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## Conclusions

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Moving online offers many different opportunities to higher education institutions and academics. As the examples discussed in this book show, a move online offers the opportunity: To academics to create a professional profile and prestige outside institutional hierarchies and more supportive (academic) networks (Chapters 7 and 8); to university teachers to re-design their seminars and rethink their role as educators in higher education (Chapters 2 and 3); to departments and centres as to transform their educational and communication strategy (Chapters 2, 4, 8 and 10); to universities and research institutions to define visions and manifest their role within the sector (Chapters 1, 2, 5, 8 and 9); and last but not least to rethink the curriculum of an entire discipline (Chapter 6).

Yet, moving higher education online has far-reaching implications for teachers and researchers in universities and research institutes. Moving online not only makes education and research output more transparent, open and accessible to more and different people (inside and outside the institution) – each with its own challenges. A move online also has the potential of blurring the boundaries of what is ‘in’ and what is ‘out’, of radically transforming the role of researchers, teachers and learners, and in consequence to challenge many taken-for granted assumptions about the role and core practices of universities.

Through the expansion of lifelong learning, we will have learners with professional and subject expertise of their own who can now be involved in the process of knowledge creation and sharing, as teachers, peer-to-peer as well as learners, especially in the more democratic space of online education.<sup>1</sup> These knowledge loops (see Figure 0.1 of the Introduction), where knowledge is continuously created, updated, tested, questioned and shared, by merging what traditionally has been inside and outside the academia, allows for different experts and others outside the academia to get involved. It is the collaborative and communicative effort that brings relevance and ideas, connects dispersed information, and ensures timeliness, that finally outplays the exclusive individual academic of the ivory tower. In research, the new open-ness of creating, publishing and data-sharing is bringing a wide community into the research process. Open data offers the opportunity for anyone with the skills and computing power to do basic research (‘4th Paradigm’, Hey et al., 2009) and the open-ness of blogs and peer reviewed journals allows anyone to publish to the world. Universities and research institutes need to embrace this change, and help to shape it in positive and constructive ways.

Taking just one of the many examples shared here, of how the role of academics and higher education institutions is transforming through online scholarly practices, is illustrated in Birdi’s chapter (Chapter 6) on the CORE project. The distributed and cooperative creation of a radically new curriculum in

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<sup>1</sup> Further, online tools seem to be particularly well-suited to enhance constructivist ways of learning (Carlile and Jordan, 2005), that is, a learning that is happening ‘in the making’.

economics across institutional *and* disciplinary boundaries offering a multiplicity of viewpoints – thus shying away from an understanding of academia as providing the ‘right answer’ or ‘truth’. Nevertheless CORE provides guidance to find better answers to explain the world in which we live, based on latest evidence and reasoning.

Thus, CORE created a new curriculum in a collaborative effort, and is bringing together a different set of people, allowing for the continuous updating of knowledge, making the result openly accessible to all. This new curriculum also, and importantly, gives guidance in(to) the ‘unknowing’. This guidance in(to) the ‘unknowing’ could indeed be understood as the key role of academia in today’s knowledge societies where knowledge can be produced, stored and accessed by anybody. Further, as knowledge is abundant and constantly evolving for learners and multiple audiences, higher education institutions need to ensure that knowledge is accessible for a diverse set of learners/audiences (inclusiveness) and gets heard where it matters most. Online learning, open research practices and new communication strategies have taken a giant stride over the past years, be it for the new technical possibilities that have emerged, or more importantly, be it for the creative use that has been made of these – some of which we have shared in this book. Yet, despite the many efforts that are being made, the digital journey in the higher education sector is only at its first stretch. We believe it is no coincidence that after having been a leader in distance education for 50 years, the Open University launches a new educational strategy on how learning is designed in 2017, ‘as to be disruptive and revolutionary as in 1969’ (see chapter 1 by Marr) or as Haywood concludes the online education of the University of Edinburgh, while being a leading example in the UK, as ‘still (being) fragile’ (see chapter 5 by Haywood).

While many higher education institutions might think they can simply ignore the ‘digital hype’, policy-makers already have concrete proposals on the table as, for example, how to link the financing of research projects to open scholarly practices (see European Union, 2017).<sup>2</sup> The move online then offers a still to be explored set of answers to the challenges faced by many universities in re-defining their role in the 21st century (see for example UNIKE, 2016; Crow and Dabars, 2015).

Higher education institutions are still far from fully seizing the opportunities offered by moving online. To respond to the various challenges traditional public universities face today, but also to define their role as a leading actor in the knowledge society of the 21st century, the higher education sector will have to fully integrate online practices in its core business, complementing existing academic practices in some cases and replacing these in others: In the area of education and training, in the area of knowledge revision and production (research), and in the way it communicates its research and engages with experts and citizens – and importantly in the way these three areas interact, integrate and inspire each other. The examples shared in this book highlight different dimensions of moving online as to enhance academic practices, and the forms this has taken to make it work in practice, with its various tensions and obstacles (typically) found when aiming for change.

## HOW TO LEAD THIS CHANGE?

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<sup>2</sup> Certainly, it is possible that these efforts to recognize and credit different forms of scholarly practice, (unintentionally) change digital practices so that they might lose some of its beneficial characteristics. As Stewart describes in Chapter 7, the open space follows different patterns to establish leaders in a field of expertise. In particular early career academics benefit from these channels of communication taking place outside institutional hierarchies being described as more supportive and less competitive.

As Haywood points out in Chapter 5, learning from other universities and having access to case studies has been influential for leading change at his university. We hope that simply by making different experiences and lessons learnt in other contexts available in this book it will give ideas and guidance to academics, university leaders and others willing to lead change in the higher education sector.

Moving higher education online means to lead change, taking into account resistance, challenges and tensions that often – or necessarily? – accompany this change. The examples shared in this book tell many different stories of how this change was led at different levels: Introducing online practices on the course level, moving a whole project online, a university implementing a digital strategy, or even the online creation of a new curriculum across institutional and disciplinary boundaries.

When starting from the course or project level, a common challenge is the real or perceived restrictions that early adopters face when taking the lead in moving online. Attempts to centralize initiatives where no clear institutional visions guide this process (see Senge, 1990) and without offering the (financial) support, prevent these initiatives from scaling to a broader level. Instead, concrete support that is offered to academics or projects to enhance scholars' visibility or that of their project with a careful approach when common central standards could be applied, and when, at other times, it is best to simply share ideas and solutions, seem to be a promising way. Very important here seems to be the support by new professionals entering the university, such as media creators, instructional designers, digital librarians, and other knowledge workers (course and knowledge editors, course facilitators), who work alongside the academics.

It seems, when leading change as an institutional strategy, a lot of effort has to be put in to get scholars, staff, and students on board and ownership of this change has to be given to the various internal stakeholders. Experienced academic managers at all levels, as well as a clearly communicated vision, are necessary for change to take place at the wider institutional level. In this context, enough room for informed discussions as well as workshops and training opportunities, is necessary, allowing early career as well as more advanced scholars to share practices and to address concerns. This is vital as to get a broader set of potentially interested professionals and academics involved than just the 'early adopters'.

An interesting alternative to top-down or bottom-up change is what Bryant describes in Chapter 2 as 'middle-out': Having the institution's mission clearly in mind, this approach seeks to support those initiatives that have a possibility to be scaled more broadly and sustained over time. What most experiences shared in this book point at is the high level of flexibility and responsiveness that is vital for leading digital transformation in universities. Whether to be open to grasp innovative approaches by colleagues or the constant need to adapt one's communication approach, rigid plans seem to be a hindrance rather than a useful guide.

To lead change, institutions will need an institutional vision that gives academics, staff and students a frame for their action. They will need academics that have a mind-set of managers being able to lead people through this change and a university management that not only tolerates, but strongly encourages and supports those willing to lead change. A culture where learning and mistakes are not only permitted but form part of the institution's very essence, where learning from mistakes is highly valued. Last but not least, room to share practices and knowledge on moving higher education online, as well as concrete support for academics by experienced 'knowledge workers' who are willing to try out new things or can be encouraged to do so ensures the growth of an online culture in the academy.

We end this book with an Epilogue, a short forward look to the kinds of students, and hence young researchers, who will be entering our universities and research institutes in the coming years, and who

will challenge us to re-shape the way we offer education and conduct research, and who will also contribute to that process, if we embrace them as partners.

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