

Digital transformation of education: can an online university function fully?

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Due to the Covid-19 pandemic there is an acceleration of the digital transformation of many aspects of life, including how we socialise, how we shop and how we teach and learn. The impact of these changes are complex and may be far reaching. One area where interactive teaching and learning is changing rapidly is in universities, where the pandemic has increased use of many online processes. Universities are institutions with a long and varied history. They have repeatedly had to change what they do and how they do it to accommodate the times in which they operate. These changes can be reviewed on the scale of centuries, such as the gradual move away from Latin as the core curriculum for student's vocational studies. They can be viewed on the scale of a few decades, for example how universities have offered far wider access to higher education which has occurred in many economies at the same time as increases in fees, which has resulted in high levels of student debt. For many universities the months that have followed the outbreak of Covid-19 have been a time of rapid transition towards them becoming online universities. This is part of a longer-term trend towards increased use of interactive learning environments in education and training, and part of the broader digital transformations occurring across the economy in many societies. But let us here focus on the widespread and rapid transition due to the impact of Covid-19 in order to consider how fully universities can function as they move much of their work online.

What is a fully functioning university?

Universities have three enduring goals: the higher education of students, the advancement of knowledge and service to the wider community (Bourner, 2020). How these three goals are prioritized has varied over time, often with one goal subsuming the other two according to various historical circumstances. The fully functioning university is one where the three goals are working together to provide mutual support. For example, when the advancement of knowledge serves the society of which the university is a part and also contributes to the higher education of students. Or that when serving the community the university also contributes to the advancement of knowledge and to the higher education of students. For a university to fully meet these three goals requires a complex balance between the goals, and these interactions vary over time and circumstance. For many universities the rapid move to conducting more of their operations online may upset this balance.

An online university

Distance learning as a mode of educating students has mirrored the changing affordances of communication technologies. Over the last century, many technologies have been used including the post, wireless, television and home video recording. The use of online networks to facilitate distance learning has been an important element of the development of the internet (and its precursors). Indeed this journal was exploring such online teaching and learning before the term the internet was widely adopted, see for example Levin et al (1992) on educational electronic networks. In the context of the rapid changes during the year of the 2020 pandemic, an online university includes those where much of the higher education of students is conducted online. Where learning materials are accessed by students from a

web based virtual learning environment, and student participation is either asynchronous use of messaging and discussion boards or synchronous classes using a video conferencing service. For the fully functioning university the goal of the higher education of students can surely be offered by an online university. The aim of this journal is to advance knowledge of *“the design and use of interactive learning environments in the broadest sense, encompassing environments that support individual learners through to environments that support collaboration amongst groups of learners or co-workers.”* (ILE, 2020). An online university can often continue to advance knowledge. Much scholarly work is conducted in isolation and the retinue of computer supported collaborative work tools such as email and messengering, shared files and video conference seminars may not have caused much change to researchers practice other than the increased use of virtual conferences, to replace face to face gatherings. But what of the capability of universities to serve society? Here the change to online may have a more mixed impact.

Service to society

In the UK as elsewhere, the scientific and medical contributions of universities to society have been very visible in the period of the pandemic, in which the move to online operations has occurred. Academics and their advancement of knowledge have been drawn into the public sphere. The trope that science is the guide to policy is widespread. Press conferences with graphs and charts highlight the important value of real time data analysis regarding the spread of the virus. The complexities of statistical modelling are widely discussed and generally valued in news and commentary. Beyond the immediate value of applied science, there has been a resurgence of expert voices expressing views on the impacts of changes across a wide range of concerns, from economic analysis of changing work patterns, to the expanding conversations of whales, who are again able to hear songs from afar, in the absence of cruise and leisure shipping (Fournet, 2020). But an area in which the online university and the needs of society is less clear has been highlighted by the continued presence of large gatherings of students at universities. Many new undergraduates may well be keen to leave their homes and move to their university as part of the socialising and self-development experience of ‘going’ to university, and universities have powerful economic reasons to encourage attendance. These economic reasons range from the immediate revenue that accrues through the provision of accommodation and catering, to more structural drivers such as the guidance from market regulators that mandates some face-to-face teaching provision. Whatever the reasons, the net impact to society of large numbers of undergraduates gathering in an environment where contacts in their social networks are vastly increased will increase the risk of the spread of Covid-19. In many countries students gathering at universities is likely to increase novel social contacts, at a time when society is most clearly served by reducing all social contacts. In the global north, the resulting mingling of households is happening as the winter arrives, which makes coronavirus contagion more likely, and reduces options to socialise safely outside. In this cold socialising, students risk being seen as pariahs at a time when they may be socially vulnerable and isolated. As the end of the winter term approaches, the allure of home will be attractive to many students, whether for midwinter holidays and festivals or just to get their laundry washed, yet there may be potent risks to students socialising with their families and spreading their contacts outside the university bubble. A recent editorial in this journal highlighted the importance of student wellbeing, and the risk for students that studying and socialising online may bring isolation and increased risks to their mental health (Greener, 2020).

So how can an online university function fully?

The changes accelerated by the digital transformation of universities have fostered a range of challenges for the fully functioning university. Those who work towards the advancement of knowledge have been at the forefront of the adoption of digital working, the internet is itself an artefact of early efforts to foster computer supported collaborative work. Here at the Journal of Interactive Learning Environments there has always much to discover and share about the affordances of technology to improve the higher education of students. The goal that is least easily addressed by the online university is how to serve society. It is in this regard that challenging questions need to be asked about how universities can help to give support to society, as society tries to build back better. At the very least, we must ask, how can universities do least harm?

References

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