"Pros and Cons of Virtual Teaching and Learning on Required Skills of Graduates Entering the Labor Market"

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Learning Objective:

After end of the session the participants are able to know

01

Exploring the concept of Virtual Teaching and Learning.

02

Analysing the pros and cons of virtual teaching and learning in the context of Labour market need

03

Developing strategies to equip the graduates to cope up the market need

Exploring the concept of Virtual Teaching and Learning.

Exploring the concept of Virtual Teaching and Learning.

What is Virtual teaching and learning:

"Virtual teaching and learning is a learning experience that is enhanced through utilizing computers and/or the internet both outside and inside the facilities of the educational organization. The instruction most commonly takes place in an online environment. The teaching activities are carried out online whereby the teacher and learners are physically separated (in terms of place, time, or both)"

((https://www.vedamo.com/knowledge/what-is-virtual-learning/))

Free tools for virtual teaching and Learning

Ted-ED: access existing online lessons or create your own lessons, useful to setup online discussions.

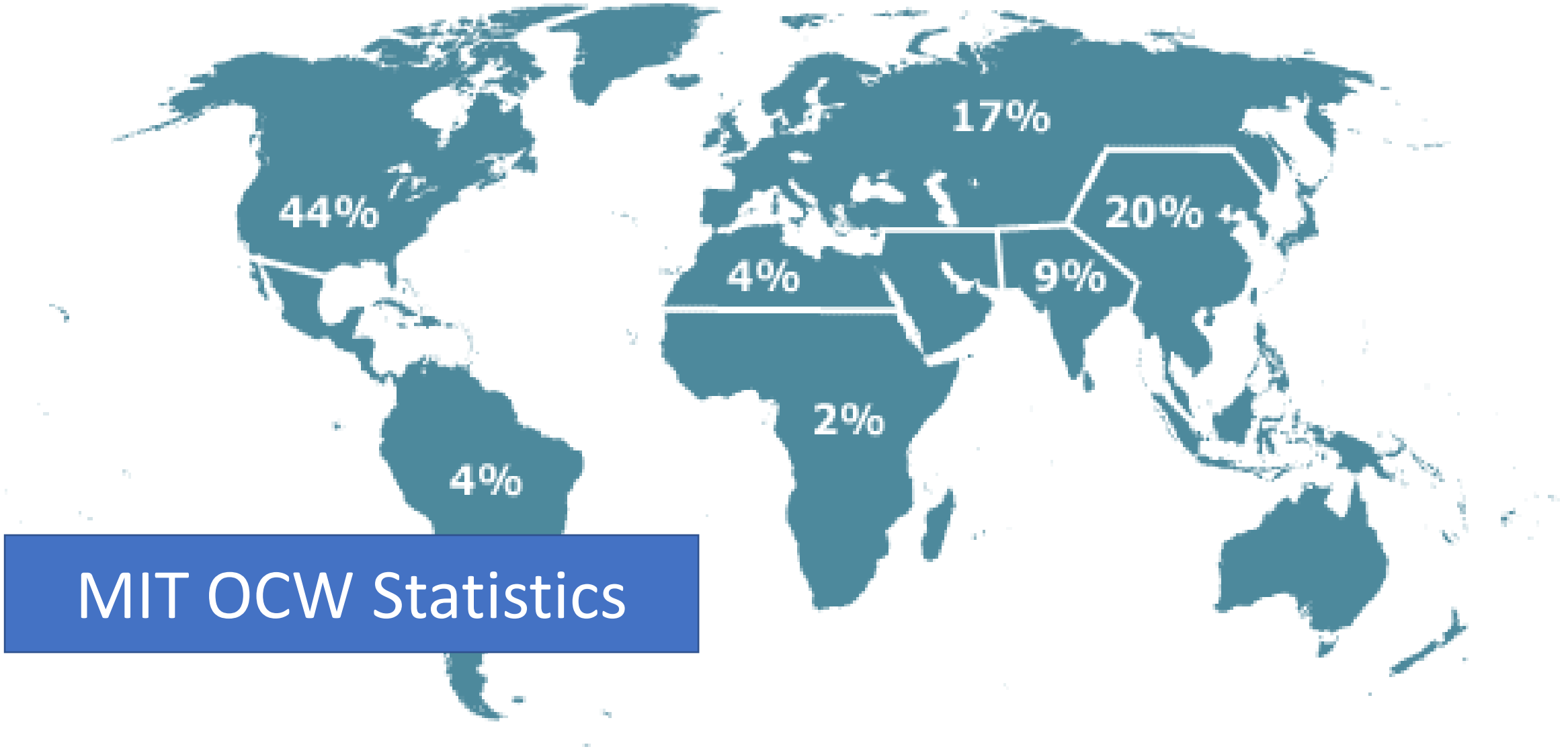
Videos: use videos from YouTube, khan academy and Vime

Conducting online sessions: Microsoft Teams, Hangouts, Zoom or Cisco webex.

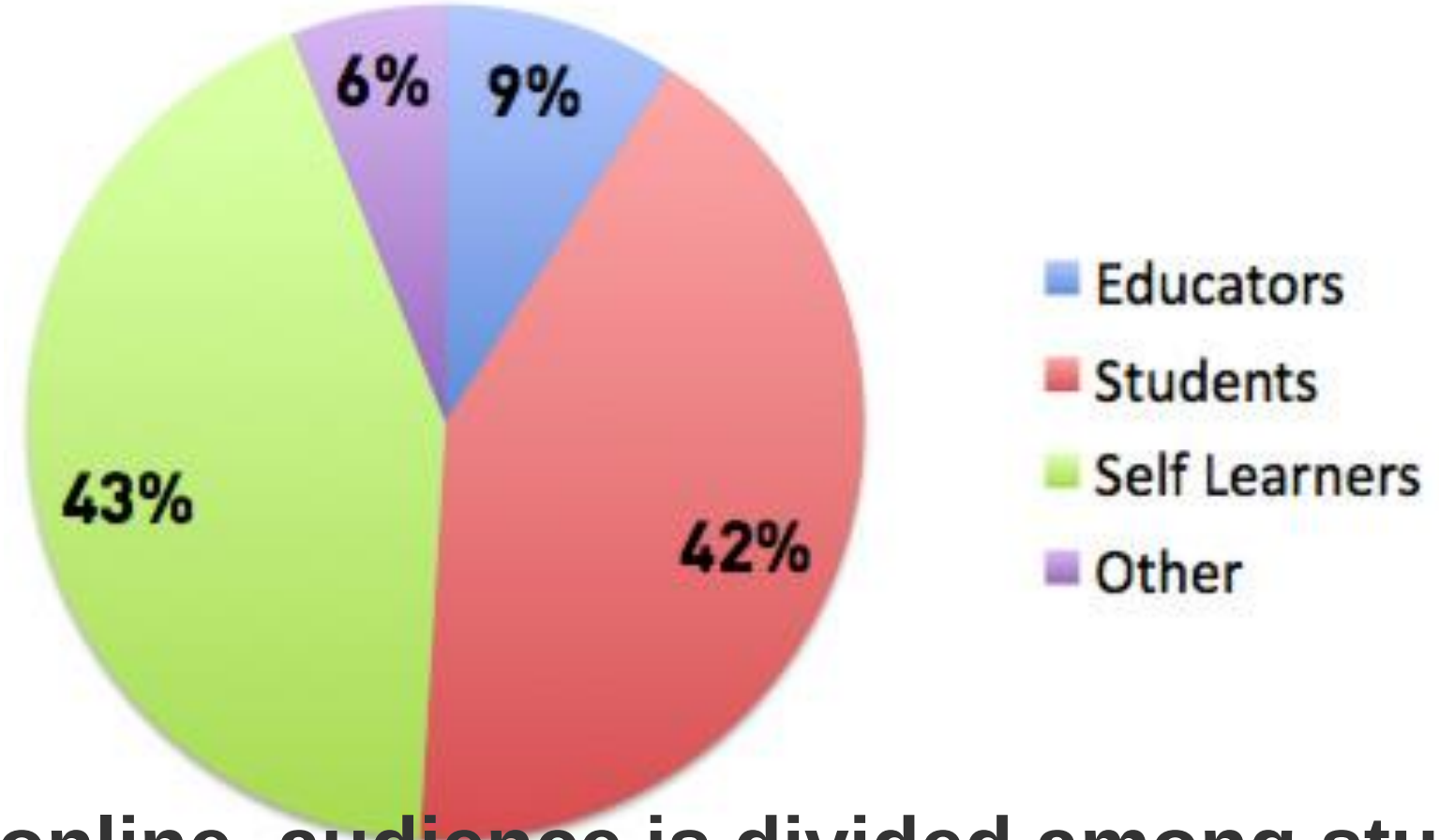
Intouch with students: Moodle/WhatsApp/Facebook/twitter / slack

(Apply your institutions safeguarding policy during setup and use)

MIT Online OpenCourseWare (OCW) receives millions of visits each year



MIT OCW Statistics



MIT online audience is divided among students, educators, and self-learners:

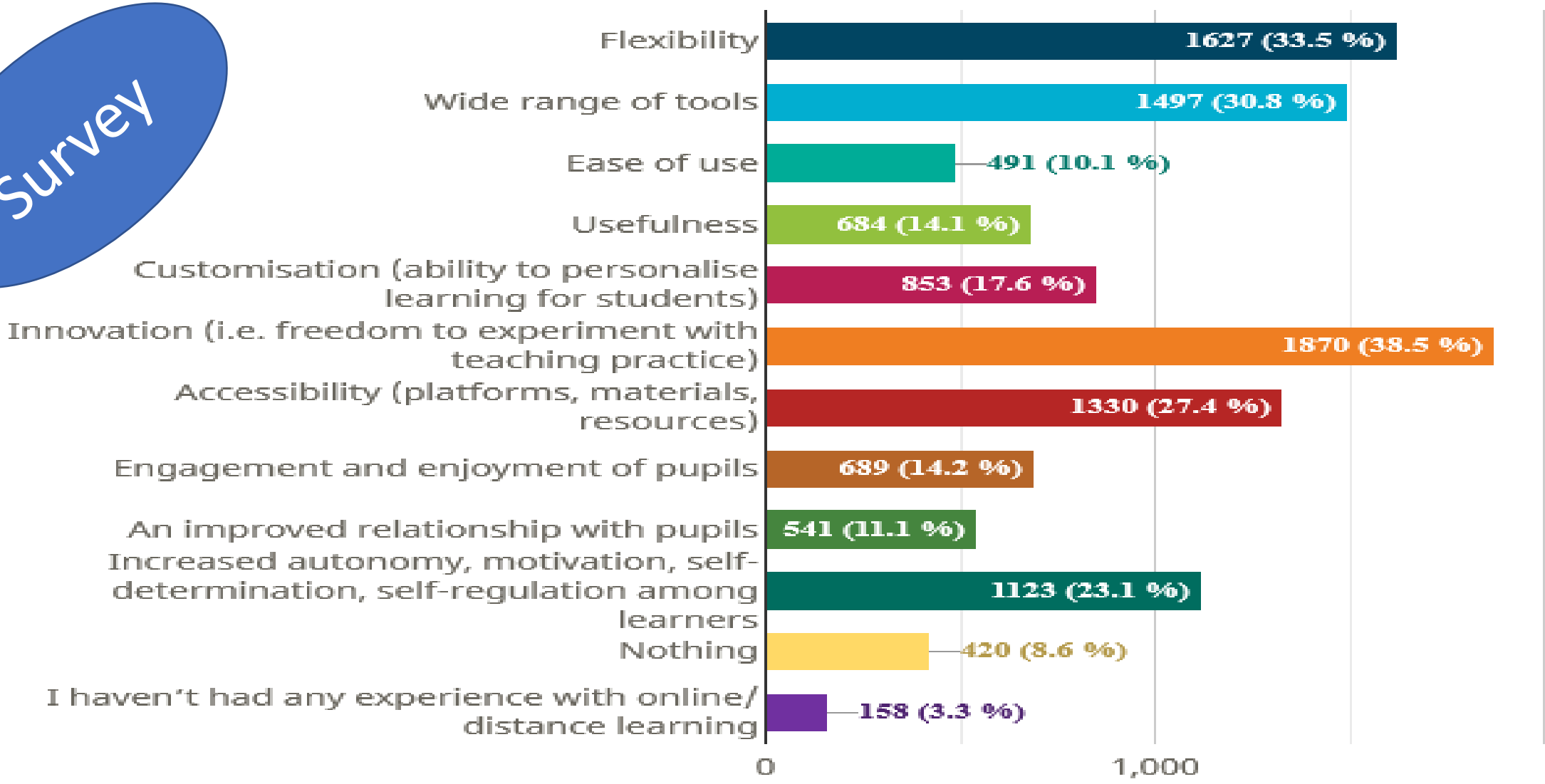
MIT OpenCourseWare is being successfully used for a wide range of purposes.

USE SCENARIO		% OF USE
Educators	Improve personal knowledge	31%
	Learn new teaching methods	23%
	Incorporate OCW materials into a course	20%
	Find reference material for my students	15%
	Develop curriculum for my department or school	8%
Students	Enhance personal knowledge	46%
	Complement a current course	34%
	Plan a course of study	16%
Self Learners	Explore areas outside my professional field	40%
	Review basic concepts in my professional field	18%
	Prepare for future course of study	18%
	Keep current with developments in my field	17%
	Complete a work-related project or task	4%

((https://ocw.mit.edu/about/site-statistics/))

As a teacher, or on behalf of a teacher you know, what has pleasantly surprised you about online/distance learning?

Survey



((https://www.schooleducationgateway.eu/en/pub/viewpoints/surveys/survey-on-online-teaching.htm))

Analysing the pros and cons of virtual teaching and learning in the context of Labour market need

Pros of virtual teaching and learning

- CONVENIENCE
- TECHNOLOGY
- VIRTUAL LABS
- PERSONAL GIAN AND CARRIER OPPORTUNITIES
- LESS EXPENSIVE AND QUICK FEEDBACK
- VARIOUS LEARNING FORMATS

Convenience:
This convenience is in regard to study location, time, course duration, etc.

Access to resources:

own pace and on their own schedule and accessed anywhere, at any time.

Course work and directions can highly be customized to your field and discipline

For those who are physically blessed it is very much convenient to attend the class through virtual teaching learning.

Technology

You can work on the course just about anywhere you have computer access.

Online courses provide an opportunity to learn new technologies and practicing the use of office software, Internet, etc.

Quick access the solution from the internet for various design problems in Electronic, Electrical and mechanical.

Easy to assess different types of material from internet.(Audio, video, written)

Online Survey

- **students retain 25-60% more material when learning online compared to only 8-10% in a classroom.**

- **This is mostly due to the students being able to learn faster online; e-learning requires 40-60% less time to learn than in a traditional classroom setting because students can learn at their own pace, going back and re-reading, skipping, or accelerating through concepts as they choose.**

Virtual Labs

A virtual laboratory is an on-screen simulator or calculator that learners use to test ideas and observe results.

They allow the learner to “tinker” with laboratory equipment that behaves in almost the same way as it would in a real environment.

Learners perform a series of experiments that yield authentic results.

Towards the end, learners are able to generalize these results and deduce a learning objective.

Personal Gain and career opportunities

- Virtual learning gives more time to learn extra language for personal gain.
- Virtual learning provide the opportunities to complete extra courses through online for better opportunities growth in carrier .
- Through virtual learning possible to complete various courses from abroad for gaining better knowledge and experience in particular field.

- The lower costs that come with choosing online learning make it a more feasible option for learning new skills.
- When students are paying less money, they are often more willing and able to take multiple courses as well.
- There will be no travelling cost and material cost because everything is virtual.
- Easy give the feedback at a movement.

Less expensive and Quick feedback

Various Learning Formats.

In this world no two people are exactly alike, including the ways in which they learn and with eLearning you have tons of options.

For example, here are a few of the various learning formats available:

- **Short, modular-type work.**
- **Lengthier lessons.**
- **Video learning.**
- **PowerPoint presentations.**
- **Interactive quizzes.**

By selecting a class that's more appropriate for your desired style of learning, you'll be better equipped to actually absorb the information in the long run.

Cons of virtual teaching learning

Real time practical skills

One way is not fit for all

Hands-on experience with technology

supervision of the instructor and interaction with other learner

Lack of control

Design, and developing of real-time solutions for industry-related issues.

Real time Practical skills

- Most of the technical and vocational courses are laboratory based course and real time practical skills are necessary.
- It is very difficult to a trainee/student to working in any company after finishing the graduation without real time practical skills.

  Ex:

  Instrumentation trainee.

- If it is compensate with virtual labs it is very difficult and all courses virtual may not be available.
- Learners who are still in the process of acclimating to a technology-heavy work environment may not enjoy online training or may have difficulty appreciating its advantages.

One way is not fit for all

One of the main disadvantages of e-learning is that it doesn't appeal to all learning styles.

While most people appreciate the freedom and flexibility that e-learning provides, many prefer the traditional classroom method to learning on a computer.

Some people might prefer to learn through a hands-on approach and may find e-learning a little too much like going through the motions, instead of applying the lessons to real-life scenarios.

hands-on experience with technology

Hand on experience is must for a technical and vocational graduate.

Example:

- **If the trainee has graduated from electrical and Electronics**

He know very well about

- **Phase voltage(single phase, 3 phase)**
- **How to use Multimeter Beamex Mc5**
- **How to measure the phase voltage**
- **How to measure the voltage current resistance and capacitance**

These hand-on experience skills are must to work in the industry.

But virtual teaching and learning these things are not possible "only knows the theory how to measure"

supervision of the instructor and interaction with other learner

THROUGH VIRTUAL TEACHING AND LEARNING FACE TO FACE, INTERACTION IS MISSING.

BECAUSE OF THIS KNOWLEDGE AND EXPERIENCE OF THE TRAINER AND SUPERVISION WILL BE AUTOMATICALLY MISSED.

SOCIAL INTERACTION WITH FELLOW LEARNERS IS MISSING AND DIFFICULT TO GET KNOWLEDGE FROM OTHER LEARNERS FOR VARIOUS ISSUES.

Lack of control.

Own time and in their own way

Paying attention.

weary of using eLearning for training purposes

Design, and developing of real-time solutions for industry-related issues.

Sometimes trainees will get the opportunities to deal with real problems of industry.

Through VTL trainees /Students are miss the opportunity of design and developing of real time solutions for industry related issues.

Example:		
Transformer related issues	motors related issues	sensor related issues.

Developing strategies to equip the graduates to cope up the market need

Skills Labour Market Needs:

Basic Skills:

- Literacy
- Numeracy
- Technical (Related to the field)

Transversal skills:

- The skills individuals have which are relevant to jobs and occupations other than the ones they currently have or have recently had. These skills may also have been acquired through non-work or leisure activities or through participation in education or training.

The strategies for cope with the cons of virtual teaching and learning to acquired skills for entering the labor market

Institutions should have the virtual lab facility for all laboratory sessions.

Institutions teaching curriculum should include the industrial apprenticeship before end of the course .

On-job training facilities should be provided by the Institutions for all the courses.

Group based Project-based learning approach (PBL) on real-time problems for good interaction among the trainees.

Conducting offline in-course assessment.

Special pieces of training on personal competencies like soft skills and updated technology.