ESCALATE

Module 1
Unit 1

Unit 2 – The role of online teaching and learning in a globalized digital economy

Module 1: DIGITAL EDUCATION DISRUPTION – THE ROLE OF ONLINE LEARNING AND DIGITAL TECHNOLOGIES

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Unit 2: The role of online teaching and learning in a globalized digital economy

Module 1: Digital Education Disruption – The Role of Online Learning and Digital Technologies

1. The use of digital technologies in online teaching and learning
2. **The role of online teaching and learning in a globalized digital economy**
3. Digital disruption in higher education

The objectives of this Unit are:

- Understanding how the online teaching-learning process is implemented in HEIs;
- Understanding specificities of the online learning environments;
- Discussing the online learning and teaching methods;
- Identifying digital skills and competences required by digital transformation.

Contents

1.1. Online learning environments

The online learning environment is a specific environment used for learning and teaching within computer mediated digital systems.

An online learning environment has no physical location where the instructors and students are separated by space [1].

It is based on the learning platform that allows sharing of educational materials with the learners via the web using computer mediated communications.

Did you know...

1.1. Online learning

Statistics & Trends

- eLearning market is projected to grow, to over $240 Billion by 2022 [2]
- eLearning industry has grown by over 900% since 2000 [3]
- Mobile eLearning market will reach $38 Billion by the end of 2021 [4]
- eLearning courses produce 86% fewer greenhouse gases [5]
- Online course increase student retention by 5 times [6]
- The most popular e-learning platform for courses is Udemy, with more than 20,000 experts creating content. There are more than 12 million Udemy students taking courses [7]

1.1. Online learning environments

Characteristics

Based on text, audio and video

Asynchronous communication

Self-reflection

Anonymity

Flexibility of time and place

Independent learning

1.1. Online learning environments

Virtual learning environment (VLE)

A virtual learning environment (VLE) is a collection of tools designed for teaching and learning in order to enhance the learning experience by including computers and the Internet in the learning process.

The components of a VLE can comprise “curriculum mapping (breaking curriculum into sections that can be assigned and assessed), student tracking, online support for both teacher and student, electronic communication (e-mail, threaded discussions, chat, Web publishing), and Internet links to outside curriculum resources” [8].

1.1. Online learning environments

Formal & informal learning environment

Formal Learning Environment is a learning environment where lessons are provided in an organized and structured way (e.g. Moodle). In a formal learning environment, the providers (teacher/institution) sets the goal and objectives.

Informal Learning Environment is a learning environment where the learning occurs unintentionally (blogging platforms, social media, educational webinars, Twitter, Live streaming). Informal learning means the learner sets the goal and objectives [9].

1.1. Online learning environments

Personal Learning Environment (PLE)

Personal Learning Environments (PLE) are systems that help learners to manage their own learning. PLE is a user- centered learning approach. It allows learners to:

- set their own learning goals (with support of their teachers)
- manage their learning, both content and process
- communicate with others in the process of learning [10].

1.1. Online learning environments

Social Learning Environment (SLE)

A social learning environment is an effective way of allowing users to interact with each other to create content, share knowledge, and learn from one another. It combines social elements like networking, file sharing, and microblogging. These are used to create an environment in which users work and learn collaboratively.

A SLE integrates social media technologies to provide the necessary social tools for collaboration and information sharing across the users [11].

Example

Online learning environments

Good practice

Digital Education Action Plan (2021-2027)

The Digital Education Action Plan (2021-2027) highlights the European Commission's support for adaptation of education and training to the digital age through

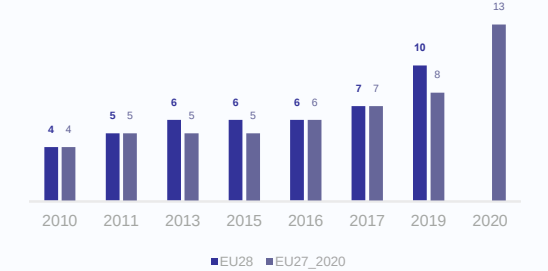
- launching a feasibility study on a possible European exchange platform to share certified online resources and connect with existing education platforms;
- supporting digital transformation plans at all levels of education and training through Erasmus cooperation projects. Support digital pedagogy and expertise in the use of digital tools for teachers through Erasmus Teacher Academies and launch an online self-assessment tool for teachers - SELFIE (Self-reflection on Effective Learning by Fostering the use of Innovative Educational technologies) for Teachers [12].

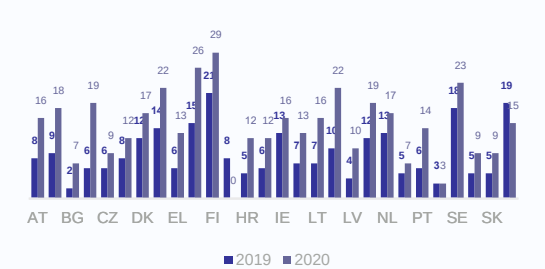
1.2. Implementation of online teaching-learning in HEIs

Compared with the traditional teaching methods, the interaction between teachers and students and students' learning initiative by online teaching mode are strongly enhanced.

Did you know...

Individuals using the internet for doing an online course





1.2. Implementation of online teaching-learning in HEIs

Asynchronous Online Courses

The main characteristics of asynchronous online courses is that they are not provided in real–time. Students have access to access to pre-recorded lectures and digital curriculum materials and are given a time frame to complete course work and exams.

Interaction usually takes place through email, discussion boards, social networking, and collaborative documents. There is no class meeting time in asynchronous online courses [13].

1.2. Implementation of online teaching-learning in HEIs

Synchronous Online Courses

These types of courses require a simultaneously online interaction between teachers and students. They are conducted in real-time. Synchronous learning includes live webinars, video conferencing, virtual classrooms, instant messaging.

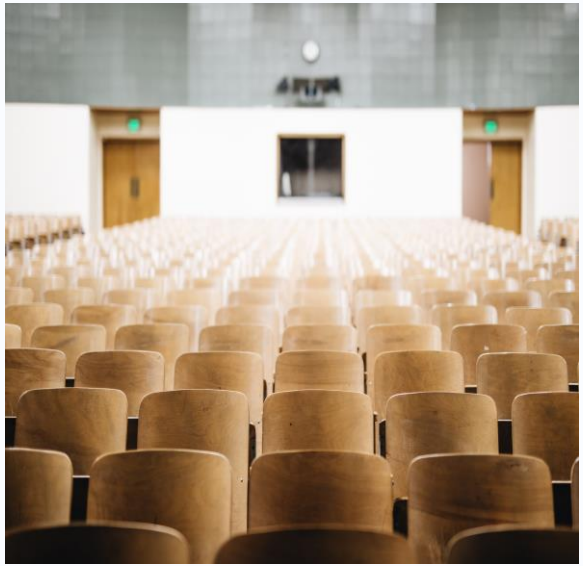
In synchronous learning environments participants interact through text, video or audio chat [14].

1.2. Implementation of online teaching-learning in HEIs

Hybrid Courses

Hybrid courses, also known as blended courses, are learning environments that allow for both traditional face-to-face instruction and web-based online learning.

Typically, hybrid courses integrate online and face-to-face learning activities. In-person meetings take place several times during semester and are complemented with computer–based communication in between these face-to-face sessions [15].



Good practice

Implementation of online teaching-learning in HEIs

Keep it simple

Reduce complexity

Ensuring equity

Feedback and assessment

Providing student-centered learning

Using free high-quality resources

Explore the possibility of moving away from live lessons

Communicate proactively

1.3. Online learning and teaching methods

The change in learning and teaching online is generated by the associated change of the learning environment.

Online learning and teaching therefore tends to focus more on integrating educational technology credentials and an expansive widespread technological grounded platforms in the learning environment.

Higher education institutions use online teaching „to ensure that a wide array of learning opportunities are available for students in a highly competitive technological arena” [16].

As the environment diversifies through the emergence of modern technologies, students advance their education for upskilling in a digital era.

Did you know...

1.3. Online learning and teaching methods

Strengths of Online Learning

- ✓ Acces to education without the expense of phisically travelling (convenience of time and space)
- ✓ Increased autonomy at directing student learning toward their specific needs
- ✓ Facilitate teacher-student interaction and constant feedback
- ✓ Increased enrollment of students in online courses and international cooperation
- ✓ Students are benefiting from personalized learning experiences, overcome language barriers and get an international experience, as well as good knowledge on a particular subject
- ✓ Students can easily engage in discussion with other students from a different country, cultural group, training background
- ✓ Cost-effective online courses for higher education institutions (in the long run)

Did you know...

1.3. Online learning and teaching methods

Limitations of Online Learning

- ✓ Reduced social interaction for students within the online environment
- ✓ Technical difficulties, academic deficiencies, unsuccessful online experiences [17]
- ✓ Increased risk of cyber attacks and data loss, misuse, or theft, particularly in large organizations, such as HEIs
- ✓ Limited opportunity for establishing trust [18].

1.3. Online learning and teaching methods

Live and streamed video

Live streaming is a useful technology for real-time interaction in online learning.

Live online classes can significantly improve distance lectures since they facilitate a better capture of the dynamics and interconnection that occurs within the classrooms. Hence, learners attention is attracted and also their interaction throughout the lecture via chat, comments, questions and debates emerging in an interactive environment.

Examples of Online Video Education Platforms to Live Stream Classes [19]

1.3. Online learning and teaching methods

Lecture capture

Lecture capture offer flexible learning options and give professors “the ability to save and upload the videos for students to playback if they missed the session or need to go back and rewatch part of the lesson” [20].

Students benefit of traditional and personalized learning experience from a virtual classroom without the expense of leaving their homes, through the use of technology into the educational process.

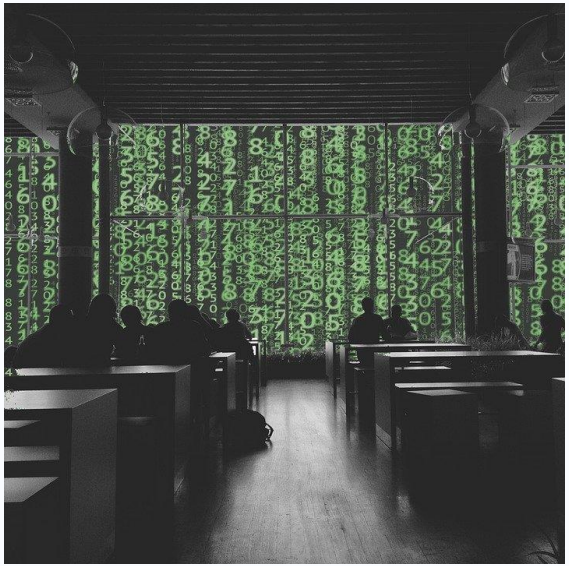
Pre-recorded lectures are often used as part of the coursework and allow students the flexibility to follow the courses online at different points in time, at their own pace and according to their schedule, thus improving the overall reach and graduation outcomes.

1.3. Online learning and teaching methods

Courses using learning management systems

Online lectures often embed software applications such as learning management systems (LMS), a concept emerged from e-Learning.

LMS allow educators to create professional structured content (including images, videos, data, tables, links etc.) to their course, that can be easily accessed by students in a controlled manner, since teachers manage their courses and modules, enroll students and give them access to the online course, or allow students to take thier own attendace, prepare reports, import datasets and track studying progress.



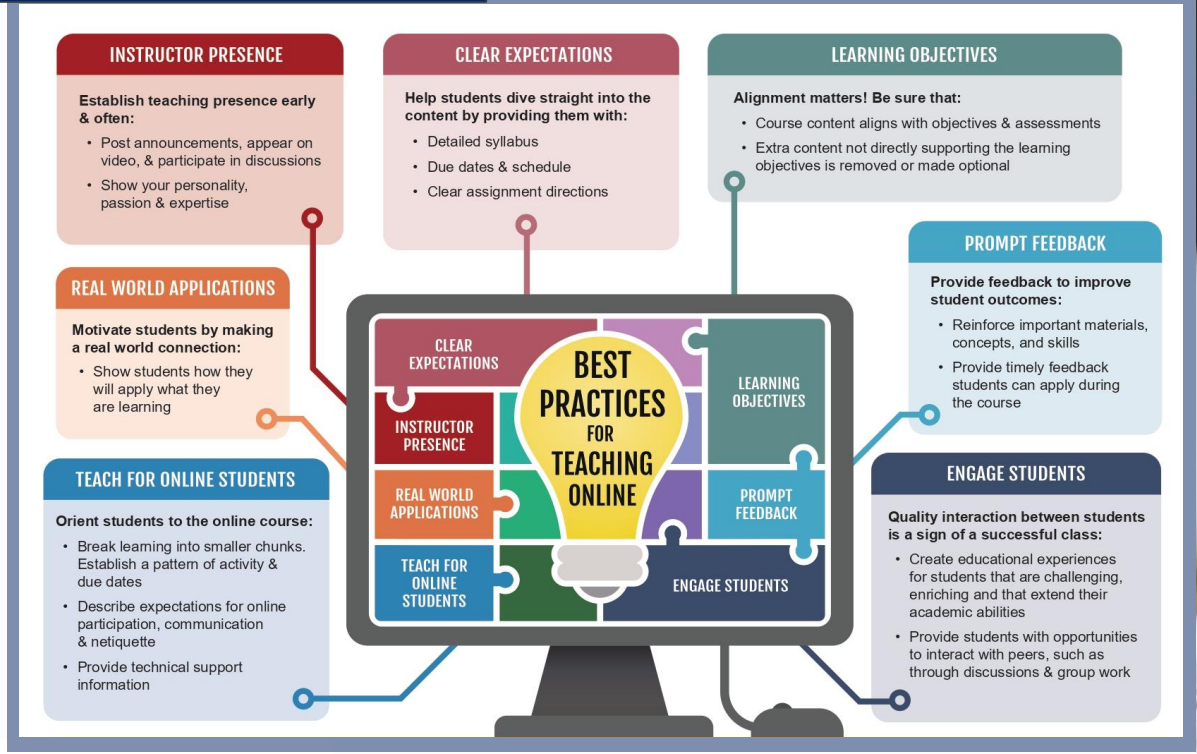
Example

Online learning and teaching methods

Learning Management Software (LMS)

Canvas or Blackboard - essential platforms for online teaching and learning;
AG5 Skills Management - a skills management platform that enables HR and operations coordinators to manage professional and personal skills for every employee across an entire workforce;
Learn Worlds - allows professionals within the education industry to create and sell custom online courses;
TalentLMS or Adobe Captivate Prime or Mindflash LMS – represent LMS built for online training ourses;
LearnUpon is a LMS built to efficiently configure, deliver, and implement corporate training;
Fuse Universal - learning platform that connects learners with the knowledge and expertise they need to develop skills.

Good practice
Online teaching and learning



Source: [21]

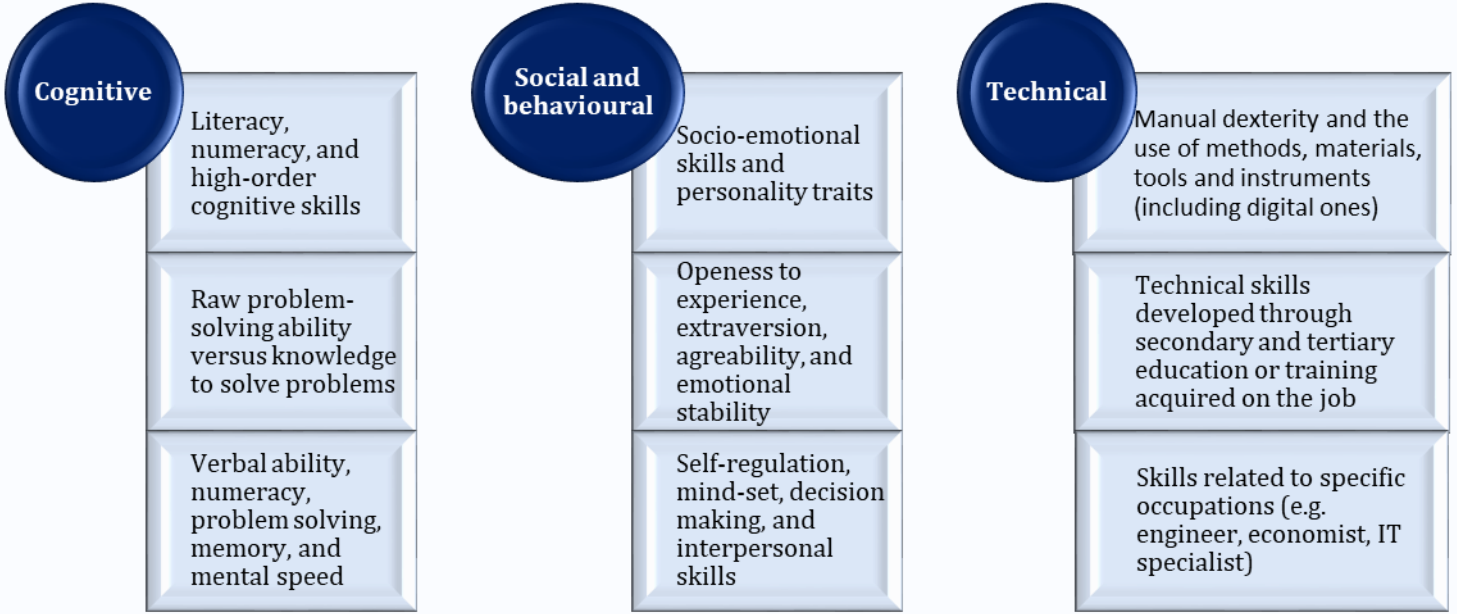
1.4. Digital skills and competences for the digital transformation

Digital skills and competences of citizens (labour force) significantly determine and enhance employment opportunities and economic performance, particularly in a globalized modern economy, where digital technologies shape/transform the labour market and societies at large.

In this perspective, the educational system and education providers, particularly higher education institutions (HEIs), play an essential role in providing the digital skills and competences needed by individuals to successfully engage in the world of online work, by considering the rapid shift towards digital transformation and the Covid-19 pandemic challenges.

1.4. Digital skills and competences for the digital transformation

Types of skills needed in a globalized modern economy



Source: [22], [23]

1.4. Digital skills and competences for the digital transformation

Challenges and objectives

Both rapid digital transformations and the Covid-19 pandemic brought important threats for the economy and the EU labour markets and impacted millions of people that need to acquire new skills or upskill to maintain their jobs and remain actively integrated on the labour market.

As entailed by Brolpito [24] and the European Skills Agenda there is a keen need for digital skills, and „in particular for 'digitally smart people', who are not only able to operate digital technologies, but can also innovate and provide leadership in terms of their use".

The European Skills Agenda sets as target for 2025 a "70% share of adults aged 16-74 having at least basic digital skills (in %)" compared to 56% in 2019, namely a percentage increase of 25%.

Did you know...

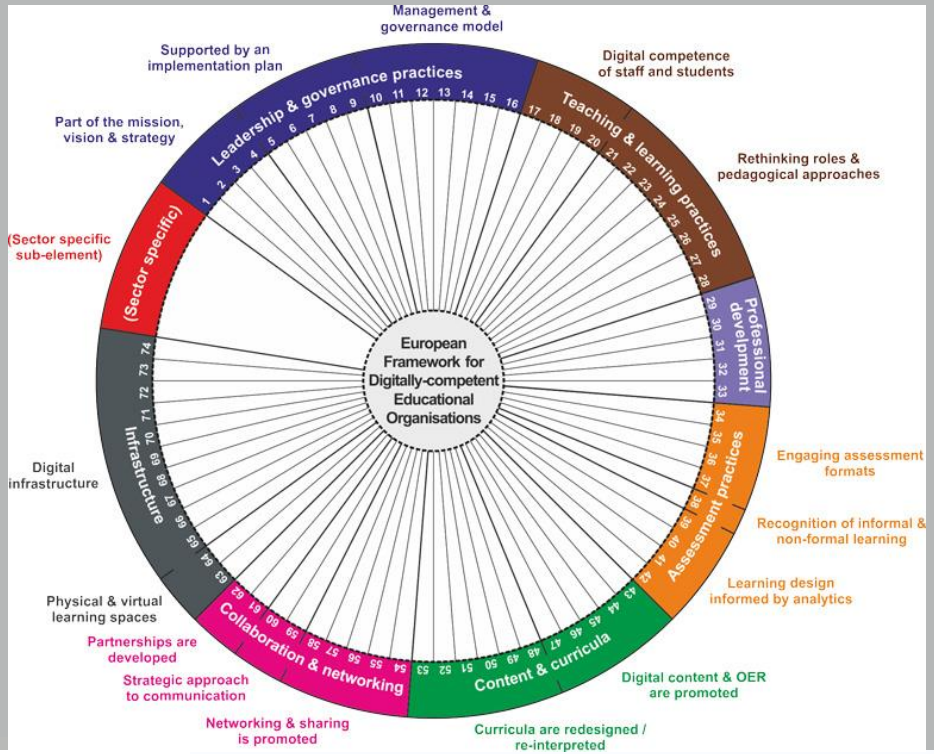
The Digital Competence Framework / Areas

Information and data literacy	Communication and collaboration	Digital content creation	Safety	Problem solving
•To articulate information needs. To search for and access data, information and content in digital environments, and to navigate between them. To create and update personal search strategies	•To interact through a variety of digital technologies and to understand the appropriate digital communication means for a given context	•To create and edit digital content in different formats, to express oneself through digital means	•To protect devices and digital content, and to understand risks and threats present in digital environments. To know about safety and security measures and to have due regard for reliability and privacy	•To identify technical problems when operating devices and using digital environments, and to solve them (from troubleshooting to solving more complex problems)

Source: [25]

Example

EU Framework for Digitally Competent Educational Organisations



Source: [26]

Good practice

European Universities Initiative

Main objective: “to address societal challenges and skills shortages faced in Europe”.

„Demand for highly skilled people is increasing; by 2025, half of all jobs will require high-level qualifications. The COVID-19 pandemic has suddenly accelerated the digital transformation of higher education institutions. Yet, much more needs to be done for deep technological and structural changes to the benefit of learning and teaching, allowing for more inclusion and flexible learning approaches” (European Universities Initiative Factsheet)

More info here

Key takeaways

- The emergence of new digital technologies in education accelerated the online learning. The online learning industry rocketed in the last years.
- Implementation of online teaching-learning in HEIs became more and more frequent beginning to act as a complete substitute for both distance learning and the traditional face-to-face class.
- Online learning and teaching methods diversified bringing a lot of benefits for education and making it accessible to anyone with internet access.
- In this context, digital skills and competences became critical for a success on the labor market.

Reflection

Have the roles changed at your university?

- Think about your own university.
- Which were the main online learning/teaching activities 10 years ago?
- And what about now? Have the online learning/teaching become the “new normal”?
- How will technology impact the learning and teaching process in the future?

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