

Webinar Series

# Design and Delivery of Technical and Vocational Education & Training

## Session 1: Online Vocational Learning: Necessary Policies

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## ▶ Distance Learning: the Plus & Minus and Necessary Policies

- Definition of Distance Learning
- Advantages and Disadvantages of Distance Learning
- Benefits of Distance Learning
- Issues to be paid attention to by policy makers

# ▶ Definition

## Definition

A way of delivering educational or training programs remotely and do not require simultaneous interaction between teachers/instructors and learners.

It's NOT a new concept. Previously, learning could also be done through the post services.

Technological developments have provided impetus for distance learning over the past 2 decades; so it is often referred to as digital/electronic learning. COVID-19 pandemic has also provided encouragement over the past 3 months.

Distance is not the same as online. → Focus

Distance can also be offline.

# ► Advantages and Disadvantages

## ▶ Opportunities

- People can study at any time
- Learners can be anywhere, as long as they have access to the internet.
- Learners can set their own pace of learning. Suitable for learners with different backgrounds; and limited time.
- Cost effective. For learners, for example, there is no need for transportation costs (note: internet costs can be handled). For institutions, for example, the provision of online classes is more cost effective than face-to-face ones.

## ▶ Disadvantages

- Requiring strong motivation and self-discipline
- Feelings of isolation (no face to face learning-mates)
- The impacts of peer learning (peer to peer) tend to be more limited
- Internet connection: speed and cost
- Sometimes requiring a high initial cost. For institutions: to design training. For learners, for the equipments.



# Benefits



## ▶ Benefits

Distance and digital learning is important to be developed, even before or without a situation like the COVID-19 pandemic, because of the benefits it offers.

### **Achieving inclusive socio-economic development**

People need to have equal access to technical and vocational education and training; and to skills development.

Digital learning can be made flexible and promote lifelong learning, reaching a wider range of learners; thereby encouraging inclusiveness.

Conditions: designed and organized wisely and integrated.

## Benefits

### Improving learning outcomes (1)

- Flexibility: time, location, learning pace.
- Challenges in motivation and discipline? Blended learning modalities or other modalities (MOOC, webinars, mobile, tutor-based, etc.).
- Can be made interesting with a variety of technologies: text, images, videos, VR/AR, surveys, peer learning, etc.
- Simulation technology which previously did not yet exist. VR/AR, for example, gives learners the opportunity to apply theories to practice in a realistic way.

## ▶ Benefits

### Improving learning outcomes (2)

- A student-centered learning. Example: learning analytics and empathy maps can be used to provide learning paths tailored to the learners' learning styles, strengths and weaknesses.
- Can be linked to various additional information/readings. Learners navigate themselves according to their needs and circumstances → self-learning → the key to lifelong learning.

## Benefits

### Responding to the fast-changing skills demands

- Digital learning formats allow material to be easily updated to reflect the latest developments.
- It often also more cost effective.
- ICTs also help instructors to keep abreast of the latest developments. Open Educational Resources, for example, can provide local needs and curriculum because they are easily accessible. Instructors who may lack expertise in certain vocational subjects can also search for learning materials online.

# ► Issues to be paid attention by policy makers

## ► Issues to be paid attention by policy makers (1/7)

### Introduction of ICT in vocational training

- Can learn from experiences/other countries, but still need to consider local conditions and contexts (national/local).
- Digitalization of vocational training needs to use a harmonious approach between institutions, adapted to the overall nature of the education sector and become an integral part of comprehensive human resource development policies.

## ► Issues to be paid attention by policy makers (2/7)

### Digital divide and inequalities

- Digital literacy, familiarity with digital learning.
- ICTs could be dual-edged swords.

### Minimizing digital divide

- Interventions should aim to expand access to ICTs: increasing basic computer literacy and promoting community digital learning centers.
- If not available, use offline technology such as radio and TV.
- Adapt to local conditions: local language, local context.

## ► Issues to be paid attention by policy makers (3/7)

### Addressing accessibility barriers

- Especially in rural areas, access to the internet and even electricity is still limited. Device maintenance costs may also be limited.
- Think of a solution. For example: save materials on USBs or if it is stored in the 'cloud', 'break down' the materials into a number of small-sized documents to make them easier to download.

### Partnership with the industry

- Training institutions need to establish partnerships with industry. It is the industry who knows skills needs.
- Sectoral Skills Board/Forum of Industry is an example.



## ► Issues to be paid attention by policy makers (4/7)

### Reviewing and redesigning curriculum and assessment

- Integrating technology into distance learning requires appropriate wisdom and strategy. For example, some materials are easier to understand when they are illustrated through animation rather than text.
- Teaching governance also needs to be adjusted. An instructor does not only 'lecture' in front of the class, but also plays an active role through mentoring, question and answer sessions etc.
- The way of assessing should also be adjusted, for example responding to each other in peer learning can be scored.
- Training institutions need to improve their multimedia and ICT resources.

## ► Issues to be paid attention by policy makers (5/7)

### **Making distance learning materials widely available.**

- Stored in the cloud so that instructors and learners can access it at any time.
- If internet access is limited, it can be stored offline (USBs, tablets) and sent to training institutions and local community training centers.

## ► Issues to be paid attention by policy makers (6/7)

### Supporting instructors development

- People need to learn to be able to use technology. So do the instructors/teachers.
- There needs to be training for instructors about the technology they must use and how to integrate technology into the learning process.
- There needs to be an investment to train and support the instructors in this matter.

## ► Issues to be paid attention by policy makers (7/7)

### Cyber security

- There needs to be investment to prevent and deal with cyber attacks.
- Especially if individual learning is stored, monitored and assessed in cyber space.

# ► Topics for subsequent sessions

## ► Focus on Skill (Vocational) Training Online

1. Introduction to online skills training
2. System and setting up online skills training
3. Design of an online skills training program
4. Utilising new technologies for skills training, with focus on Building and Construction
5. Development of Virtual Reality as an online tool, with focus on Electrical and Refrigeration training
6. Professional development for skills trainers: pedagogical skills, etc
7. Assessment and certification
8. Standard of distance learning
9. Addressing digital divide