



Digital Technologies in HE: from the European vision to the university governance

Theoretical framework
European framework
Template and tools for national Case Studies

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Date: 12/07/2021



Erasmus+

ECOLHE - Empower Competences for Onlife Learning in HE | 2020-1-IT02-KA203-079176
Co-funded by the Erasmus+ Programme of the European Union



INTRODUCTION

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2020 will go down in history as the year of the COVID-19 Pandemic.

It is the year in which, in many continents and countries of the world, we had to change our ways to work, study, socialize and live together.

In project ECOLHE - Empower Competences for On life Learning in Higher Education -, our attention is focused on the ways of studying, particularly in University.

In **Italy**, schools and universities were called "to go online" within a few weeks. Not all schools were ready to do so: some had more difficulties, due to the few previous experiences in integrating ICTs, at system level (Capogna, Cianfriglia, Coccozza 2020). Universities were probably more reactive, but here organizational, technological, and didactic processes linked to the practice of e-learning or blended training were not easy, too. These processes required enormous organizational efforts and forced educational institutions to ask themselves important questions about the use of new technologies in didactic processes. This use should be competent, responsible, effective, and efficient and it required a considerable effort in updating all the staff involved: teachers, senior and junior researchers, administrative staff.

In **Spain**, the pandemic forced educational institutions to adapt to online settings to continue with their activities, adapting content and methodologies to online teaching based on a reflection from an urgent and unprecedented perspective. This situation has implied a transformation of teaching activity (classes, teaching practices and assessment) from face-to-face to an online format. Consequently, this process implied a responsibility of each university institution involving all the agents of the educational community (teachers, students, and administration staff). Therefore, the pandemic situation caused an evident acceleration of the digitization of university institutions, which has been overcome depending on the level of digital maturity of each institution. However, most of them just replicated face-to-face activities in an online environment by developing synchronous sessions with the students, so it makes evident a need for teachers' training for real digital transformation. UOC, in this sense, contributed with its knowledge with the development of online training activities (webinars) to Spanish HE institutions and the publication of a book facing the most important issues in this process. In addition the Conference of Rectors of Spanish Universities ask both most experienced online universities in Spain (UNED and UOC) to contribute in the gathering of Open Educational Resources for online teaching oriented to HE institutions.

In **Finland**, digitalisation is at the core of the 'Finland: Vision 2030' initiated in the year 2018-19. Vision 2030 is aiming for more digitalisation of the education system and relevant services. On the one hand, Vision 2030 key goal was online, virtual and remote education. The pandemic situation further brought sudden challenges.

However, the Finnish schools and higher education were relatively prepared compared to critical urgent scenarios in many other countries. Many researchers noticed that good ICT infrastructures, teachers' digital competencies and students' abilities to adopt new learning environments play vital roles (Brown, 2002). On the other hand, the preparations were not enough to deal with the sudden demands of a pandemic situation. Finland has excellent ICT infrastructure and high bandwidth internet connections. The biggest advantage noticed students and teachers are equipped with technology usages and willingness to adopt online-distance education. There were minor challenges during the Covid-19 situation but the education department and community working-towards solutions including effective communication.

In **Greece**, universities, schools and other educational facilities were forced to proceed in an online teaching in a very short time. From a technical point of view, in the beginning, the network infrastructure was unable to support the high demand for bandwidth in order to deliver voice and video services to users and, as a result, connections either could not be established or they had very poor performance. These problems were solved in some satisfactory level, but not completely. From an educational point of view, tutors and teachers tried to adjust themselves in a new way of teaching. That was not and still is not easy, as there are no specific guidelines and methods for online learning. Particularly, it is very difficult to interact with students via screen; a teacher among other things should be able to understand how the audience perceives the lecture through student's expressions and reactions. Another issue is the evaluation procedure, as it is almost impossible to supervise an exam properly through a computer screen, without time-consuming procedures. For these reasons, new tools, methods, guidelines and a completely new mentality should be created for tutors, teachers and students, to provide educational services in the best possible way. Universities in Greece were ahead compared to schools, in terms of network infrastructure and online learning, but still new teaching procedures and especially students' evaluation methods need to be developed if we want to preserve the high educational status of Europe's Higher Educational Institutions (HEI).

In **Cyprus**, during the Pandemic and the "lock downs" enforced, the Ministry of Education and Culture made the necessary arrangements and requested from the teachers in schools "to go online". The teachers had to face many difficulties when preparing the "online" classes because they were not prepared to do so. Integration of ICT in education is not easy; tools (software and hardware), methodology, ethics, curricula, procedures etc., should be considered and adapted under the new environment. However, in a few months, this new experience started developing and the online teaching situation became better, but still with a lot more to be done. Many challenges had to be faced, sometimes when using only online teaching and sometimes when using the "blended" teaching (combination of online and physical presence). Universities and other Higher Education Institutions had to adapt "On line" teaching, to continue with their activities. Their teaching content and methodologies changed to "online" teaching, based on a reflection from an urgent and unprecedented perspective. The Universities responded positively to this new situation, according to their ICT capabilities and the levels of experience of technology use they had. However, their adaptability to practices of e-learning or blended teaching was not very easy or by all Universities equally responsive. The use of new technologies in education processes requires a lot of organisation, necessary knowledge and competences. It is necessary to update the staff (teachers, researchers and administrative staff) who need to adjust

themselves in the new educational environment. This was not and still is not easy, because there are no specific guidelines and methods for online teaching and learning. It is very difficult to interact with “students” via screen. In terms of network infrastructure and the use of new technologies and “online” teaching and learning, Universities in Cyprus, were in a better position compared to our schools. However, new “online” teaching methodologies and evaluation processes and methods need to be developed, to maintain high quality standards in the Higher Education.

Ireland’s National Skills Strategy 2025 affirms the government’s vision for Ireland to be renowned as a place “where the talent of our people thrives [...] through the effective use of technology to support talent and skills provision, to grow enterprise and to enhance the lives of all within society” (DES 2016). The Department of Further and Higher Education, Research, Innovation and Science launched a three-year strategy (2021 – 2023) with six overarching strategic goals - talent, innovation, inclusion, international, governance and capacity. One of the goals of this strategy aims to “support researchers, experts, and enterprise in the development of innovative modes of engagement, new skills and new technologies, to enable people in Ireland to grow and adapt to living and working sustainably in an increasingly global, digital and automated world” (DFHE 2021). This is a new government department in Ireland and digital skill development are a part of its overall strategy for the sector. In relation to developing adult basic digital skills, the department has an action plan to support an Inter Departmental Group to oversee the development and publication of a new 10–year Strategy to transform adult literacy, numeracy, and digital skill levels in Ireland to ensure nobody is left behind.

The idea of the ECOLHE project was born in 2017 and it has been revised and improved. The project was born before the Pandemic, because there was already the clear awareness that the university system had to start dealing with a more intensive use of ICT in teaching and learning processes.

Today, the objectives of ECOLHE are more pertinent than ever. It is a research-intervention project, in the methodological framework of an action-research.

The Project aims at highlighting experiences, practices and competencies of teachers, researches and university staff members active in the digital field, in order to foster the dissemination of best practices in training and skills development for “**online**” **learning** in higher education (HE), according to the new experience of a hyperconnected reality (Floridi, 2015).

ECOLHE intends to experience a **new online training model** to respond to **new knowledge and skills demands**, in a context of a **universal entitlement to lifelong learning** as set out in the ILO report *The Future of Work* (International Labour Organisation, 2019).

The proposal is in line with the most important recommendations of European Union policies about Learning Quality Assurance for Lifelong Learning:

- the Bologna Process (1999), fostered by the European Area of Skills and Qualifications, refers to the promotion of Lifelong Learning (LLL) and Lifewide Learning (LWL) by online learning in HE.

- the “New Skills for New Jobs Initiative” (2010) and “Modernization in HE” (2012) highlights the relevance of digital competences in the knowledge society and the need to overcome the gap with international competitors in digital field.
- the European framework Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG, 2015).
- the recommendations of the European Union’s High-Level Group on the Modernization of Higher Education, which highlight the integration of digital technologies and pedagogies as an integral element of higher education institutions’ strategies for teaching and learning (European Commission, 2014).

The proposal is also developed in the perspective of the important work of the High-Level Group on the Modernisation of Higher Education. The High-Level Group on the Modernisation of Higher Education prepared two reports in consecutive years, which stressed the importance of the quality of teaching to achieve the goals that higher education sets as responses to the needs of society (HLGMHE, 2013). Specifically, it is important to highlight two of the recommendations emanating from the second of the reports (HLGMHE, 2014):

- the first one is the Recommendation number 3, which states "higher education institutions should encourage, collect and take into account student feedback, which can detect problems in teaching and learning in advance and facilitate faster and more effective improvements".
- It also calls for “higher education institutions - with the help of public administrations and the EU - should support their teachers to develop their skills and competencies for teaching and learning online and in those other modalities that may open the digital age and should take advantage of the opportunities offered by technology to improve the quality of teaching and learning” (HLGMHE, 2014).

By 2030, university students in the world should reach 414 million and to meet their needs the current rigidity of education and training systems will have to be overcome.

Even more critically, the 2019 Deloitte *Global Human Capital Trends*¹ the report indicates an accelerated need for lifelong learning as graduates currently lack many skills required for today’s work and are facing an ever-changing and increasingly complex society that will need continuous learning for the entire life course, both for work and social integration.

Even now it is estimated that after 2020, 90% of the jobs will require IT skills, so it is essential that education systems offer a learning paradigm that not only addresses current skills and knowledge deficits, but helps people become lifelong learners.

¹ Source: <https://www2.deloitte.com/it/it/pages/human-capital/articles/deloitte-human-capital-trends-2019---deloitte-italy---human-capi.html>

Today, it is hard to imagine future learning contexts, formal and not formal, without thinking about the use of innovative ICTs and new ways of online dimension significant involvement.

The principal objective of ECOLHE is to understand the way in which national policies have translated the European policies, and how the universities have translated regulatory constraints in practice with the intent to intercept useful suggestion for policy-makers, decision-makers and Academic Bodies in order to build a European E-learning Higher Education Area, founded on the teacher's professionalization and E-learning Quality Assurance Standard".

ECOLHE will examine national public policies for e-learning in HE related to case studies to study the transformation of key concepts from supranational level to national level (i.e.: dominant rhetoric, orientations, legacies, obligations, risks and opportunities, expectations, educational paradigm and so on), during the implementation of inclusive and LLL processes based on digital technologies.

The aim of the project is to examine in HE the way in which each university (units of analysis) involved develops its strategic approaches to digitization. Specifically, we will examine the respective micro-policies of each unit of analysis and how they have "translated" the digital challenge into practice, following a national framework.

The contemporary societies are facing some crucial changes. These changes require that Educational Institutions review teaching and learning paradigms, organization, management, evaluation processes, relations systems and competences framework for teaching.

Online delivery is a challenge for Higher Education (HE) and policymaking (Horizon Report 2016; COM/2013/0654 final).

Technology is changing HE, although it is under-utilized (EE.CC, 2016).

ECOLHE has the purposes to contribute in:

- supporting teachers and educators promoting future and transferable skills;
- providing an overall framework of the online learning innovation processes in HE, useful in providing important sources of information to policy and decision-makers;
- enhancing and promoting online quality relationships and e-learning standards.

To reach these purposes, ECOLHE's objectives are:

- **to analyze six case studies** in HE, to examine the way in which each of the universities involved, develop their own strategic approaches to digitalisation. Many studies focused on these issues: "the majority of European HE institutions has made little progress in adapting the courses that are offered to a student-centred learning model capable of integrating developments and opportunities in technology-enhanced education" (Raetzsch *et al.*, 2016). These case studies, using an organizational empowerment approach,

aim to take stock of the current situation and evaluate to what extent there is a deficit in terms of meeting key challenges in European HE (IO1);

- to implement **online training** to empower teachers and researchers to perform online and blended learning, more responsive to the qualitative dimensions of human interaction (IO2);
- to develop **new online environments for HE**, enhancing the gamification logic (IO3);
- to develop a tool for the **self-assessment of HE professionals based on the Symbiotic Learning Paradigm (SLP)**, a novel framework that places the learner at the centre and enables a hyper-collaborative relationship between stakeholders and HE (IO4);
- **guidelines** in order to furnish to Academic Bodies useful instruments and recommendations to run digital transformations in HE (IO5);
- to favour social innovation in online and blended EHEA through the sharing of best practice experimented among country partners (IO2, IO3, IO5 and C1).

ECOLHE aims to support the Digital Agenda for Europe (2010)² in providing digital competences and new competences for new jobs and new teaching needs.

Considering this complex framework, the project intends to build bridges and share knowledge between HE institutions and different stakeholders, with the following aims:

- to produce and validate a set of new online Quality Assurance Standards able to consider the qualitative dimension for basic studies of teaching interactions inside online environments.
- to enhance lifelong learning in HE through a focus on professionalization of teachers, so they can effectively respond to and operate in an ever-changing context that demands engagement beyond the traditional concept of university education.
- to the spread of best practices at European level, to:
 - provide decision-makers and institutions useful data for the definition of intervention strategies;
 - contribute to the European debate on the modernization of HE in the digital age;
 - promote a digital culture, through a multi-stakeholder approach that takes account of the systemic complexity introduced by ICT. They involved contexts and learning models, transforming all social and organizational practices;

² COM(2010)245 final. COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS. A Digital Agenda for Europe. Available online at: <https://eur-lex.europa.eu/legal-content/en/ALL/?uri=CELEX%3A52010DC0245>.

- develop a new pedagogical approach for an innovative vision of European e-learning in HE, through the production of an innovative perspective, more careful to the qualitative dimension of online teaching and key teaching competences in the digital era;
- establish cooperation networks and partnership among different educational institutions (universities, research centres, training institutions, digital publishers and developers), offering a replicable model of research-intervention / action-research? In the area of experimental educational research. Thanks to the partnership among those organisations and HE associations, and according to a logic of co-construction and co-evaluation, ECOLHE will involve key actors of the HE system among staff, teachers, researchers, PhD, students, to ensure an organizational empowerment approach necessary for sustainable results at the end of the project.

To achieve these goals, ECOLHE will implement different activities and outputs:

- analysis of organizational and teaching models, with reference to the role of HE in promoting innovation and teaching quality (IO1-IO5);
- the empowering of teachers' digital competences and strategies for online teaching (IO2-C1);
- the enhancing of digital tools and environments for lifelong learning, inclusion, diversity and innovation (IO3);
- the continuous teachers' professional development (IO4-C1).