EDITORIAL

How can we Maximise the Potential of New Technologies to Meet the Sustainable Development Goals (SDGs)?

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The United Nations' plan of action for sustainable development notes the immense challenges that we face, but recognizes that "The spread of information and communications technology [ICT] and global interconnectedness has great potential to accelerate human progress, to bridge the digital divide and to develop knowledge societies" (United Nations, 2015, p. 5 pars 14 and 15). This issue of *JL4D* reviews this great potential for ICT to assist in meeting the sustainable development goals (SDGs) by 2030.

The future roles of ICT provide the focus of our first article by Professor Gilly Salmon, Academic Director of Online Services UK (https://www.oes.com/) in her contribution to our new series in which leaders in online and flexible learning reflect on past, current and future developments in the use of new technologies. (For Terry Anderson's contribution to our previous issue, please see https://jl4d.org/index.php/ejl4d/article/view/327.)

Gilly invites us to vision the future so that we can take action now to shape learning for students to come, in the context of the huge changes that face the world in terms of economies, employment, the environment and education. Gilly maps the developments of Web 1.0 to 3.0 against Educational and Industrial Revolutions and then looks forward to Education 4.0, Web 4.0 and Industrial Revolution 4.0. The future is, of course, uncertain; but she draws on available trends and data to recommend ways in which universities should be thinking now about their curricula, modes of learning and methods of assisting student success within the context of futures that will be very different.

Gilly Salmon is of course extremely well known as one of the pioneers of eLearning and as a leading innovator in the field of digital and blended learning. Her first seminal work was *E-moderating: The key to teaching and learning online* (2000 – third edition, 2011), in which she developed the much cited and employed five-stage model of structured support in online learning, from 'access and motivation' through 'knowledge construction' to 'development' (see www.gillysalmon.com/five-stage-model). The model was further developed in *E-tivities: The key to active online learning* (2002 – second edition, 2013), which launched a new term of 'e-tivities' – now ubiquitous – and provided frameworks to enable individuals and groups to participate actively online (see www.gillysalmon.com/e-tivities). These and subsequent works, as well as the paper we are delighted to include here, illustrate Gilly's convictions and practice that learning is constructed between participants who are increasingly able to play significant contributory roles through new technologies, and that collaborative design (see *Carpe diem*, www.gillysalmon.com/carpe-diem) is the secret to our students' success and will be for their futures. In the last ten years, since she has held senior and executive roles in universities, she has developed a stream of work around strategy, partnership and transformation for higher education

institutions, and in doing so has become what she calls an ardent 'amateur futurist'. Gilly has made substantial contributions to our understanding of the potentials afforded by flexible learning; her practical approach towards how we can develop both our own and our students' interactive learning engagement online and her informed vision of future possibilities and challenges make her an ideal contributor to our series.

Professor Salmon notes that "In 2019, 68% of internet traffic is via mobile devices, more of the world has a mobile device than a telephone or a desktop… [and] these statistics are rising and the percentages shifting rapidly towards mobility, especially in Asia and Africa". Our two invited articles explore the huge potential for mobile devices to support language learning and the ways in which they can assist those who have had fewer opportunities to access learning for development.

Professor Agnes Kukulska-Hulme, from the Open University UK (OU), explores the vital role mobile technologies can play in assisting local language learning for migrants entering a new country. As she notes, both the arrival of migrants, and the arrival of new technologies are not always welcome, but that there can be productive synergy between them. She argues that the mobility of groups or populations should not be seen as a challenge but as an opportunity which provides us with a wealth of new ideas in our rethinking of learning designs, use of smartphones and specifically mobile language learning. Kukulska-Hulme analyses a range of innovative projects which demonstrate the potential of mobile technologies and concludes that the urgent language learning needs of increasing numbers of migrants can be well served by mobile devices. Policy makers and educationalists also have a great deal to learn from migrants and their learning of relevant languages; indeed, insights from migrants can also benefit other mobile populations. She thus provides strong evidence and examples to support the UN recognition of the "positive contribution of migrants for inclusive growth and sustainable development [and] that international migration is a multi-dimensional reality of major relevance for the development of countries of origin, transit and destination, which requires coherent and comprehensive responses" (United Nations, 2015, p. 35 par 29).

Kukulska-Hulme notes that there are a number of resources available for mobile devices, including those that promote more active collaborative language learning, but that more research is needed. We are therefore particularly pleased that our second invited article provides an example of such research from Professor Mpine Makoe and Dr Shandu-Phetla from the University of South Africa (UNISA). They discuss the use of WhatsApp groups to support English language learners at UNISA, using the framework of *Ubuntu* – a South African concept that emphasises relationships with others and the community - and analyse a range of discussions that demonstrate *Ubuntu* values and the importance the participants placed on the support from their groups. The examples are all the more impressive in that the students were able to use their own languages – South Africa has eleven official languages - to explore concepts and arrive at a general understanding of English terminology.

Makoe and Shandu-Phetla's students were studying a module that would prepare them for university study and was thus aimed at supporting those students who have previously had fewer opportunities to engage with higher education. Our first research article provides another example of the potential for online and flexible learning to widen participation in higher education. Coughlan and Goff, from the Open University UK (OU), discuss the creation of six open online courses, developed by the OU in collaboration with learner representative partners (LRPs); that is, organisations that have knowledge and connections with particular groups of people who are under-represented in further and higher

education. The open online courses were targeted at lower-paid workers in the healthcare, teaching and voluntary sectors, as well as those wanting to start up a business with little experience. Collaborative involvement in the creation of the courses varied but both partners learnt from the experience; for example, the OU needed to reduce jargon and acronyms, while partners welcomed learning about the process of developing a course. Coughlan and Goff conclude with key principles for collaboration between learning partners which will be of great relevance to others seeking such collaborations. The principles also demonstrate the great possibilities for supporting those who have previously had restricted opportunities for educational development.

Learning for development is of course at the heart of this Journal, and we are delighted to include a bibliometric analysis by Dr Sanjaya Mishra, Associate Editor, of the contributions made to *JL4D* Volumes 1-5 (2014-2018). *JL4D* was founded with the aim of showcasing "the practical dimension of how learning for development works" (Kanwar, 2014), and this is one of the key areas under discussion in our article, for example in relation to authorship, citation patterns and topics covered. Mishra demonstrates that the number and quality of articles published in *JL4D* has been comparable with more established journals and that *JL4D* has also attracted relatively more articles from Commonwealth countries and Sub-Saharan Africa. While there are points to note, for example the relative preponderance of descriptive and qualitative articles compared with other Journals, *JL4D* is providing a valuable input to the literature on learning for development, especially on educational issues.

Our case study illustrates some of these points in that it provides an example from Sub-Saharan Africa of how a particular institution in Uganda is grappling with the potential of new technologies to support students. Mayanja, Tibaingana and Birevu examine the introduction of a range of flexible and online resources provided by the Institute of Open, Distance and e-Learning at Makerere University, and uncover some good practice but also a number of issues and provide recommendations. For example, mobile phones, as in our invited articles, provide much the most frequently used and easily accessible form of technology (96% of the sample), but the university is not taking advantage of this to respond to enquiries, use SMS or interact with students via e-mail.

The book review by Ferreira-Myers of COL's *Guide to blended learning* (Cleveland-Innes & Wilton, 2018) confirms that "quality assessment rubrics for blended learning" are only in the initial stages. The book/resource itself is also concerned with the potential for online resources and technologies to promote learning for development. The *Guide* http://oasis.col.org/handle/11599/3095 provides a valuable, free, online resource for all those developing and using blended learning strategies.

The United Nations Declaration 2015 looks forward to "A world with universal literacy. A world with equitable and universal access to quality education at all levels, to health care and social protection, where physical, mental and social well-being are assured (United Nations, 2015, Declaration 7 https://sustainabledevelopment.un.org/post2015/transformingourworld). This issue of *JL4D* has looked forward to the potential for new technologies to contribute to these goals. We can vision the future and take action to meet our students' needs (Salmon); maximise the potential of mobile learning devices (Kukulska-Hulme; Makoe & Shandu-Phetla; Mayanja et al.); and work towards ensuring educational opportunities are available to all (Kukulska-Hulme, Makoe & Shandu-Phetla; Coughlan & Goff; Mayanja et al; Ferreira-Myers). Further research and scholarship in all these areas

will be vital and we are very pleased to have evidence from Mishra that *JL4D* is making a small contribution in this area towards meeting some of these ambitious educational goals.

Some general themes emerge from the papers in this issue. We need far greater awareness of the huge changes we are facing and then adapt our practices in this light (Salmon; Kukulska-Hulme); we need to recognise and acknowledge the great value of collaboration with partners (Coughlan & Goff; Ferreira-Myers); and perhaps above all, we need to act on the potential of new technologies, especially mobile technologies, to widen participation and ensure the involvement of all those who have previously been excluded or marginalised from learning for development (Kukulska-Hulme; Makoe & Shandu-Phetla; Coughlan & Goff; Mayanja et al.).

It is therefore all the more important to take action as soon as possible to maximise the potential for ICTs to contribute to meeting the SDGs, and supporting those previously excluded, especially as we read (June 2019) that the numbers of people forcibly displaced worldwide has risen to 7.8 million (UNHCR, 2019).

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