ECOLHE
Empower Competences for Onlife Learning in HE

IO1

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

Spanish Case Study. UOC

Authors:
Montse Guitert
Teresa Romeu
Marc Romero
Pablo Baztán
Organisation: Universitat Oberta de Catalunya (UOC)

Project Scientific Director: Stefania Capogna
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INTRODUCTION

This report presents the results of the research carried out at the Open University of Catalonia (UOC).

After a synthesis of the legal and context aspects, the results of applying the different instruments established in the project for each group of stakeholders are presented.

The UOC has been a completely online university since its foundation. Therefore, some of the instruments have been modified to adapt them to this reality, when necessary.

The results are presented by sections, according to the index that can be seen at the beginning of this document.

We understand that this way of presenting the results allows a better comparative analysis between the different cases involved in the project.

I PART. LITERATURE ANALYSIS: THE DESCRIPTION OF THE NATIONAL FRAMEWORK

Introduction

To have a global vision of the origin of Spanish universities, the work of Martel (2018) briefly describes some of its most significant milestones:

"The **first university** was founded in Palencia in **1212** by Alfonso VIII of Castile. It was followed by the University of Salamanca, founded by Alfonso IX of León in 1215, the University of Valladolid, founded in 1260, and so on. The instruction and teaching bodies at these universities were regulated under the **Magna Carta issued by Alfonso X** in **1254**. Over time, universities were founded in other cities throughout Spain, [...]but the royal funding eventually dried up, and they came to be dominated by the Catholic Church. Some authors, such as Francisco Aguilar or the Pesets, contend that the so-called colegios mayores, strict student residence halls operated by the Church, proved to be the downfall of the Spanish university. There were five such colegios, which together formed a closed and exclusive system that came to control most of the country's university chairs [...] It was not until **1766**, under Carlos III, that the colegios were abolished and the **first university reforms** were undertaken, including the assignment of ministers as directors of the universities. [...] The education system was centralised under Antonio Gil de Zárate's Department of Public Instruction through the **1857 Public Instruction Law (also known as the Moyano Law**). Under the new system, instruction was given in six faculties—the rest were eliminated—and at ten universities, namely, those of Madrid, Salamanca, Valladolid, Barcelona, Santiago, Saragossa, Granada, Seville, Oviedo and Valencia. Education became 'another area of government' (Del Valle López, 1998:33); all new plans, examinations, rector appointments, teaching methods, etc., were exclusively determined by government regulation. This model lasted until **1970**, with brief hiatuses, such as the six-year period following the Revolution of **1868**, which called for academic freedom, freedom of religion and freedom of assembly. As a result of that period, these freedoms, along with scientific freedom, were included in the Constitution. The period also saw the founding of the Institución Libre de Enseñanza, or Free Institution of Education, an experimental private university devoted to academic and scientific freedom. [...]

The national legislative framework

Today, the education system is governed by **the 1978 Spanish Constitution** while some laws have implemented constitutional principles. Here we highlight those related directly with the university:

1983: Organic Law 11/1983, of 25 August, on University Reform (LRU from the Spanish).
Great power to university departments in promoting faculty. (Alarming increase in endogamy in university centers).
1985: Royal Decree on the regime of university teaching staff (RD 1985)
2001: Organic Law 6/2001, of 21 December, on Universities (LOU)
2007: Organic Law 4/2007, of 12 April (LOMLOU)
Following again Martel (2018) , "Organic Law 6/2001, of 21 December, on Universities (LOU) and the 2007 (LOMLOU) amendment thereof establish that the function of universities is to serve society through:

- the creation, development, transmission and criticism of science, technology and culture;

- the provision of training for the exercise of professional activities requiring the application of scientific knowledge and methods and for the creation of art;
- the development of science and technology, as well as the dissemination, assessment and transfer of knowledge to promote culture, quality of life and economic development;
- and the dissemination of knowledge and culture through university extension and lifelong learning".
- On October 29, **2007**, the **Royal Decree 1393/2007** was published establishing the organization of official university education for its adaptation to the "**Bologna Process**" and the initiation of the European Higher Education Area (Egido, 2006).

SInce the beginning of 2020, in Spain a new Ministry is in charge of university management: the Ministry of Universities responsible for proposing and carrying out the government policy on universities as well as representing Spain in the European Union and other international organizations regarding universities.

Currently, the Ministry of Universities works on a new university law, the Organic Law of the University System (**LOSU**), scheduled for the **end of 2021**. The strategic elements identified in the framework of the future LOSU, in consultation with the different parliamentary groups, collegiate bodies and social organizations are:

- 1. University governance and structure.
- 2. University financing.
- 3. Teaching, research and transfer.
- 4. Students.
- 5. Teaching and Research Staff.

Profound changes are expected with the approval of the new law. Therefore, this report will mention the most relevant points of the sections below.

The Spanish University System in numbers

In this section we present some data on the number of universities, degrees, students, teaching, research and administrative staff of Spanish universities. All data has been obtained from the report "Datos Y Cifras Del Sistema Universitario Español. Publicación 2019-2020" (Data And Figures Of The Spanish University System. Publication 2019-2020) published by the Ministerio de Educación y Formación Profesional (MEFP, 2019).

The Spanish University System (SUS) was integrated in the 2018-2019 academic year by a total of 83 active universities, 50 public and 33 private. 1055 university centers between schools and faculties, 525 university research institutes, 50 doctoral schools, 54 university hospitals and 77 foundations.

Table 1 Number of university campus by Comunidad Autónoma.classified in Public Presential (P in green), Public Not Presential (NP in green), Special (E), Private Presential (P in orange) and Private Not Presential (NP in orange).

Total: 349

Type	Region / University	Count
	Andalucía	**38**
P	Almería	1
P	Cádiz	4
P	Córdoba	4
P	Granada	7
P	Huelva	4
E	Internacional de Andalucía	8
P	Jaén	2
P	Loyola Andalucía	2
P	Málaga	3
P	Pablo de Olavide	1
P	Sevilla	6
	Aragón	**7**
P	San Jorge	2
P	Zaragoza	5
	Asturias (Principado de)	**7**
P	Oviedo	7
	Balears (Illes)	**1**
P	Illes Balears (Les)	1
	Canarias	**14**
P	Atlántico Medio	1
P	Europea de Canarias	1
P	Fernando Pessoa-Canarias (UFP-C)	1
P	La Laguna	5
P	Las Palmas de Gran Canaria	6
	Cantabria	**3**
P	Cantabria	2
P	Europea del Atlántico	1
	Castilla - La Mancha	**4**
P	Castilla - La Mancha	4
	Castilla y León	**19**
P	Burgos	2
P	Católica Santa Teresa de Jesús de Ávila	1
P	Europea Miguel de Cervantes	1
P	IE Universidad	2
NP	Internacional Isabel I de Castilla	1
P	León	2
P	Pontificia de Salamanca	2
P	Salamanca	4
P	Valladolid	4
	Cataluña	**53**
P	Abat Oliba CEU	1
P	Autónoma de Barcelona	3
P	Barcelona	6
P	Girona	3
P	Internacional de Catalunya	2
P	Lleida	5
NP	Oberta de Catalunya	1
P	Politécnica de Catalunya	9
P	Pompeu Fabra	5
P	Ramón Llull	4
P	Rovira i Virgili	10
P	Vic-Central de Catalunya	4
	Comunitat Valenciana	**26**
P	Alicante	2
P	Cardenal Herrera-CEU	4
P	Católica de Valencia San Vicente Mártir	5
P	Europea de Valencia	1
NP	Internacional Valenciana	1
P	Jaume I de Castellón	1
P	Miguel Hernández de Elche	4
P	Politècnica de València	4
P	València (Estudi General)	4
	Extremadura	**4**
P	Extremadura	4
	Galicia	**7**
P	A Coruña	2
P	Santiago de Compostela	2
P	Vigo	3
	Madrid (Comunidad de)	**38**
NP	A Distancia de Madrid	1
P	Alcalá	3
P	Alfonso X El Sabio	1
P	Antonio de Nebrija	3
P	Autónoma de Madrid	2
P	Camilo José Cela	1
P	Carlos III de Madrid	5
P	Complutense de Madrid	2
P	Europea de Madrid	5
P	Francisco de Vitoria	1
P	Politécnica de Madrid	4
P	Pontificia Comillas	3
P	Rey Juan Carlos	5
P	San Pablo-CEU	2
	Murcia (Región de)	**8**
P	Católica San Antonio	1
P	Murcia	5
P	Politécnica de Cartagena	2
	Navarra (Comunidad Foral de)	**6**
P	Navarra	4
P	Pública de Navarra	2
	País Vasco	**13**
P	Deusto	2
P	Mondragón Unibertsitatea	8
P	País Vasco/Euskal Herriko Unibertsitatea	3
	Rioja (La)	**2**
NP	Internacional de La Rioja	1
P	La Rioja	1
	Estado	**100**
E	Internacional Menéndez Pelayo	32
NP	Nacional de Educación a Distancia	68

Type	Category	Count	Type	Category	Count
P	Pública presencial	175	P	Privada presencial	65
NP	Pública no presencial	68	NP	Privada no presencial	5
E	Pública especial	40			

In the 2018-2019 academic year, 2.920 undergraduate degrees were implemented, 2.159 in public universities. The branch of Social and Legal Sciences is the one that had the highest number of Bachelor's

degrees (1046), 359 were offered in private universities and 687 in public universities. At the other extreme, with the lowest number of degrees implemented, is the branch of Sciences, with 226 offered at public universities and 18 at private universities. The number of Master's degrees in the 2018-2019 academic year was 3567, 2761 were implemented in public universities. A total of 1.137 Doctorate degrees were offered, 293 belonging to the branch of Social and Legal Sciences, 267 to Engineering and Architecture and 233 to Sciences. Private universities offered a total of 94 degrees and had only 5.6% of students.

TEACHING AND RESEARCH STAFF (PDI)
The teaching and research staff, in the 2017-2018 academic year, stood at 122.910 people. Of these, 103.876 belonged to public universities and 19.034 to private universities. The full-time equivalent teaching staff reached 83.094 teachers. In public universities, 98.173 professors were reached, with 41% women. Regarding the body of civil servants, the number of teaching staff stood at 42.819, 35.9% being women. In terms of age, the university teaching body was over 54 years old on average.

ADMINISTRATION AND SERVICES STAFF (PAS)
The administration and services staff, in the 2017-2018 academic year, stood at 61.908 people, 52.443 assigned to public universities and 9.465 to private universities. Regarding the distribution by sex, the percentage of female civil servants stood at 67.9% and that of women hired at 53%. The average age of the PAS in public universities reached 49.9 years.

EMPLOYED RESEARCHERS AND TECHNICAL SUPPORT FOR RESEARCH (PI)
The group of employed researchers and technical support staff for research, in the 2017-2018 academic year, reached 26,064 personnel, of which 24,523 were assigned to public universities and 1,521 to private universities. The research staff employed amounted to 19,190 contracted researchers, of which 63.4% came from competitive public calls. With regard to age, 74.7% of the research staff employed were under 35 years of age, and 46.6% were women.

Table 2 Shows the distribution of these professional groups in online universities.

UNIVERSITY	PDI	PAS	PI
UDIMA	220	78	
UNIR	890	866	
INTER. ISABEL I DE CASTILLA	250	85	
VIU	42	87	
UOC	290	557	116
UNED	1.186	1.213	141

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Professional development

The university teaching profession in Spain is characterized by having a double purpose: research and teaching.

However, having the dual role in their profession, teacher and researcher, the training of university professionals focuses on their branch of knowledge and not on teaching:

"The initial training of university teachers has been focused on preparing to do research from the doctorate, having in the best of cases some particular teaching assignment. On the other hand, permanent training is organized from university programs, some of them focused on teaching skills, although they are not a mandatory requirement for teaching performance" (López, 2016).

As Liberia and Zurbano (2018) explain, the initial step for university teaching is doing a PhD. Once the doctorate has been obtained, different figures articulate the teaching professional career that can progressively be achieved:

- Profesor Ayudante Doctor
- Profesor Contratado Doctor
- Profesor Titular de Universidad
- Profesor Catedrático de Universidad

To obtain each of these categories, accreditation from the National Agency for Quality Assessment and Accreditation (ANECA) is required. The requirements vary for each one of them, but are based on the number and quality of scientific publications and the number of teaching hours taught.

National systems of assessment and Quality Assurance in HE

At State level, the National Agency for Quality Assessment and Accreditation of Spain, ANECA, is a Autonomous Body whose aim is to provide external quality assurance for the Spanish Higher Education System and to contribute to its constant improvement through evaluation, certification and accreditation.

ANECA publishes annual reports including the objectives that have guided ANECA throughout the year, together with the institutional and evaluation activities that have been carried out within the scope of responsibilities of the Agency. The last published report can be found in ANECA (2017).

ANECA has developed several evaluation Programmes in order to perform its activities (evaluation, certification and accreditation):
Academic Staff Evaluation Procedure:

- **PEP:** evaluates the CVs of applicants to access non-civil servant academic staff bodies.
- **ACADEMIA:** evaluates CVs of applicants to access civil-servant academic staff bodies.
- **CNEAI:** The CNEAI is the body within ANECA responsible for the evaluation of research activity for the purposes of assigning the corresponding retribution complements, as per applicable regulations.

Programme Evaluation Procedure:

- **VERIFICA:** evaluates degree proposals designed according to EHEA criteria.

- **MONITOR:** follows-up an ex-ante accredited programme to check its correct implementation and results.
- **ACREDITA:** checks that the degree has been carried out according to the initial project.
- **SIC:** Assessment for quality International labels

Institutional Evaluation Procedure:

- **AUDIT:** provides guidance for HEIs to establish their own internal quality assurance systems.
- **AUDIT INTERNACIONAL:** certify quality assurance systems for Higher Education Institutions (HEI) located in third countries
- **ACREDITACIÓN INSTITUCIONAL:** evalúa las solicitudes de acreditación institucional de los centros universitarios.
- **DOCENTIA:** supports Universities to create mechanisms to evaluate academic staff quality.

Regarding the principal focus of the ECOLHE project, "ANECA, in its role of promoting the adoption of quality assurance (QA) criteria in accordance with international standards, is aware that in order to alleviate the effects of the current health situation resulting from the evolution of Covid-19, with the suspension of face-to-face teaching activities and other serious consequences, different and meritorious solutions have been adopted in the field of university education.

Faced with this unexpected and difficult situation, it is essential to highlight, value and support the enormous work that universities, their teaching and research staff, administration and services, as well as their students, are doing. Universities continue to be immersed in the difficult task of providing quick and effective answers to the different questions that this complicated situation has been posing, the first of which is to make the abrupt transition from face-to-face to online teaching".

In this sense, ANECA adopted a more flexible system to better accompany institutions, and the "Implementation of the quality label for virtual education".

At the "Comunidad Autónoma" level, there are ten local agencies, listed below:

Andalucía: Dirección de Evaluación y Acreditación de la Agencia Andaluza del Conocimiento (DEVA-AAC)
Aragón: Agencia de Calidad y Prospectiva Universitaria de Aragón (ACPUA)
Canarias: Agencia Canaria de Calidad Universitaria y Evaluación Educativa (ACCUEE)
Castilla y León: Agencia para la Calidad del Sistema Universitario de Castilla y León (ACSUCYL)
Cataluña: Agència per a la Qualitat del Sistema Universitari de Catalunya (AQU)
Comunidad Valenciana: Agència Valenciana d'Avaluació y Prospectiva (AVAP)
Galicia: Axencia para a Calidade do Sistema Universitario de Galicia (ACSUG)
Islas Baleares: Agència de Qualitat Universitària de les Illes Balears (AQUIB)
Madrid: Sección de Evaluación, Certificación y Acreditación de la Calidad de la Enseñanza Superior de la Fundación para el Conocimiento madrimasd
País Vasco: Unibasq-Agencia de Calidad del Sistema Universitario Vasco
In Catalonia the local agency AQU, founded in 1996, is regulated by the Act 15/2015 on the Catalan University Quality Assurance Agency (Published in the Official Journal of the Government of Catalonia, DOGC, dated

23 July 2015). The Act strengthens and reinforces AQU Catalunya as the main instrument for the promotion and assurance of quality in the Catalan higher education system with functions that are upgraded and up-to-date, a more flexible structure and better compliance with European standards as regards its independent nature as an agency. It also places the international sphere of its activities on a firmer footing and establishes a system for the appointment of the Agency's director by way of an open and competitive process, amongst other things.

The ACU functions as "Assessment of the educations leading to the achievement of the official and own degrees granted by the universities and the higher education centres" or "Certification of the quality of teaching, of the management processes and of the activities of the universities" can be found in the PDF The functions of AQU Catalunya.
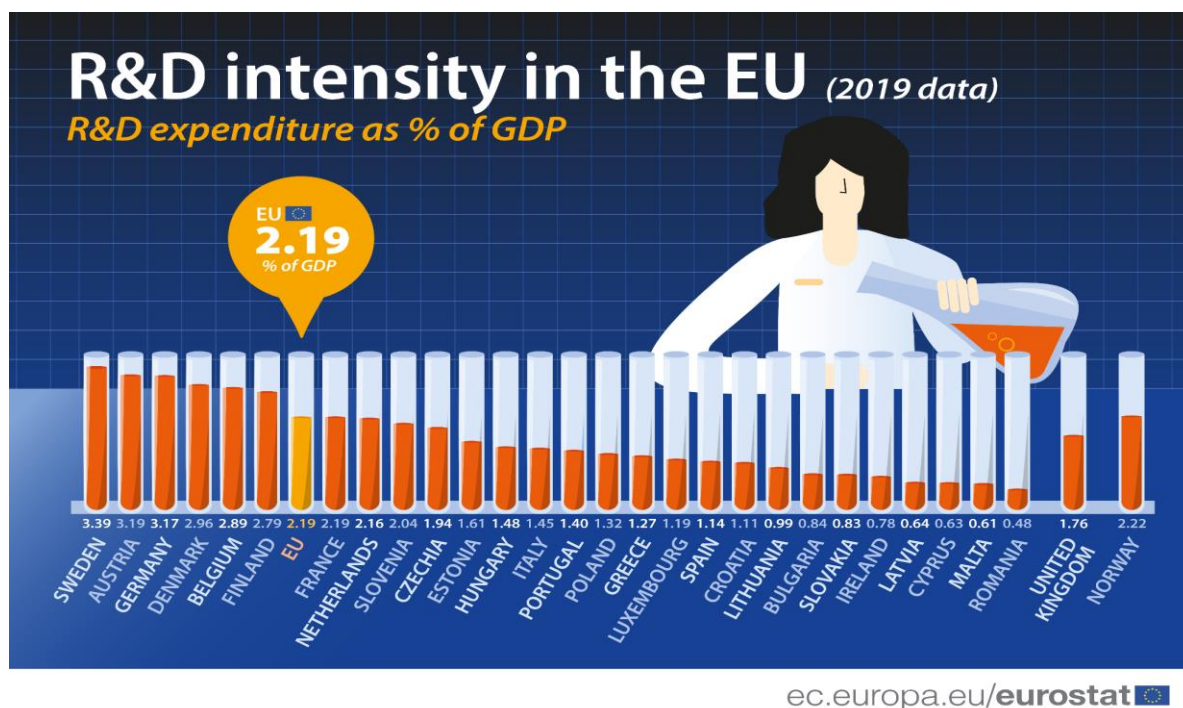
National financing programs

In 2019, the Member States of the European Union (EU) spent over €306 billion on R&D. The R&D intensity, i.e. R&D expenditure as a percentage of GDP, stood at 2.19% in 2019, compared with 2.18% in 2018. Ten years earlier (2009), R&D intensity was 1.97%.

With respect to other major economies, R&D intensity in the EU was much lower than in South Korea (4.52% in 2018), Japan (3.28% in 2018) and the United States (2.82% in 2018), while it was at about the same level as in China (2.06% in 2018), higher than in the UK (1.76%) and much higher than in Russia (1.03%) and Turkey (1.03% in 2018).

R&D expenditure in the Spain at 1.14% of GDP in 2019, one of the lowest in EU, as the chart below shows:

Figure 1: R&D expenditure in Spain in 2019

The work done by Isabel Rodà (2017) describes the different financial options that research has in Spain, with some more detail about Catalonia:

"At the state level there are various forms of public and private funding in Spain for research. Regarding public ones, the vast majority depend on two ministries, the Ministry of Economy and Competitiveness (MINECO) and the Ministry of Education, Culture and Sports (MECD). These grants allow the development of research projects (R&D, FIS, etc.), the training and mobility of predoctoral and postdoctoral researchers and also the acquisition and improvement of infrastructures. There are also grants aimed at promoting collaboration between research teams both nationally and internationally and grants for improving the interdisciplinarity of these teams. We must mention the Centro Superior de Investigaciones Científicas (CSIC) with its network of its own and mixed centers and institutes grouped into eight general scientific-technical areas.

At the regional level, there are various research aid programs, financed with the budgets of the autonomous communities ... Catalonia ... has a particular structure, different from those that exist in other areas and which is due to the existence of more of 40 public research centers and a total of 8 universities that generate a considerable volume of research, especially in the fields of biomedicine and chemistry, in which Catalonia is one of the world leaders.

Only at the university level, Catalonia currently has more than 15.000 teachers and researchers and 816 consolidated research groups which, added to those generated by the research centers, to a total of 1.650 active research groups.

Many of them also have the financial support of the Generalitat de Catalunya. All this research is possible thanks to public and private funding. The Generalitat de Catalunya has a government system organized in councils (Conselleria). The Conselleria of Economy and Innovation, and the Conselleria of Culture, are those that manage the vast majority of the aid destined for research in Catalonia. Many of these grants are managed by a unit created ad hoc, the Agency for the Management of University and Research Grants (AGAUR), which finances projects, teams and predoctoral and doctoral training and mobility ... researchers from the Catalan system can choose, as in other communities, both to national and regional aids."

There is another institution in Catalonia, ICREA, "that is a foundation supported by the Catalan Government and guided by a Board of Trustees. ICREA was created in response to the need to seek new hiring formulas that would make it possible to compete with other research systems on a similar footing by focusing on hiring only the most talented and extraordinary scientists and academics. ICREA is an institution without walls. It works hand in hand with Catalan universities and research centres to integrate ICREA research professors in the Catalan research system. It works hand in hand with Catalan universities and research centres to integrate ICREA research professors in the Catalan research system" (ICREA).

Best practices

Zabalza (2012) offers a reflection on the approach to the world of higher education based on good practices, changing the focus from "the conventional pedagogical principles, we move on to a much more functionalist and pragmatic idea: good is what works well, what is valued by its protagonists and beneficiaries, what is recognized as valuable by colleagues or indirect recipients (stakeholders)".

The systematic review carried out by Alonso-Garcia et. al. (2019) focused on good teaching practices with ICT in Spanish HE, bases the identification of good practices on the seven key principles of good practice with ICT established by Chickering and Gamson in 1987 listed below:

▪ Stimulate contact between teachers and students.

- Develop cooperation between the students.
- Use active learning techniques.
- Provide immediate feedback.
- Allow tasks to be carried out on schedule.
- Communicate positive expectations.
- Respect the diversity of capacities and modes of learning.

Their work identifies the good teaching practices with ICT that are being developed in Spanish higher education and to establish the relationship between good teaching practices with ICT and the Sustainable Development Goals (SDG), and highlighting common aspects that characterise good teaching practice:
(i) the focus of the activity was on the student,
(ii) they encouraged collaborative work, and
(iii) they favored autonomy.

The study stetes a synthesis of 26 good teaching practice with ICT, as for example:

- Virtual Learning Environment (VLE) that presented the content in different formats offers variation of activities and develops fluid and constant communicative processes between teachers and students, as well as between peers.
- VLE based on the methodological principles of autonomy, cooperation, and interaction,
- Implementation of blended learning, where the platform collected a variety of materials and formats (text, audio, video, etc.
- Development of a collaborative inter-university MOOC

II PART. FIELD RESEARCH: THE NATIONAL CASE STUDY

Introduction

The UOC was created in Barcelona in 1994 and teaching began in 1995, with 200 students. It was the first university ever to run exclusively online. With more than 85,700 graduates, it is now one of the biggest universities in Spain.

The UOC's methodology – its proprietary learning model – is based on three basic elements: **learning resources**, personalized **student support** from teaching staff, and **collaboration**.

The organizational structure is divided into **four large blocks**, which respond to the objectives and lines set by the Executive Board:

- **Faculty**. This block ensures the quality and rigor of the teaching activity and the proper functioning of the University, taking care to ensure that programmes, syllabuses and contents are up to standard. It coordinates the learning process of students and promotes research and innovation.
- **Research**. This block brings together the research into the interactions between ICTs and the different aspects of the economy, society and culture and offers support to faculty and researchers from both an academic and scientific perspective, and in terms of administration, monitoring and promotion.
- **Administration**. This block ensures the application of the educational model, the quality of the services offered, and the proper functioning and administration of the University.
- **Office of the President**. This block is responsible for governing the University, institutional and international relations, media relations and representing the University.

The UOC's academic structure is organized into departments and its administration into areas that ensure the proper day-to-day running of the University.

The **academic structure** of each department includes UOC faculty, who are responsible for the academic direction of the programmes offered by the University and coordination of the network of collaborating teaching staff.

The teams in **the administrative departments and the Office of the President** are organized into areas and operating groups. The operating groups focus on specialist areas of activity. The areas bring together different operating groups and align them with the University's objectives.

In the following sections we present the main results of the field research. Four instruments have been addressed to four groups of stakeholders: a)catalan decision makers , b) UOC academic bodies, c) UOC teachers, researchers, tutors, administrative and technician staff, and d) UOC students.

Decision-makers: main results

This section presents the results of an interview done to a high authority of the Catalan University Quality Assurance Agency (AQU).

Regarding how innovation is bolstered, it depends on leadership at European level, activated more by the needs and policies of each university than from the local government.

Two examples of how innovations have been landed to practice:

- Recently, in Catalonia has been articulated the accreditation of SLP (Short Learning Programs), which in a very specific field (digital competence) has opened a door to the improvement of continuous training in this field.
- During this time of pandemic, the Government of Catalonia has supported financially the universities, which have implemented their own digital innovation policies, even though this is not the best way to implement innovation.

Digital transformation boosts universities to evolve towards an HE assuming the principles of blended learning. We need to move to a situation where the student will only go to face-to-face class when it is worthwhile or necessary. Therefore, all teachers should reflect on which part of their teaching should explicitly be face-to-face and which should not.

About the integration of the European requests, the Catalan Universitary System follows the Standards and Guidelines for Quality Assurance in the European Higher Education Area (ESG) and European Quality Assurance Register for Higher Education (EQAR) indications.

Finally, the principal challenge that catalan universities should face is clearly the teaching methodology: how we give more value by taking advantage of DT. Continuing training will also be very relevant, with programs such as the mentioned SLP (or microcredentials). These open up a new landscape where higher education institutions have to adapt against other more flexible organizations.
It is important to be careful grading the efforts on DT training.

Academic bodies: main results

This section presents the main results of the interviews with four academic leaders:

- Vice-rector of Competitivity and Occupation
- Vice-rector of Strategic Planning and Research
- SotDirector of Emerging Programs
- Vice-Rector for Teaching and Learning

This section report is structured following the interview script:

Table 3 Academic bodies main results for Area

Warm-up question- Area 1 ICT Culture
What is your idea of digital innovation in Higher Education? The conception and implementation of significant changes in the resources and / or services, processes, dissemination or organization in order to improve, above all, the results of teaching, research, management or dissemination. Innovation involves the use of new knowledge or a new combination of existing knowledge. **0.2.** How is digital innovation applied in your university context? institutional goals; internal and external organizational processes; teaching/ learning and university practices/activities; competencies and need required to teachers, researchers and students; the skills required of governance bodies and intermediate and support staff The eLearn Center drives the evolution of our educational model through innovations in learning. We have also a HUB, Hubbik, to promote entrepreneurship, open innovation, support for knowledge transfer of results, and cooperation between the entire UOC community. And different innovative research groups: Edul@b is focused on Educations and ICT.

Area 2 - Leadership, planning and management
2.1 How is the integration of new digital innovation into learning and teaching managed within the university? There are different ways. For example, some innovative experiences emerging from research can be adopted by a teacher or group ro teachers. But in an institutional way, currently through the eLearn Center. There is a specific circuit through which a teacher proposes the new product or process and the eLearn Center, through a committee, studies whether it is feasible to integrate it. 2.2 What guidance is provided to faculty, staff and students? In general, for any product, survey, process or digital organization that adds value to higher education or society, it is promoted through HUBBIK, directed to any person of the UOC community. In the case of specific digital innovation on teaching and learning, it is shared with teachers through the eLearn Center.

2.3 What are the policies, guidelines and concrete help that central steering bodies offer to universities to redefine their role in the face of the challenge of digital innovation?

- what goals
- which resources
- which supports in terms of accompaniment
- what evaluations are carried out and with what means / results?

…. and how in your university do you manage to translate them into practice
Requesting funding for potentially innovative projects from any of the three administrations (Catalonia, Spain, Europe) and obtaining funding for innovation from all three.

2.4 What are the most important problems you encounter today as a university to cope with digital innovation, even those imposed by the global pandemic?

As a full online university, digital innovation is not a problem for UOC.
The full online UOC system has been a big advantage to face the pandemic situation.

2.5 Could you give some examples of solutions adopted in order to: teaching/learning; research; third mission; administrative/management activities etc?

Massive application of online assessment from the European project TeSLA. Creation of the spin-off chat-kit (massive generation of chatbots on-demand) by a researcher from the IN3 research center. Research projects with potential for incorporation into the productive sector: MoCoTo (Mobile Corneal Topographer), PositiveThinkingApp and DistractApp (two apps for pain management), WiLD (Wireless Leakage Detection System in the vehicle manufacturing lines).

2.6 Is it felt/how is it perceived by stakeholders (students, business, society…) your ability to promote digital innovation and renew internal organizational and teaching processes through the enhancement of digital technologies / resources)?
To answer this question we use some data, not participants' opinion:
about students, 87% would choose the UOC again and 79% would recommend the UOC.
UOC is recognized by companies with a 93% employment rate.

Area 3 - Quality assurance

3.1 Has the quality control system provided any indications on the integration of digital innovation in teaching/learning processes?

The internal quality assurance system (SGIQ) currently only provides guidance on teaching, on its planning and execution. The UOC's Planning and Quality Area follows the demands of the Catalan University Quality Assurance Agency (AQU). It is planned that in the future the SGIQ will also incorporate aspects of the other missions of the university.

3.2 What role does the quality control system play in the promotion of educational innovation processes?

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It is not promoted through the SGIQ but through the eLearn Center.

3.3 What tools does it suggest?

3.4 Are periodic monitoring and revision of curricula carried out with regard to the application of digital skills (in order to ensure effective digital maturity of students)?

UOC offers a cross subject in Digital Competence for all the students.

Area 4 - Scientific-research work

4.1 What is the university vision of digital innovation in the scientific-research context?

Innovation (digital or not) is with research part of the same chain of knowledge. Research is at the beginning of the chain because it generates knowledge and innovation is at the end because it creates value (economic and / or social) from this knowledge. However, we should note that on the one hand, not all the knowledge generated will end up creating value and that, on the other hand, value can be created from any knowledge, generated or not by research (professional experience, for example, it is also knowledge).

4.2 Which are the concrete applications to support research and researchers?

There is a Vice-rectorate for Research and Innovation to which the Research and Innovation Area reports, which provides applications to support teaching and research staff in carrying out research. All the detailed applications can be found on the UOC intranet through a catalog of research resources, ranging from training, to support for applying for funding for projects, ethical requirements, support for scientific publication, and all support for innovation through HUBBIK.

Area 5 - Technology transfer and service to society

5.1 What is the role of the Third Mission in the diffusion of digital innovation inside and outside the University?

The role is total and definitive as innovation (digital or not) is the creation of added value for society and the Third Mission is the commitment to social needs and market demands according to the socio-economic context.

5.2 Who is in your university and what is the role of stakeholders in this process?

In general, the whole university is involved. We work for all three missions. The teaching and research staff has all three missions as part of their job. In the 7 UOC Departments or Studies, apart from the management, there are three sub-directorates, each aimed at one of the missions. At the same time, as coordinating bodies throughout the university, there is one for each mission. The Competitiveness Commission is in charge of innovation (which is clearly the Third Mission)). This Commission is chaired by the Vice-Rector for Competitiveness and Employability. In addition, it is also dealt with by the Research and Innovation Committee (chaired by the Vice-Rector for Strategic Planning and Research), as it deals with innovation that comes from research and, at the UOC, research focuses on the interaction of technology with human activity being the

three main focuses, the network society, online learning, and digital health). Finally, the Vice-Rector for Globalization and Cooperation, as well as the Area of the same name, are also involved in the process of the Third Mission in relation to digital innovation, with specific attention to transmission and transfer to Latin American countries, as well as in the exchange of knowledge with NGOs.

Area 6 - Learning and teaching

6.1 Which innovative tools, methods and approaches are used to improve the curricula of your university?

Curriculum improvements are carried out by each of the 7 UOC Departments or Studies with the support of the eLearn Center. However, it is worth mentioning that being a regulated study plan, innovation becomes difficult to integrate because it is necessary to make official modifications that must be approved by AQU.

6.2 What kind of support does the university provide for the professional development of faculty, researchers, students and administrative staff with respect to integrating digital innovation into teaching and university management?

The professional development of teaching staff is carried out by the eLearn Center. In the case of students, they can present their "final studies work" with innovative potential (and, therefore, also with digital innovative potential) at HUBBIK and evolve towards digital innovation (creation of added value for higher education or for society in general). The management staff, as part of the UOC community, can also present the projects at HUBBIK and, in fact, there is already the first spin-off of a digital service from a management person: Immersum Studio.

Area 7 - ICT resources and infrastructure

7.1 What is the current availability of technology infrastructure and devices in the university?

The availability of infrastructures and technological devices at the UOC is relatively adequate. It is never enough and we currently have a specific method of prioritization for the acquisition of digital technologies that is more transparent and clear. However, this only ensures that digital technology is acquired but not necessarily that digital innovation is acquired. In fact, technology is seldom an innovation in itself because creating value-added higher education requires new products, services, organizational models, or processes.

7.2 Do you think there are currently methodological skills for using these resources? And updating/maintenance skills?

Yes, as a fundamental knowledge of the community of an online university.

7.3 What are the critical issues/constraints that still weigh on this aspect and possible solutions to overcome them?
We don't have enough budget to invest in digital technology

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7.4 Has a development plan been designed to do this?

Not a specific plan, but the request to the Government to increase the budget for investment in digital technology at the UOC is done year after year. It has remained unchanged for over 10 years.

Closing section

C.1 What strengths and weaknesses, if any, are you finding in your university's innovation governance?

Strengths:

Recognition of innovation in the teaching and research staff professional development.

The creation 2 years ago of: 1) the Office of the Vice President for Competitiveness and Employability, which deals with innovation policy; 2) the vice-management of research and innovation that coordinates the management of both; 3) the subdivisions of emerging programs in each of the 7 Studies coordinated through the Competitiveness Commission.

The creation of Invergy, to invest in start-ups and spin-offs.

Participation and, therefore, funding in the EduTech program of the Generalitat de Catalunya.

Weaknesses:

Better internal integration of research and teaching within the UOC.

An internal consensus on what innovation is according to international standards (e.g. according to the OECD or the European Commission).

C.2 Last question: Is there anything further that you think is important?

...

Focus groups: main results

In this section, questions are done taking into account the roles and responsibilities that the different professionals have in the UOC.

UOC will focus on the following targets for each FG:

FG 2.1: 8 Teacher/Researcher (PRA): Professor Responsible Subject ("Asignatura") with research activity.
FG 2.2: 7 Collaboration teacher and Tutor (PDC). They don't usually participate in research.
FG 2.3: 7 Administrative Staff and technicians

Questions from the ECOLHE proposal have been adapted in some cases to the UOC characteristics, and the questions were translated into Catalan and shared with participants in two different ways. Some questions sended by mail to each participant and were received by writing individually, and some questions were shared with each group of participants in three virtual debates.

Principal results can be found in three different subsections below separated by questions:

FG 2.1: Teacher/Researcher

- 0.1 What is your idea of digital innovation in Higher Education?

Digital innovation (DI) is considered a vehicle for improvement, not an objective in itself. The degree of demand for the use of digital technologies ranges from their application to the disruptive change in the processes of teaching and research activity.

- 0.2 What is digital innovation in your university context?

No data.

- 0.3 In what way does the digital technologies, also regarding the challenge of the new technology frontiers (e.g. artificial intelligence, digital learning environment, augmented reality etc.), have modified:
    - teaching, research and organizational processes in your HEI?
    - your way of working and interacting with each other?
    - (focus mainly on digital competencies for teachers/researchers and student's needs in the digital era)

Increase of knowledge that is incorporated into study programs.

Application of tools and resources to teaching and monitoring the evolution of students such as virtual campus, collaborative work in the cloud, use of video or microblog.

Negative aspects include the need for constant training and depersonalization due to the process automation.

- 1.1.1 How is the university as a system, transformed, under the pressure of digital innovation, in terms of organization, internal processes, work flows and communication, at different levels?
- 1.1.1.a … looking at the UOC in perspective since you joined.

With the exception of the participant who has been at the UOC for a short time, the rest have a critical view of the transformation of the university. They claim how processes, bureaucracy and the amount of work to be done have increased, but academic and relational criteria have been lost.

- 1.1.1.b ... compared to face-to-face universities.

Face-to-face universities have a high degree of use of technology in management processes. With regard to the teaching-learning dimension, the road of ID is wider because it's newer, but care must be taken to choose appropriate tools, and to incorporate DI in an integrated way to avoid adverse effects.

- 1.1.2 What are the main criticalities that you have encountered with respect to this?

There is a steady increase in the tasks associated with the role of teacher and a "liquidity" (in Bauman's sense) of that role. Teaching management has increased enormously, and research has become more difficult.

- 1.2.1 How has the figure of the teacher/researcher changed in the last period and how is digital innovation having an impact with respect to the redefinition of roles, skills, organizational dimensions of teaching and research?

We have a steady increase in the complexity and requirements (in management and communication) of most processes.

We have a lot of data, but to be innovation, this data would have to "own life" in many internal processes, workflows, and communication, anticipating needs. And that still doesn't happen.

- 2.1.1 What is your experience in using innovative teaching methodologies with digital technologies? Can you give some examples of innovative methodologies with digital technologies applied to your teaching?

A large number of experiences have emerged about this topic. Digital innovation can be focused on different subjects or disciplines. We point here just some of them:

Business Game (simulations).

Collaborative information visualization tools to feed, monitor, and evaluate collective development processes and collective intelligence exercises. Ex: https://miro.com

2009: "Telemedicine Laboratory (LabTM)" The LabTM Telemedicine Laboratory: Not a Grail Yet?", Published in: eChallenges e-2009 Conference Proceedings, Paul Cunningham and Miriam Cunningham (Eds), IIMC International Information Management Corporation Ltd 2009, ISBN 978-1-905824-13-7.

2010: "BioWave: Using Web 2.0 tools and applications like Google Wave 2.0 Apps to encourage interdisciplinary collaboration between biomedical and biotechnological Masters from different studies and increase their visibility on the Web" *Aguilar, A., Mach, N., Sánchez, A., Saigí, F., Juan, A., Barrios, B. (2011)*

Using Slideshare for online presentations of PowerPoint presentations by students.

Use Wikipedia to update, improve, or create subsections on published health topics, or include any reference to articles.

Calculation of ECTS credit time (VR and Quality)

Tesla (EMIT)

Aplica: design of subjects by competences (eLC pilot)

Didactics of Mathematics: Jiménez, R. ; Sancho-Vinuesa, T. and Romeu, T. (2018) Exploring a methodology based on peer review for the development of mathematical competence in high school. 11th International Conference of Education, Research and Innovation, November 12-14, Seville (Spain). Triay, J., Minguillón, J., Sancho-Vinuesa, T. and Daza, V.

(2015) Exploring the effectiveness of video viewing in an introductory x-MOOC of algebra. Workshop on Applied and Practical Learning Analytics (WAPLA@ECTEL), in ECTEL 2015. October 18, 2015, Toledo (Spain). Remei Calm, Ramon Masià, Carme Olivé, Núria Parés, Francesc Pozo, Jordi Ripoll, Teresa Sancho-Vinuesa.

- 2.1.2 What makes these practices better / effective?

An innovative practice is better, not because it is more "efficient" in the sense that it is possible to save time, but rather it is possible to achieve more objectives of the teaching profession that will facilitate students the acquisition of competencies and transfer knowledge and experience

- 2.1.3 Have digital resources and technologies changed/modified your way of working/teaching/designing learning paths and relationship with students and colleagues?

There are no deep changes in the way of working individually, but there are changes in the way of communicating and collaborating in a network.

- 2.2.1 What are the criticalities/constraints that still weigh in the adoption of digital innovation/technologies in your teaching practices?… and the possible solutions to overcome them?
- Can you give some examples?

The main problem is the energy consumed by the communication "network" and the process of incorporation of innovation.

Examples: It is very difficult to manage a blog in a research group or leverage recorded videos of talks / conferences by teachers and collaborators.

- 2.3.1 Do you share common models/practices in your faculty?

Although what other colleagues do is highly valued, the transfer of innovation is difficult and infrequent. Transfer is done by scientific publications or sometimes in an internal specific meeting.

- 2.3.2 What are the criticalities/constraints that still weigh in the adoption of digital innovation/technologies in your teaching practices?

Mistrust that innovation cannot be applied in the personal case in an adequate way and that it could involve a high investment of time

- 2.4.1 In your personal experience, what are the main difficulties or advantages that students encounter facing the use of digital technologies in their learning and / or research paths? (disinterest/ interest; difficulty/ ease; apathy/enthusiasm; etc).

Technical problems in the campus - those that absorb energy, time, dedication, patience, etc. ... unintended consequences of the technological action.

- 3.1.1 In your personal experience, which are the main competencies that professors/researchers should have in order to carry on effective lectures (referring also to digital, methodological and socio-relational skills)? Can you give some examples?
    - Instrumental skills: knowledge of tools and their applications.
    - Teaching skills: design, organization and planning, use of appropriate methodologies, search for resources, evaluation.
    - Organization and planning: Innovation competence: closely linked to creativity.
    - Competence in collaborative and networked work, as well as the ability to create a network.
    - Communicative competence at oral and written level.
    - Research competence: asking questions, searching for data, analyzing and interpreting, defining results. Leadership competence.

- Flexibility.
- Empathy.
- Personal information management.

- 3.2.1 Based on your personal experience, what does help and what does restrain the acquisition and the effective use of those competencies? Focus on organizational and educational aspects: bureaucracy, logistics, timing, training models and pedagogical teaching methods.
- Can you give some examples?

Each competence requires a special approach depending on its characteristics: a technical competence is not the same as an emotional one. A strategic plan is necessary to work on each of them.

- 3.3.1 How do you keep yourself up-to-date in order to acquire the mentioned competencies? (self-training, peer tutoring, paid private training, training offered by the university, etc.). Can you give some examples?

Competence update is considered fundamental and inherent to the profession itself. Both the self-training and the training offered by the university are the channels mentioned by 7 of the participants. One person mentions that competence is not acquired through the acquisition of knowledge but through intelligent observation of experience.

- 4.1.1 Based on your personal experience, which are strengths and weaknesses, opportunities and threats in:
  - the implementation of digital innovation in your university?
  - integration of digital technologies in organization processes and teaching in your university?

Strengths: when innovation is done with transparency and the capacity to manage a large volume of students.
Weaknesses: lack of time to integrate innovation. Many times, things do not work well when the academic year starts.
Opportunities: being a benchmark for other universities is a boost factor.
Threats: the increase of technologies complicating the management instead of helping and the improvement of other universities in this area.

- 4.2.1 How has the HEI intervened to accompany this process of enhancement and the integration of digital technologies in: organizational processes, teaching/learning processes, third mission activities and research? and 4.2.2 what are the results/effects of these interventions?

Fundamentally in the introduction of new tools for both management and teaching action. In general, it is believed that there is good training to know the tools (6 participants). 4 participants criticize the little integration of the tools for the improvement of the teaching action, and the lack of educational transformation since the emphasis is placed on management. The excess workload associated with the incorporation of new tools is also mentioned.

- 4.3.1 What are the limits/risks and opportunities that governance has faced in your HEI's digital innovation process?

Participants have no answer for this question

- 4.3.2 How has governance intervened to overcome the negative aspects, limits and risks identified?

Participants have no answer for this question

- 4.4.1 What are the areas for improvement that the experience of the pandemic has brought out with respect to the use of digital technologies/resources in teaching and learning processes?

There have been no major changes, except that the communication with colleagues has been only virtual.

- 4.4.2 and which will need to be worked on in the coming months?

The challenge is to improve the virtual evaluation

FG 2.2: Collaboration teacher and Tutor

- 0.1 What is your idea of digital innovation in Higher Education?

Use DT to improve higher education both at a technological and methodological level. It must allow global, efficient and versatile access.

- 0.2 What is digital innovation in your university context?

No data.

- 0.3 In what way does the digital technologies, also regarding the challenge of the new technology frontiers (e.g. artificial intelligence, digital learning environment, augmented reality etc.), have modified:
    - teaching, research and organizational processes in your HEI?
    - your way of working and interacting with each other?
    - (focus mainly on digital competencies for teachers/researchers and student's needs in the digital era)

The incorporation of new tools generates a constant change in the teaching processes. Fundamentally the use of video and collaborative work.

- 1.1.1 How is the university as a system, transformed, under the pressure of digital innovation, in terms of organization, internal processes, work flows and communication, at different levels?
- 1.1.1.a … looking at the UOC in perspective since you joined.

Digitization has been achieved in all areas, such as the signing of contracts, tests or meetings. The increase in communication flows and the growth of the university has made everything more complex, but the participants perceive an approach of constant improvement and learning.

- 1.1.1.b ... compared to face-to-face universities.

No data on this question.

- 1.1.2 What are the main criticalities that you have encountered with respect to this?

The structure of the subjects is very rigid. The workload associated with the changes. Part of the structure and processes does not evolve, and imbalances are generated.

- 1.2.1 How has the figure of the teacher/researcher changed in the last period and how is digital innovation having an impact with respect to the redefinition of roles, skills, organizational dimensions of teaching and research?

The speed of technological changes forces teachers to be alert and in constant adaptation. Student-centered teaching changes the role of teachers, and now is more of a guide in learning processes.

- 2.1.1 What is your experience in using innovative teaching methodologies with digital technologies? Can you give some examples of innovative methodologies with digital technologies applied to your teaching?

The use of mobile devices, ABProjects on Google Sites, audiovisual feedback, the online assessment that incorporates planning, virtual group work, co-assessment, self-assessment with a practical and reflective improvement application.

- 2.1.2 What makes these practices better / effective?

No data.

- 2.1.3 Have digital resources and technologies changed/modified your way of working/teaching/designing learning paths and relationship with students and colleagues?

Completely. The teaching-learning resources are much more versatile and interactive, and the ability to communicate and work in a team has changed a lot.

- 2.2.1 What are the criticalities/constraints that still weigh in the adoption of digital innovation/technologies in your teaching practices?… and the possible solutions to overcome them?
- Can you give some examples?

No data.

- 2.3.1 Do you share common models/practices in your faculty?

The participants are proud of the work done as a team and the high level of transfer.

- 2.3.2 What are the criticalities/constraints that still weigh in the adoption of digital innovation/technologies in your teaching practices?

An important key to improving the transfer is to involve the team in the innovation processes.

- 2.4.1 In your personal experience, what are the main difficulties or advantages that students encounter facing the use of digital technologies in their learning and / or research paths? (disinterest/ interest; difficulty/ ease; apathy/enthusiasm; etc).

Students have a great initial motivation with technology, to maintain it is key:
- Incorporate ICT as tools that allow to modify the teaching methodology and the design of activities
- Show the potential of ICT in the teaching-learning process and all that they can bring
- Adapt the way of transmitting and teaching through ICT
- Mejorar si es necesario the ICT training of the teachers and the previous ICT knowledge of the students.

- 3.1.1 In your personal experience, which are the main competencies that professors/researchers should have in order to carry on effective lectures (referring also to digital, methodological and socio-relational skills)? Can you give some examples?

Table 4 Emerging competences by group of stakeholders:

🟦 Teachers/Researchers
🟩 Collaborative Teachers/Tutors
🟥 Administration/Technical

1. Professional engagement	2. Digital Resources	3. Teaching and learning	4. Assessment	5. Empowering learners	6. Facilitating learners' DC
Organisational communication 🟦 🟩 🟥	Selecting digital resources 🟦 🟩	Teaching 🟦 🟩	Assessment strategies 🟦 🟩	Accessibility and inclusion 🟩	Information and media literacy 🟩
Professional collaboration 🟦 🟩 🟥	Creating and modifying digital resources 🟦 🟩 🟥	Guidance 🟦 🟩	Analysing evidence 🟦 🟩	Differentiation and personalisation 🟦 🟩	Digital communication and collaboration 🟩
Reflective practice 🟦 🟩 🟥	Managing, protecting and sharing digital resources 🟦 🟩 🟥	Collaborative learning 🟩	Feedback and planning 🟦 🟩	Actively engaging learners 🟩	Digital content creation 🟩
Digital Continuous Professional Development (CPD) 🟦 🟩 🟥		Self-regulated learning 🟩			Responsible use 🟦 🟩
					Digital problem solving

- 3.2.1 Based on your personal experience, what does help and what does restrain the acquisition and the effective use of those competencies? Focus on organizational and educational aspects: bureaucracy, logistics, timing, training models and pedagogical teaching methods.
- Can you give some examples?

Continuous training based on real application in the classroom and the recognition of the institution and peers as a motivational factor

- 3.3.1 How do you keep yourself up-to-date in order to acquire the mentioned competencies? (self-training, peer tutoring, paid private training, training offered by the university, etc.). Can you give some examples?

All participants use self-training as a way to be updated in the competences they need. The resources for this self-training can be by own search, or following seminars or courses offered by the university. One participant suggested that these courses could be cheaper or free for college collaborating professors (PDC). Three participants mentioned that developing their own work and communicating with the rest of the faculty is a way to update competences.

- 4.1.1 Based on your personal experience, which are strengths and weaknesses, opportunities and threats in:

  - the implementation of digital innovation in your university?
  - integration of digital technologies in organization processes and teaching in your university?

Strengths: ICT increases communication capacity, creativity and supports teaching learning processes for the entire institution.
Weaknesses: A misuse of ICT can transform strengths in weaknesses.
Opportunities: ...
Threats: ...

- 4.2.1 How has the HEI intervened to accompany this process of enhancement and the integration of digital technologies in: organizational processes, teaching/learning processes, third mission activities and research? and 4.2.2 what are the results/effects of these interventions?

All participants value positively the support and training received to improve their teaching performance. This support is done from the coordination of each area, both for the updating of content and methodologies and for the acquisition of digital skills and the use of tools.

- 4.3.1 What are the limits/risks and opportunities that governance has faced in your HEI's digital innovation process?

Improving connectivity in all areas (domestic, professional, etc.) allows innovations.

- 4.3.2 How has governance intervened to overcome the negative aspects, limits and risks identified?
- It is important to have teams dedicated to governance in the institutions
- 4.4.1 What are the areas for improvement that the experience of the pandemic has brought out with respect to the use of digital technologies/resources in teaching and learning processes?

Participants have responded about the aspects have been improved during the pandemic:

Administration: improvements in student enrolment circuits and electronic signature.

Teachers and researchers: virtual communications, webinars to share knowledge as training, virtual assessment.

- 4.4.2… and which will need to be worked on in the coming months?

The use of social networks.

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FG 2.3: Administrative Staff and technicians

▪ 0.1 What is your idea of digital innovation in Higher Education?

*T*his staff group expresses a very practical vision of the use of DT: take advantage of technological possibilities to facilitate the teaching-learning, communication and management processes.

▪ 0.2 What is digital innovation in your university context?

The application of new processes or tools and improvement of existing ones to facilitate management.

▪ 1.1.1 How is the university as a system, transformed, under the pressure of digital innovation, in terms of organization, internal processes, work flows and communication, at different levels?

▪ 1.1.1.a … looking at the UOC in perspective since you joined.

6 participants are very pleased by how the university incorporates the technological advances that facilitate management (one mentions that it can be improved), 2 are critical of the increase in bureaucracy difficults processes and the ability to innovate.

▪ 1.1.1.b ... compared to face-to-face universities.

Very positive view of the evolution of the UOC.
Highlights the difference with face-to-face universities. The UOC efficiently handles a lot of information and processes, and teleworking is easy to implement.

▪ 1.1.2 What are the main criticalities that you have encountered with respect to this?

The fragmentation of the innovations. There is a lack of greater integration of the different processes that are carried out.

▪ *2.1.1* What is your experience in using digital technologies in your work?

Technological network is always in our work. Some examples of tools are:
Library: new databases or new products / software.
Trello (for project management), Miro (for ideation processes), Digg (for sharing information).
Tools designed and implemented to accompany the training design of programs and subjects based on competencies (implementation of GRAF).

▪ 2.1.2 Have digital resources and technologies changed/modified your way of working?

The management has become more efficient and the big change is the collaborative work in a network and the virtual communication that allows to reduce the presence.
One participant is critical of the increase in the number of processes.

▪ 2.1.3. Up until now, has technological technologies been a resource or a limit to your work?

For all the participants, technology is a great advantage in their work.

▪ 3.1.1 In your personal experience, which are the main competencies that professors/researchers should have in order to carry on effective lectures (referring also to digital, methodological and socio-relational skills)? Can you give some examples?

Table 5 Below shows the emerging competences by group of stakeholders:

🟦 Teachers/Researchers
🟩 Collaborative Teachers/Tutors
🟥 Administration/Technical

1. Professional engagement	2. Digital Resources	3. Teaching and learning	4. Assessment	5. Empowering learners	6. Facilitating learners' DC
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Professional collaboration 🟦 🟩 🟥	Creating and modifying digital resources 🟦 🟩 🟥	Guidance 🟦 🟩	Analysing evidence 🟦 🟩	Differentiation and personalisation 🟦 🟩	Digital communication and collaboration 🟩
Reflective practice 🟦 🟩 🟥	Managing, protecting and sharing digital resources 🟦 🟩 🟥	Collaborative learning 🟩	Feedback and planning 🟦 🟩	Actively engaging learners 🟩	Digital content creation 🟩
Digital Continuous Professional Development (CPD) 🟦 🟩 🟥		Self-regulated learning 🟩			Responsible use 🟦 🟩
					Digital problem solving

- 3.2.1 Based on your personal experience, what does help and what does restrain the acquisition and the effective use of those competencies? Focus on organizational and educational aspects: bureaucracy, logistics, timing, training models and pedagogical teaching methods.
- Can you give some examples?

Participants are critical of the type of training they receive. It is a concrete and isolated training. The trainers are external professionals. We should take advantage of the internal knowledge, because UOC staff knows how the university works.

- 3.3.1 How do you keep yourself up-to-date in order to acquire the mentioned competencies? (self-training, peer tutoring, paid private training, training offered by the university, etc.). Can you give some examples?

Most of the participants (6) use self-training.
One participant mentions a training plan following with the hierarchically superior to analyze his needs and plan learning.

- 4.1.1 Based on your personal experience, which are strengths and weaknesses, opportunities and threats in:

- the implementation of digital innovation in your university?
- integration of digital technologies in management and administration processes in your university?

Strengths: Identification of strategic challenges in the UOC EP for the coming years.
Weaknesses: Individual and group skills.
Opportunities: Companies and consultants with knowledge and skills to accompany us.
Threats: Rapid acceleration of digital innovation in the environment, increasing competition.

- 4.2.1 How has the HEI intervened to accompany this process of enhancement and the integration of digital technologies in management and administration processes and

- 4.2.2 what are the results/effects of these interventions?

All the participants are very satisfied with the different improvements in the digital management of the processes both at the organizational and communication levels. GSuite, IntraUOC: in general adapting tools to improve management and communication.

- 4.3.1 What are the limits/risks and opportunities that governance has faced in your HEI's digital innovation process?

No data.

- 4.3.2 How has governance intervened to overcome the negative aspects, limits and risks identified?

No data

- 4.4.1 What are the areas for improvement that the experience of the pandemic has brought out with respect to the use of digital technologies/resources in management and administration processes?

Time management and defining which tasks can be done synchronously / asynchronously.
It has also been shown that the quality of internet connections can be a digital gap to be solved in a global telework environment.

- 4.4.2 and which will need to be worked on in the coming months?

Communication channels have multiplied and their use should be protocolized.
Having a catalog of resources and tools for our community, which help to work collaboratively on projects, and not on processes, will facilitate defining strategies for projects. The day-to-day volume does not allow us to have other perspectives and think about the future.

Students: main results

For this phase of general description, each section of survey questions was analyzed using descriptive statistics such as mean (M) and standard deviation (SD). Number of responses of each section (N), mean and standard deviation of each section can be found in the tables below in this chapter.

Sections from 1 to 4 show the results of the ECOLHE common questionnaire, and section 5 is part of the questionnaire added only for UOC students because. Section 5 *(My motivation for studying online is due to)* is here selected because it can be useful to understand the reasons that motivate students to do online studies. In the following sections, the most relevant results are described, and all the results are shown in the corresponding sections and tables:

Learning fostering

In terms of learning fostering, "The class group activities" (M=4.44; SD=.86) and "Stimulate debating and peer assessment" (M=4.30; SD=.92) received higher scores. These results are coherent with the effort done by the University fostering collaborative work between students.

By the other hand, "Invite guest speakers" (M=2.73; SD=1.21) and "Use lab experiments and simulations" (M=2.95; SD=1.14) received lower scores. These two items invite the University to search innovative options to stimulate guests participation and generate virtual experiments and simulations.

Table 6 Students' learning fostering

1	To foster students' learning, in the classes, the teachers:	N = 533

Question		Mean	SD
1.1	Use game elements or educational games	3,34	1,13
1.2	Use visual or digital resources and tools	4,17	0,93
1.3	Use conceptual maps	3,57	1,16
1.4	Use class group activities	4,44	0,86
1.5	Use case studies	3,92	0,98
1.6	Use lab experiments and simulations	2,95	1,14
1.7	Stimulate debating and peer assessment	4,30	0,92
1.8	Invite guest speakers	2,73	1,21
1.9	Assess students' prior knowledge to orient personalised learning	3,05	1,32

Knowledge assessment

This section contains only an item, and the result is presented below.

Table 7 Knowledge assessment

2	To assess the knowledge:	N = 533

Question		Mean	SD
2.1	Students take innovative tests (quiz, game, playing role, speech, etc.) during the classes	4,12	0,04

Students' experiences

This section gives an overview about the students experiences with the university staff, the resources and the global management. Most of the items received scores over 4. Those items with scores lower than 4 have a minimum 3.81 score (items 3.1, 3.6, 3.9, 3.12 and 3.4).

Consequently, participants express that "I'm overall satisfied with my choice to study at this University" (M=4.27; SD=.72).

Table 8 Students experiences

3	Based on my experience, I believe that:	N = 520

Question		Mean	SD
3.1	Students are at their ease to each other	3,88	0,95
3.2	Students are respectful towards each other	4,00	1,06
3.3	Locations is functional to my needs of studying or staff contact	4,19	1,06
3.4	The faculty organization/structure is clear to me	4,15	1,01
3.5	Announcements from the administrative staff are clear	4,08	0,63
3.6	The administrative staff is prompt to support students' needs	3,92	0,93
3.7	Teaching staff is empathic	4,08	0,98
3.8	Teaching staff provide the student support that I need	4,08	0,89

3.9	Teachers are engaged in the teaching process	3,92	1,09
3.10	Teachers are digitally competent	4,23	0,76
3.11	Teaching materials are not too difficult to understand	4,04	0,82
3.12	Teaching materials are appealing	3,85	1,01
3.13	Lessons are available to students remotely on the internet	4,50	0,65
3.14	Lessons catch my attention and stimulate my curiosity	3,81	1,27
3.15	Technology and learning portals (e.g. Moodle, Learning Management System) are effectively used	4,08	1,02
3.16	ICT Tools and platforms are intuitively used	4,04	0,87
3.17	I'm overall satisfied with my choice to study at this University	4,27	0,72

Learning and professional experiences and expectative

This section asks about learning and professional experiences and expectative. Items "Is really enjoyable" (M=4.19; SD=.80) and "Matches my learning expectations" (M=4.15; SD=.73) received higher scores. Items related to professional development "Is giving me the opportunity to meet significant people for my life and my profession" (M=3.31; SD=1.23) and "Is giving me the opportunity to find a job" (M=3.08; SD=1.13) received lower scores, may be explained because students in this university is people that is usually already hired.

Table 7: Learning and professional experiences and expectatives

4	I believe that studying at this University:	N = 517

Question		Mean	SD
4.1	Matches my learning expectations	4,15	0,73
4.2	Is really enjoyable	4,19	0,80
4.3	Is developing my soft skills	4,04	1,04
4.4	Is giving me the opportunity to meet significant people for my life and my profession	3,31	1,23
4.5	Is giving me the opportunity to find a job	3,08	1,13

4.6	Will impact my good professional image/reputation	3,73	1,12
4.7	Will help me in acquiring a job or career-related knowledge and skills	4,12	0,91
4.8	Will help me develop my critical thinking	4,04	1,04
4.9	Will help me in team working	4,08	1,13

Motivation for studying online

This section is one of a set of sections added by UOC, following the usual strategy to understand the students' experience taking the ICT subject in this university.
"The flexibility it offers with your professional and / or family commitments" (M=4.62; SD=.67) and "The geographic flexibility of studying a degree not available in my close environment" (M=4.02; SD=1.20) received higher scores.

Therefore, flexibility is the most important factor motivating students to study online.

Table 9 Motivation for studying online

5	My motivation for studying online is due to:	N = 488

Question		Mean	SD
5.1	The flexibility it offers with your professional and / or family commitments	4,62	0,67
5.2	The geographic flexibility of studying a degree not available in my close environment	4,02	1,20
5.3	The reasonable price of the program	2,94	1,16
5.4	The opportunity to develop digital skills and competencies by studying fully online	3,78	1,13
5.5	A more innovative pedagogical model than a traditional university program	3,80	1,08
5.6	The reputation of the program itself	3,52	1,01
5.7	The pandemic situation caused by COVID'19.	3,25	1,34

Conclusions about best practices

Focusing the data analysis on best practices in the UOC, the main results on this issue can be found below:
Leadership, planning and management
As part of the UOC's structure, there is specifically a Vice Rectorate of Strategic Planning and Research.
For an online university, planification is one of the most important axia to guarantee that all our courses are disponible online.Syllabuses, learning outputs, methodologies, staff in charge, websites, and the rest of the elements from HE must be planned and prepared with a enough time to be ready to be launched abroad.
Information about the UOC Strategic Plan and its conception can be found in the link:
https://www.uoc.edu/portal/en/metodologia-online-qualitat/estrategia/pla-estrategic/index.html

Quality Assurance
The internal quality assurance system (SGIQ) currently only provides guidance on teaching, on its planning and execution. The UOC's Planning and Quality Area follows the demands of the Catalan University Quality Assurance Agency (AQU). It is planned that in the future the SGIQ will also incorporate aspects of the other missions of the university.

Scientific research work
There is a Vice Rectorate for Research and Innovation to which the Research and Innovation Area reports, which provides applications to support teaching and research staff in carrying out research. All the detailed applications can be found on the UOC intranet through a catalog of research resources, ranging from training, to support for applying for funding for projects, ethical requirements, support for scientific publication, and all support for innovation through HUBBIK.
The UOC has 2 research centres, one centre for innovation and learning transformation and a Doctoral School and also conducts research in the fields of its seven faculties. They involve 51 research groups with more than 500 researchers. Information about Research and Innovation can be found in the following link:
https://www.uoc.edu/portal/en/recerca-innovacio/index.html
Technology transfer and service to society
The Vice-Rectorate for Globalization and Cooperation, as well as the Area of the same name, are principally involved in the process of the Third Mission in relation to digital innovation, with specific attention to transmission and transfer to Latin American countries, as well as in the exchange of knowledge with NGOs.

Learning and teaching
Curriculum improvements are carried out by each of the 7 UOC Departments or Studies with the support of the eLearn Center.
The professional development of teaching staff is carried out by the eLearn Center. In the case of students, they can present their "final studies work" with innovative potential (and, therefore, also with digital innovative potential) at HUBBIK and evolve towards digital innovation (creation of added value for higher education or for society in general).
The UOC's methodology – its proprietary learning model – is based on three basic elements: **learning resources**, personalized **student support** from teaching staff, and **collaboration**.

ICT culture

As an online university, UOC is fully impregnated by ICT culture. For example, the eLearn Center drives the evolution of our educational model through innovations in learning. We also have a HUB, Hubbik, to promote entrepreneurship, open innovation, support for knowledge transfer of results, and cooperation between the entire UOC community. And different innovative research groups: Edul@b is focused on Education and ICT.

ICT resources and infrastructure

Again, as a fully online university, ICT resources and infrastructure is a basic stone for the UOC.

As example digital resources are available from the UOC Library:

https://biblioteca.uoc.edu/en/search-the-digital-collection-by-field/index.html

CONCLUSIONS

The main conclusions of this report are listed below:

- Digital innovation is a vehicle for improvement, not an objective in itself. Therefore, universities should use technology to improve teaching, research and sharing knowledge.
- Training online is not transferring the face-to-face system to the virtual world. Traditional universities should face a deep evolution to achieve the integration of online learning in their structure.
- Digital transformation boosts universities to evolve towards an HE assuming the principles of blended learning. Therefore, all teachers should reflect on which part of their teaching should be face-to-face and which should not.
- The full online UOC system has been a big advantage to face the pandemic situation. UOC is also facing a new way of working to be: + digital, + open, + collaborative, + agile, + data-based, and + transdisciplinary.
- The institutions should be prepared to receive innovative proposals. They need effective innovation management channels to be awake to their generation from anyone and quickly close the innovation circle. Therefore, the key is to transform the organizational dynamics to a Learning organizations model.
- HE institutions have to be continuously updated in a changing digital world. To allow staff and students to be continuously updated, DT should allow global, efficient and versatile access. To ensure the updating of digital competence, UOC offers a cross subject in Digital Competence for all the students, but the UOC staff use self-training.use self-training as a way to be updated.
- There are significant differences between the different groups of staff when analyzing DI in the institution. As a general rule, Teachers and researchers are the most critical with how digital innovation impacts the institution and in their own responsibilities. Tutor and collaborative teachers are satisfied with their possibilities of developing innovative proposals and the support of teachers and the rest of the team. By their side, administrative staff have a practical vision of DT use: take advantage of DT possibilities to facilitate/improve the teaching-learning, communication and management processes.
- Students evaluate positively the collaborative perspective of the teaching learning process, the innovative activities, the clouse and quick communication with the rest of university stakeholders and the opportunity to meet significant people for their life and profession. On the other hand some improvements can be faced by the university, such as inviting guest speakers, clarifying better the university organization/structure and the engaging of teachers in the teaching process.
- Flexibility is the most important factor motivating students to study online: geographic flexibility and also with their professional and family commitments.

REFERENCES

Alonso-García, S., Aznar-Díaz, I., Cáceres-Reche, M.-P., Trujillo-Torres, J.-M., & Romero-Rodríguez, J.-M. (2019). Systematic Review of Good Teaching Practices with ICT in Spanish Higher Education. Trends and Challenges for Sustainability. *Sustainability*, *11*(24), 7150. MDPI AG. Retrieved from http://dx.doi.org/10.3390/su11247150

ANECA (2017). Activity Report 2017. Retrieved from http://www.aneca.es/eng/ANECA/Background/Activity-Report

Egido Gálvez, I. (2015). La política universitaria en la España democrática: logros y carencias después de treinta años. Tendencias Pedagógicas, 11, 207–222.

Isabel Rodà, « La financiación de la investigación en España », *Mélanges de la Casa de Velázquez* [En ligne], 47-1 | 2017, mis en ligne le 01 janvier 2018, consulté le 31 juillet 2021.
URL : http://journals.openedition.org/mcv/7543 ; DOI : https://doi.org/10.4000/mcv.7543

Liberia, I. y Zurbano, B. (2018). La investigación predoctoral en Ciencias Sociales: una propuesta desde la Facultad de Comunicación de la Universidad de Sevilla. Sevilla, España: Egregius.

López, E. (2016). *La formación docente del profesorado universitario: sentido, contenido y modalidades.* Bordón. Revista de Pedagogía, 68(4), 89-102. doi:10.13042/Bordon.2016.38998

Martel, T. (2019). *The History of Spanish Universities from their origins in the 12th century.* Global University Network for Innovation. Retrieved from http://www.guninetwork.org/articles/history-spanish-universities-their-origins-12th-century.

MEFP (2019). Datos Y Cifras Del Sistema Universitario Español. Publicación 2019-2020. Retrieved from https://www.educacionyfp.gob.es/servicios-al-ciudadano/estadisticas/universitaria/datos-cifras-copia.html

Zabalza Beraza, M. (2012). *El estudio de las "buenas prácticas" docentes en la enseñanza universitaria. REDU. Revista de Docencia Universitaria, 10*(1), 17-42. doi:https://doi.org/10.4995/redu.2012.6120