



Professional development in digital teaching and learning

**IO6A4 Report on recommendations on managing innovation in digital
education**

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DigiTeL Pro Institutional Policies and Strategies for Digital Education Recommendations

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Introduction

Due to the COVID-19 crisis, universities had to switch to digital education and re-organize their campuses. A survey conducted by the European Commission in May 2020 showed that during the first lockdown period, 95.1% of universities organized online and distance learning, and 82.7% even conducted online exams. This required emergency decisions and massive support for online lectures, tutorials, and videoconferencing. Universities allowed only half or one fifth of the students in face-to-face lectures, while others attended online. Another option was to go completely online in distance education formats. At least, in person lectures had to be reduced to the minimum, while students got assignments to be completed at home.

This was a disruption for teaching staff, who faced an extreme workload to adapt to the situation. Students started to manifest for the right of having “quality education”.

The DigiTeL Pro Strategic Partnership was established to address this issue. It brought together experts from universities with a proven track record in research and innovation in digital education to provide continuous professional development courses for universities. They are at the edge of expertise in teaching and learning scenarios, connecting with main trends in practices observed during the crisis, and in the student learning experience.

In this project, these groups have valorized their expertise in continuous professional development in three CPD courses, covering main approaches in digital education: synchronous hybrid, blended and online distance education. This not only helps universities respond to the challenges posed by the COVID-19 pandemic, but also promotes the development of new approaches to teaching and learning that are better suited to the "new normal".

This means that on campus education must not be copied, but research-based modes of teaching and learning to enhance education must be used. Central is the concept of active learning, engaging students in rich spectrum of learning activities, for example internet search, watching knowledge clips, online collaborative learning, serious games and simulations, essay writing using wiki tools. Interaction, debate and dialogue can be done synchronously and asynchronously.

From an institutional policy perspective, it is important for every educational institution to reconsider their educational model, including professional digital education. It is urgent that educators are trained in the use of digital pedagogies and understanding what constitutes quality online education. Additionally, educators may need to shift from being mere lecturers to also being developers of effective digital teaching strategies. Finally, education should be regularly evaluated to ensure it is meeting the highest standards.

DigiTeL Pro has developed institutional policy guidelines to help higher education institutions achieve high-quality, accessible, flexible, and cost-effective digital education. By implementing these guidelines, universities can enhance their ability to provide effective digital education that meets the needs of students in a fast changing world.

Policies, strategies and leadership support for innovation

1. The integration of digitalization into higher education requires **leadership support for educational innovation** that can establish institutional policies and strategies for digital education. This leadership should be shared across various levels within the institution, including faculties, programme boards, teaching and learning services, course teams, and teaching staff.

The COVID-19 pandemic has highlighted the importance of digital education and accelerated the need for its integration into higher education. Many institutions recognize the need for shared leadership in this area, but lack the means and frameworks to implement common policies and strategies for digital education.

2. Institutions should utilize the benefits of digital education in all **three areas of provision**: mainstream degree education, continuing education and professional development, and open education (MOOCs). Digital education offers high-quality active learning, flexible and scalable access, and cost-effectiveness. Institutions can use synchronous hybrid, blended, and online distance education based on target groups, objectives, and competencies, as well as the preferences of teaching staff and institutional culture. By embracing digital education, institutions can offer a more diverse and accessible range of educational opportunities while enhancing the quality and effectiveness of teaching and learning.
3. Proper **change management** principles are crucial for the successful implementation of policy plans. These principles entail several actions, including effective communication, empowering change agents within the institution, addressing resistance, and ensuring psychological acceptance of change. With digitalisation transforming higher education rapidly, it's important to acknowledge that there may be resistance and psychological barriers to accepting these changes. Therefore, it's crucial to pay attention to these factors to ensure successful implementation.

Learning technology and education spaces

4. Universities should continually improve and adjust their **technological infrastructure, learning technology, and tools** to enhance the quality of education. This includes supporting adaptive education, learning analytics, collaborative learning activities, individual tutoring, student support, and e-assessment. Technology should also enable the **scaling up of digital education across the institution** while maintaining an intensive and rich learning experience in interaction with research and innovation resources.
 - Learning analytics can be utilized to gather and analyze data on student performance. This data can assist instructors in personalizing their teaching to meet the needs of individual students.
 - Collaborative learning activities can be fostered through online platforms, allowing students to collaborate in real-time or asynchronously.
 - Individual tutoring and student support can be provided through online tutoring sessions, peer-to-peer support, and other forms of online assistance.

5. As universities shift towards more synchronous hybrid, blended, and online distance education practices, the traditional model of large lecture halls and classrooms may no longer be sufficient. Instead, universities should consider adapting their **education spaces** to better suit the needs of digital education.

This can involve providing the appropriate technology infrastructure, such as high-speed internet and video conferencing tools, to support synchronous hybrid and online distance education. It can also involve creating more flexible spaces that allow for a better management of learning activities, including small group activities, peer-to-peer collaboration, and individual work.

Adapting education spaces in this way can have a significant impact on the **architecture of the university of the future**. Universities may need to re-think the design of their buildings to create more flexible, adaptable, and technology-enabled learning spaces.

6. It is important to guarantee the **availability and accessibility of digital infrastructure** for all actors, such as computer access, internet connection, and a suitable study environment. Institutions should also consider the digital divide and work to reduce barriers to access for underrepresented groups.
7. Higher education institutions should aim to find a balance in their relationship with the **EdTech** industry by prioritizing collaboration while maintaining a level of independence from software and hardware providers. One way to achieve this is through cooperation with other higher education institutions to reduce reliance on external developers and increase their negotiating power when dealing with the EdTech sector

An institutional framework for digital education

8. To expand innovation and engage all stakeholders, universities need to establish a **robust institutional framework for digital education** that considers the institution's size, profile, and structure. This framework should provide guidance and support to faculties, programme boards, course teams, and teaching staff and align with institutional policies and strategies, emphasizing active learning in digital environments using digital tools and resources. Adequately staffed teaching and learning services, as well as ICT services, must be available to assist stakeholders in implementing these policies and strategies. This necessitates significant funding.
9. **Examples** of institutional frameworks for digital education include:
 - **The KU Leuven Learning Lab**, which supports an institution-wide network for integrated digital transformation. It brings together educational expertise and different faculties and departments, including central and decentralized services, faculties, and programs, potentially on different campuses. The framework provides front-line support to teaching staff and curriculum boards and assists the central leadership in developing institutional policy priorities.
 - **TU Delft Teaching and Learning services and Teaching Academy**, which respond to the needs of individual teachers and entire faculties based on a shared educational vision and strategic framework. They offer guidance, including pedagogical frameworks, guidelines, and continuing professional development, and help teachers choose appropriate learning resources and design effective courses and curricula. The Teaching Academy fosters a community of teachers, providing a shared physical space where all teachers can work and showcase innovative teaching practices.

- **The UOC e-Learning Centre**, which has created a unique online distance learning teaching model for the entire institution with differentiated roles for program directors, coordinating professors, course leaders, and tutors. It offers methodological support to teachers in the pedagogical design of courses and programs. Learning designers and advisors train faculty members, and personalized advice is given through expert advice sessions. The center has developed an advanced course development template. All initiatives are grounded in research and innovation conducted in the eLearning Centre.

New models of teaching and learning design, development and delivery

10. Technology creates opportunities to enhance the quality, accessibility, flexibility and scalability of education at an equal or even lower cost by new teaching and learning environments where active learning is at the centre. This requires **new models for teaching and learning design, development and delivery**. Adopting these models is critical for achieving a long-term transformation of courses and curricula.
11. Three *research and innovation schools* have updated research and innovation reports, and good practices in DigiTel Pro, respectively on *synchronous hybrid, blended and online distance education*. On the European scene, these approaches complement each other. This doesn't prevent that *all three approaches are used to some extent in a university*, depending on the target groups to be reached in a course or programme, the individual preference of teaching staff or the institutional culture:
 - **synchronous hybrid education** is based on settings that have in common that both onsite or 'here' students and remote or 'there' students are simultaneously included. Examples are (multi-campus) virtual classrooms and hybrid classes during COVID;
 - **blended education** is based on a course design with a deliberate combination of online and offline learning activities. A typical format is the flipped classroom.
 - **online and distance education** is based on a course design with a continuous physical separation between teacher and learner, synchronously and asynchronously. Examples are MOOCs, digital micro-credential courses and programmes, and courses in open and distance universities.
12. In **decision-making on the digitalisation of courses and curricula**, a balance should be sought between the autonomy of educators on one hand and standardizing such decisions across the institution on the other hand. This involves setting clear guidelines and policies that ensure consistency in the design of curricula and courses, while also allowing for flexibility to meet the needs of individual instructors and students.

Continuing professional development of educators

13. To enhance the quality of technology-enhanced learning, universities should focus on increasing the educators' capability in learning design by prioritizing their continuous professional development. The Digital Competences Framework for Educators can be used as a starting point to identify the necessary pedagogical skills and competencies. Technical support should be provided as required, and educators must have access to targeted professional development opportunities that meet their specific requirements. To facilitate knowledge sharing among educators, universities can create subject-related communities of practice, peer coaching groups,

working groups, coaching by experts, multidisciplinary design teams, micro-support, education days, online communities, and help desks.

14. Three CPD courses for the design, development and delivery of digital education are developed by the DigiTeL Pro research and innovation schools, respectively for synchronous hybrid, blended and online and distance education. They are openly available here

<https://digitelpro.eadtu.eu/course-programmes/synchronous-hybrid-education>



The student's perspective: digital readiness, mental well-being, inclusiveness and involvement

15. In order to ensure that students develop **digital readiness** and have the necessary digital and self-regulating skills and competences, higher education institutions should take the following steps:
- Measure and monitor the digital readiness of incoming students and continue to monitor their progress throughout their academic career. If necessary, improve and enhance their digital proficiency.
 - Determine which basic digital skills are required for all students, regardless of their field of study. The Digital Competence Framework is a useful tool for identifying relevant digital skills and competences.
 - Pay attention to self-regulation skills, especially for students in their first year of studies. It is important to note that self-regulated learning and independent study work are not the same thing, and that educators may need support in developing effective pedagogical approaches.
 - Consider promoting computational thinking skills, regardless of the field of study.
 - Acknowledge that at a later stage, depending on the field of study, students may need more advanced digital skills (such as data management, cybersecurity, and digital numeracy skills).
 - Collaborate with other higher education institutions to develop skills modules.
16. For higher education institutions, it is important to prioritize the **mental well-being** of students, especially during periods of intensive digital education where social cohesion and contact may be compromised. Institutions should offer support to students as needed, which can take many forms, such as providing courses for staff in student support services on mental well-being, supporting activities organized by student services, and enabling one-on-one interactions between educators and students. Since the student population is diverse, it is essential that well-being initiatives cater to the individual needs of students.
17. To accommodate the diverse student population in higher education, including working students, those with disabilities, and those with low socio-economic status, institutions should implement **an inclusive digital learning offer** that is accessible, flexible, and adaptable. Open access to digital resources should be ensured, and technical support should be provided to students in need through various channels such as manuals and direct points of contact. Universal Design for Learning should guide the design of the learning experience, requiring staff professionalization.
18. To encourage student involvement in digital education policy-making, higher education institutions should take the following steps:
- Provide **clear communication** regarding the expectations for digital processes, including the time commitment required, the time that students are expected to spend on campus, expected response times from educators (incl. e-mail response), the availability of digital infrastructure on the campus, and other relevant information, to help students plan their schedules accordingly.
 - **Involve students as active participants** in the policy-making process for digitalization, from conceptualization to implementation and evaluation. This can be achieved at the institutional, programme, or course level. Students should not only be kept informed of policy decisions but should also be given the opportunity to contribute their perspectives and experiences to shape the policies.

19. DCU University has developed a Futurelearn MOOC, titled "A Digital Edge: Essentials for the Online Learner," as part of the DigiTeL Pro project. This course is aimed at higher education students at all levels who wish to improve their online learning experience.



The image shows a screenshot of a Futurelearn course page. At the top right, there is a 'DigiTeL Pro' logo. The course title is 'A Digital Edge: Essentials for the Online Learner' by DCU. It has a 4.7 rating from 129 reviews. The description states: 'Thrive at university in the 'new normal' and build the skills you need to get the most out of online university learning.' There is a 'Go to course' button and a note that 7,682 students are enrolled. At the bottom, there are logos for the Irish Universities Association, DCU Students' Union, and DigiTeL Pro, all with 'supported by' text above them. To the right of the course information is a photograph of a young woman with curly hair wearing blue headphones, sitting at a desk and writing in a notebook.

Assessment and feedback

20. Higher education institutions should take the following measures to ensure high-quality assessments and feedback in digital learning environments:

- Ensure that institutional digital environments offer diverse and high-quality assessment and feedback methods while respecting the professional autonomy of educators and didactic teams.
- Establish agreements on assessment and feedback at the level of study programmes to maintain consistency and quality.
- Customize assessment methods to the educational approach and verify whether the learning objectives have been met in formative and summative feedback.
- Consider experimenting with automatic assessment and feedback for adaptive learning using learning analytics and artificial intelligence (AI), particularly for large groups of students.

Lifelong learning

21. To meet the needs of learners and society, higher education institutions should focus on collaborating with relevant partners, such as those from the labor market, to design digital lifelong learning courses and programmes. Digital micro-credentials are an educational format that can meet the demands of the labor market and provide a flexible option lifelong learning in higher education. Collaboration with the labor market and professional field can help in designing a tailored learning experience.

Internationalisation

22. Universities can embed digital pedagogies in international education and mobility. Digital pedagogies can contribute to the accessibility, flexibility, scalability and cost-effectiveness of internationalisation. They can support high-quality course and programme collaboration and mobility, for example in university networks and European Universities alliances.
23. The European target for EUIs is 50% short-term or long-term mobility, depending on the curriculum goals and personal preferences of the students. This goal of large scale mobility can only be reached when integrating forms of digital mobility. In line with the delivery mode of courses and programmes, digital mobility can be synchronous hybrid, blended, or online distance/virtual.
24. Collaborative courses and programmes can be organized in degree education, continuing education and professional development, and open education. Digital micro-credentials and MOOCs can play a primary role in this.

Quality assurance and institutional evaluation

25. To ensure the quality of teaching and learning processes in digital environments, it is important to implement effective institutional quality assurance mechanisms in dialogue with the national quality assurance agencies. These mechanisms will apply the European Standards and Guidelines for Quality Assurance and the ENQA Considerations for Quality Assurance of E-learning Provision. In addition, quality assurance models specifically designed for digital education, such as the Excellence label and the European Maturity Model for Blended Education, can be used.

Research and innovation

26. To base institutional policies and educational models on research and innovation in digital higher education, collaboration between different departments within the institution is essential. This includes teaching and learning services, faculties of education, and educational research departments.

These departments can work together to conduct research and experimentation on different approaches to digital education, evaluate their effectiveness, and develop policies and strategies based on their findings. By working collaboratively, they can ensure that institutional policies and strategies are evidence-based and grounded in the latest research on digital education.

27. Universities can steer innovation, for example by the funding of projects/experimental implementations after a call on specific technological or educational issues (for example e-assessment and feedback, instructional design models....) or by seed money for bottom-up initiatives. The scaling of results is of course a condition for having impact.
28. To keep the institution continuously innovative, it is important to regularly evaluate institutional policies and strategies and frameworks, followed by the adaptation of policy objectives and strategies.

Legal aspects

29. As a higher education sector, it is important to be mindful of legal aspects associated with digitalization such as privacy, data security, copyright, and intellectual property rights. For higher education institutions, it is recommended to identify and address the legal requirements by consulting with other institutions and government bodies to establish a framework.

Collaboration platforms can also be utilized to aid in this effort.

Resources

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