

EDITORIAL

New Technologies: What are the Opportunities and Challenges?

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The United Nations Secretary General's *Strategy on New Technologies* emphasises the huge potential of new technologies "to accelerate the achievement of the 2030 Sustainable Development Agenda and to facilitate their alignment with the values enshrined in the UN Charter, the Universal Declaration of Human Rights and the norms and standards of International Law" (United Nations, 2018, p. 3). But while new technologies can "offer us powerful new ways to achieve our shared commitments to each and every one of the Sustainable Development Goals (SDGs)... they are not risk-free, and some inspire anxiety and even fear. They can be used to malicious ends or have unintended negative consequences" (United Nations, 2018, p. 8). This issue of *JL4D* focusses on the benefits and challenges of new technologies, in the context of SDGs, and in particular SDG4, the provision of quality education for all (see <https://www.un.org/sustainabledevelopment/education/>).

These opportunities and challenges provide the focus for our first article which launches a new series; in this, leaders in online learning from across the world reflect on past, current and future developments and issues in the use of new technologies.

We are delighted that Terry Anderson, Emeritus Professor at Athabasca University, provides the first article in the series in an important discussion of the use and abuse of social media in Higher Education. In this he explores the paradox between the convenience and acceptability of social media, as against the loss of control of our personal data; for example, information is delivered to us by social media companies through an algorithm which we cannot influence. The article also considers how these dilemmas can be addressed.

Terry Anderson is of course extremely well known in the field of online learning, having been among the earliest to embrace both its potential and the accompanying challenges. Among his many seminal works have been those applying the Community of Inquiry (COI) framework to online learning (Garrison, D.R, Anderson, T., & Archer, W., 2000), in which the authors argue that appropriate online teaching and social presence can support critical and practical enquiry. Terry also edited, and contributed three chapters, to *The theory and practice of online learning*, 2nd ed. (Anderson, 2008) which won the Charles E. Wedemeyer Award for the outstanding book of 2008, awarded by the University Continuing Education Association. He also organised the first virtual conference ever held on the Internet (Anderson & Mason,



1993). More recently, his research has focussed on new research methods and tools and social media (see his Google Scholar profile: <http://tinyurl.com/terrydanderson>).

These contributions exemplify another of Terry's major achievements, which has been championing research into online learning. His long-term editorship of the *International Review of Research in Open and Distributed Learning* has been central to the development of our discipline, and his ongoing involvement has more recently been demonstrated in his co-edited volume *Online Distance Education: Towards a research agenda*, co-edited with Olaf Zawacki-Richter (2014).

The potential of new and emerging technologies is highlighted in our two invited articles, though in very different ways. Our first invited article has particular relevance to current progress in SDG4, where, "An estimated 617 million children and adolescents of primary and lower secondary school age worldwide—58 per cent of that age group—are not achieving minimum proficiency in reading and mathematics" (see <https://sustainabledevelopment.un.org/sdg4>).

Professor Sugata Mitra, from Newcastle University, has been investigating ways of increasing reading comprehension through the use of new technologies and this is the subject of our first invited article. Mitra discusses two studies that investigate whether and how collaborative work among groups of children using the Internet can boost reading comprehension: one study is based on children in two very different schools in New Delhi; the other larger study on five Indian and two English schools. The "School in the Cloud" project brought together two concepts: the Self Organised Learning Environment (SOLE) and the "Granny Cloud" in which interested adults support children in their learning. Both studies discussed in this article shared some similar and striking results; for example, children who research the Internet in groups show an increase in reading comprehension over those taught traditionally or any individual in the group when studying alone. This could have major implications for helping children to read and work collaboratively in many other fields.

Distance learning institutions were often the first institutions to explore the use of new technologies but their use is now widespread among campus-based universities, leading to increased competition for traditional single-mode distance teaching institutions. Our second invited article, by Dr Caroline Seelig, Alan Cadwallader and Doug Standring, of the Open Polytechnic, New Zealand (OPNZ), examines the challenges faced by single-mode, distance education institutions in this context, as well as reduced funding and the need to increase flexibility. For OPNZ this has involved a re-examination of fundamental aspects of open and distance learning and a major Transformation Change Programme (TCP). The first step was to develop their own digital learning platform and transfer print to online delivery; the second to redesign all aspects of teaching and learning to create greater flexibility, such as assessment-on-demand. The TCP has involved disaggregating functions and unbundling roles and services and has led, among other things, to repurposing the role of academics. The programme is at an early

stage but has already provided many learning points, which are discussed, and will be very valuable to others embarking on such change programmes; it also suggests a new role for specialist open and distance learning institutions in the future.

Progress data for SDG4 indicates that, “In 2016, an estimated 85 per cent of primary school teachers worldwide were trained; the proportion was only 71 per cent for Southern Asia and 61 per cent for sub-Saharan Africa” (see <https://sustainabledevelopment.un.org/sdg4>). One of the key factors in meeting SDG4 will be the increasing use of new technologies, where relevant, to train and support teachers as well as students and children. Our first research article by Makhaya and Ogange discusses this very subject. The eCampus at Maseno University was originally launched with high expectations that it would increase revenue, student satisfaction, staff and student interaction and lead to greater productivity. However, many of these ambitions have not been realised, at least partly because many lecturers have not engaged with the online systems. Makhaya and Ogange examine the reasons for this and find that while staff are enthusiastic about the potential of eLearning, they face difficulties in terms of inadequate bandwidth, lack of facilities on campus and lack of institutional support, something that was highlighted as crucially important by Seelig et al. at OPNZ.

Increasing flexible assessment routes was also considered important at OPNZ and our second research article looks at a different route to flexible assessment through Open Badges. Papadimitriou and Niari from the Hellenic Open University, Greece, examine the role of digital badges as a virtual CV of experience and qualifications. They survey some of the major providers, such as *Mozilla Open Badges* and *MoodleBadges Free*, to show how they provide digital records of learning and achievements, and then consider some linked to Greece or European Projects such as Erasmus. In Greece, for example, the national “Photodentro” repository of OER can provide “quality stamps” in the brand name of the producer. The authors conclude that Open Badges are a way to record performance and progress and share one’s achievements; they also recommend a common framework for credentials to take Open Badges into the future.

Collaborative learning was found to increase children’s reading competence in India and England in our first invited article by Mitra; collaborative learning with colleagues in a professional development programme in Kenya has also been found important in promoting more interactive work among children in Kenya. Our Report from the Field by Wambugu, Stutchbury and Dickie discusses the impact of a renewed programme of school-based professional development in a primary school in Kenya, ten years after the Open University UK’s initial introduction of TESSA (Teacher Education in Sub-Saharan Africa). The new programme was well received by teachers who reported that their teaching styles had changed to increase more interactive learning and engage students in discussion with each other. Sub-Saharan Africa has the lowest percentage of trained primary school teachers in the world (61%) and this kind of professional development will make a significant contribution to meeting SDG4.

Our first book review is of Ibrar Bhatt's *Assignments as controversies: Digital literacy and writing in classroom practice* (2017) by Rosario Passos. This discusses the nature of learner practices and how they engage with digital media, in order to understand the efficacy of assignment design, a subject highly relevant to the development of the Open Badge Movement and other online assessment discussed above.

Our second book review provides us with an opportunity to recognise and celebrate the huge contribution that the late Colin Latchem (1933-2018) made to the study of Open and Distance Learning. His last book *Open and distance non-formal education in developing countries* (2018) is reviewed by Mairette Newman, who applauds the comprehensive overview of over 180 cases of non-formal education. Her conclusion that "the book serves as both an inspiration and practical guide" for those working in the non-formal education sector is a fitting tribute to one of the leading distance educators in our field.

This issue of *JL4D*, then, provides much valuable material about the ways in which the use of new technologies can be both challenging – when we do not have control of our own data (Anderson) and when infrastructure and institutional support is limited (Makhaya & Ogange) – but also has great potential in supporting collaborative reading and teacher development (Mitra; Wambugu et al) and in providing new forms of assessment (Seelig et al; Papadimitriou & Niari). It can be hoped that identifying and addressing these challenges and opportunities will help us meet the SDG targets by 2030.

Finally, I should like to thank all the peer reviewers whose names are included below and who have provided us with such valuable assistance in maintaining the quality of *JL4D* and supporting the authors and Editorial Team during 2018.

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Chief Editor, *JL4D*

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