University Responses to Digitalization at the Start of Covid-19 – Cases in Scotland

Paper for the World Association for Sustainable Development (WASD) Conference on 'Online Learning – the New Normal Post Covid-19', 28-29 October 2020

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Background

ESCALATE - Coordinated Higher Institutions Responses to *Digitalisation*

Involves: UK (Stirling and Exeter), Italy, Germany, Spain, Romania over 2 years (2019-2021)

Web: <u>https://escalate.projects.uvt.ro/</u>

Tweet: @DigitalEscalate

Project part funded by EU ERASMUS +KA2, Project No. 2019-1-RO01-KA203-063214







Context



- Universities across globe undergoing constant transformation to respond to society and labour market needs
- Covid-19 pandemic forced universities to rapidly increase digital teaching and student services (existing & new trends)
- It is uncertain which changes:
 - are likely to be *permanent, discarded* or *amended* after the pandemic
 - may lead to systemic (rather than task or function) changes
 - may result in problems of 'datafication' of education
 - will have other *unintended consequences* (e.g. automation, surveillance, data protection, ethics)







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Skills context



- *European Commission Digital Economy and Society Index* (DESI) 2019, UK ranks fifth of the 28 EU Member States
 - Overall in the UK, 71% of the population have at least basic digital skills (EU average of 57%). Nearly half do not have basic digital skills!
 - -46% of population above basic digital skills (EU average 31%)
- Skills shortages predicated to increase in the next five years in:
 - UK digital employment across sectors (particularly across new jobs in AI, Cyber Security, e-commerce)
 - social and emotional intelligence and higher cognitive skills (skills that are often further developed in universities)







Policy context in Scotland

- UK strategies plus Scottish government's digital strategy (2017) aspires to "harness the technologies of the Fourth Industrial Revolution to increase economic and social prosperity"
- Key policy-based initiatives and programmes influencing digitalisation in HEIs: aligned with the vision for Scotland as a *productive, innovative* and *digital nation* with *educated and skilled workforce* able to successfully engage in the world of work in a *globalised modern economy* (Quality Assurance Agency for Higher Ed. 2020)









University responses to online delivery

- Varying degree to which technology is used/integrated with the traditional methods of delivery (a variety of terms in use, e.g. digital university, digital literacies, virtual learning, e-learning, on-line and blended learning, technology-enhanced learning)
- Responding to shifts:
 - changing way students learn
 - expectations for preparing students for work and/or
 - a requirement for HEI operational efficiency
- Heavy investment in developing *digital infrastructures* such as *Virtual Learning Environments* (VLEs) to enable digital learning and interactions in small and large groups of learners including *Massive Open Online Courses* (MOOCs) (*but how much do these choices create path dependency for the future*)















- New courses in digital topics
- **Digital Skills Development for students** (incl. training in use of institutional VLE and library available to students pre-arrival + productivity, digital and data literacies, and cyber security awareness), **and staff** (courses in online & blended learning)



 Innovative assessment and Digital Literacy (presenting solutions to a problem, often based on data handling and analysis in a format of a digital artefact (e.g. presentation, video, podcast, digiessay)

Examples of digital innovation & digital skills development in HEI

 Investment in software and media management systems that offer media creation and management options (e.g. Panopto)



 Digital transformation of student learning and experience (laptop loan schemes, online support and guidance (e.g. bite-size information in multiple formats, bulletins, blogs, memes and snippets released via social media/ apps).

Impact of the 2020 Coronavirus pandemic



- Digital Champions and training for staff (to create self-supporting communities of practice confidently and meaningfully embedding the technology in teaching)
- Supporting students through difficult times (many lost peer and staff support but also access to sufficient technology and infrastructure)
- More collaborative ways of working (academic and non-academic staff creating local digital platforms for sharing experience and positive practices)
- **Reappraisal of existing practices** and upskilling in digital skills for design and delivery of educational content is the worthwhile investment that has a potential to **increase the quality of learning and student engagement**.







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Unintended consequences of learning and teaching in digital realms



- impacts of technology-led education on quality, equality and formation of social capital
- cyber-security threats
- personal data protection issues
- ethical aspects of student attendance and engagement
- student performance and engagement monitoring practices
- monetisation opportunities from student digital footprint (3rd party)
- staff monitoring practices
- development of future machine learning (and AI) with associated ethical and other issues (e.g. databases used to develop then reinforcing existing biases)
- Future path dependency due to choices in infrastructure













Conclusions

1)

need for practically-focused effective inclusion strategies and interventions to be designed and offered more widely to reach individuals from disadvantaged backgrounds and with low level of skills or qualifications and from older age groups

2) significant effort needed to better understand long- and short-term challenges and unintended consequences of digital learning and working when operationalising and implementing digital up-skilling

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