PROGRAM/COURSE EVALUATION

Training program evaluation in technopreneurship and in any program for that matter is a continual and systematic process of assessing the value or potential value of a training program. Results of the evaluation are used to guide decision-making around various components of the training (e.g. instructional design, delivery, results) and its overall continuation, modification, or elimination. This phase of the training program in technopreneurship is usually done online. However, in the event that the internet connectivity is somehow poor, paper and pencil evaluation may be conducted. There is an approved form designed for this purpose (refer to the Training Division). The evaluation covers both administrative and academic aspects of the program.

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APPENDIX 1
Other Activities That Make Training Interactive

Buzz Group – A large group is subdivided into smaller groups for quick discussion. All groups meet simultaneously to react to a topic, generate ideas or questions, etc. They bring their results back to the larger group.

Case Study – A written or oral account of a situation is given to learners. Either individually or in small groups, they are asked to analyze the case and present recommendations.

Coaching – A one-on-one process in which intensive learning occurs via demonstration and practice followed by guidance and feedback .

Debate – Two learners or teams of learners (or two instructors as a role play-see role play below.) defend opposite sides of an issue for purpose of exploring all aspects.

Demonstration – Learners observe the performance of a task or procedure. The demo may be live or recorded and may be best if both (live at time of training, recorded for future reference).

Discussion – An exchange of ideas on a topic. It can be leaderless or moderated. It can be totally unstructured and spontaneous or it can be highly structured.

Game – An exercise in which competition or cooperation (or both) is used to practice principles learned previously. This is usually intended to be fun.

In-Basket – Prepared items are given to the learner as if arriving in their in-basket. Learner must prioritize, make decisions, handle any difficulties and respond to time deadlines and pressure, etc. in order to get the assignments completed.

Instruments – questionnaires, checklists, etc. that learners are asked to fill out to create to explore a topic.

Lecturette – A brief oral presentation, used to overcome some of the weaknesses of formal lectures. These are usually interspersed throughout a course of training.

Mini-Case Study – A modification of the case study in which a brief situation is described by the participants who discuss how the case should be handled. This is characterized by only key facts being presented with brevity of discussion. This is often used to give examples of situations and procedures.

Neighbor Discussion – A quick method used to create participation and activity among the participants. They are asked to speak to the person beside them/across from them for a few minutes to discuss an issue, answer a question, or generate questions to ask.

Panel – A discussion among experts/ practitioners take place while participants ask questions after giving panel members time to speak. Often requires a moderator.

Shared Vision 2023

The Inter-governmental TVET Leader for Sustainable Development

Mission

Transforming TVET towards Sustainable Societies through Outcome-Based Quality Training, Accreditation, Research and Image Building for stakeholders

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