Guest editorial: Digital education and online learning to achieve inclusivity and instructional equity (Part A)

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This special edition has been published at a time when digital education and online learning have become central to the response of the ongoing COVID-19 pandemic, which kept students and lecturers away from campuses. In response to strict COVID-19 regulations to facilitate social distancing, universities cancelled all face-to-face classes and transitioned to digital education and online learning. The transition was also known as emergency remote teaching (ERT) (Hodges et al., 2020). Central to the transition were digital learning platforms known as learning management systems (LMS). Linder et al. (2017, p. 27) define LMS as "a software system that offers an organizational structure for a range of course tools to be used by both groups and individuals online". According to van Dijck et al. (2018, pp. I, 2) digital platforms are "hailed as the driver of economic progress and technological innovation" and enable a "participatory culture". Dlamini and Ndzinisa (2020) further argue that digital learning platforms are pedagogical tools to enable online teaching and learning.

LMSs have become the most "prominent and promising educational innovation" to mitigate the risk of widening the gap to access tertiary education (Yu et al., 2010, p. 332). However, there is a legitimate concern about the isolating nature of digital education and online learning. The transition to ERT was unprecedented and staggering and lecturers had to improvise quick solutions in less-than-ideal circumstances (Hodges et al., 2020, p. 2). While the transition to digital education and online learning has been lauded as efficient, flexible and encourages higher engagement with course material, the biggest challenge is the absence of research informing the transition, and instructional design principles informing the design and development of the online courses. Dlamini (2018) argued that any reactive and simplistic approach concerning the implementation of digital education, online learning and digital learning platforms as well as technologies in universities has the potential to promote ideals of classism.

Therefore, this special edition aims to set an agenda for research, the operationalisation of

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digital education and the positioning of digital technologies to create inclusive learning environments. The Department of Education (2004) states that ICT offers greater opportunities to access learning, redress inequalities and improve the quality of teaching and learning. As the White paper on e-Education puts it, there is compelling international and local research evidence that, under the right conditions, "investments in ICTs yield positive results for learners and teachers … [including] knowledge for the real world; the ability of learners to manage learning; … and accessing information that increases knowledge, inquiry and depth of investigation" (Department of Education, 2004, clause 2.19). In our experience, it has become clear that the discourse on "Digital Education & Online Learning to Achieve Inclusivity and Instructional Equity" has not been adequately debated and researched scientifically in the South African context.

In fact, there is a lack of empirical work to ground the discourse, especially in resource constrained contexts. Howard and Maton (2011) assert that intellectual fields that lack explicit and powerful theoretical frameworks capable of underpinning empirical research tend to move towards repetition, fragmentation, and segmentation. According to Dlamini and Ndzinisa (2020, p. 2) students in the SADC region "struggled with digital technologies due to their varying levels of digital skills". Thus, under the inferiority of resource constrained contexts, "inequality such as higher income inequalities, poverty and household wealth were made visible" (Dlamini & Ndzinisa, 2020, p. 2). Consequently, unequal access to digital resources have aggravated digital inequalities and inequity. Mhlongo and Dlamini (2022, p. 1) asserted that "approaching digital technologies from a utility perspective places these tools at crossroads with broader social and contextual issues". Unequal access to digital resources and competencies has the potential to widen the access gap to education.

As such, there has been a great need for high-quality papers that reflect various perspectives on 'Digital Education & Online Learning' especially with accelerated transition towards digital education and online learning in the education sector. The papers in this issue explore the interplay between digital affordances and cognitive dimensions as well as the theoretical and epistemological literature on adopting and appropriating technology in education. Further, this issue provided an opportunity for researchers to share best practices and contribute contextual knowledge. Fundamentally, an understanding of this intricate subject demands diverse perspectives on how the interplay between technology and education is perceived, and how changing discourses impact teaching and learning practices. In the midst of the transition, the Wits School of Education conceptualised the Digital Education and Learning Lab (DELL) to re-imagine technology integration in education and then created a space to debate and advance the discourse on "Digital Education & Online Learning to Achieve Inclusivity and Instructional Equity". The debates suggested a need for further engagement on these issues, hence the 'Special Call for Papers'.

Therefore, the papers in this issue discuss and provide critical reflection on various digital technologies and their impact on pedagogical practices and also as catalysts for change in the education sector. This special issue is positioned to bring together distributed research to inform teaching and learning using various technological innovations and digital pedago-

gies. Garbutt and Van den Berg expanded on the research conducted in information systems on socio-materiality by applying it to online learning through the work entitled "*Theorising socio-materiality in online learning: Cutting through the complexity*". The aim was to provide a theoretical underpinning for guidelines to reduce the complexity of social and material combinations in digital education. In their findings there is evidence that applying a sociomaterial view makes it possible to contemplate the line between the social and the material. Their analysis also showed the merit of the model to broaden the research in online learning.

In the article "*Placing inclusive education in conversation with digital education*", Carrim and Bekker place inclusive education in conversation with digital education, and they do so for two reasons:

1. the increased use of digital education will need to be inclusive and should not result in increasing inequalities, and

2. the experience within inclusive education to provide valuable insights which could benefit the development of digital education.

Carrim and Bekker recommend that digital education will need to engage with the deep-seated values, beliefs and assumptions held by teachers, students, parents and society at large. Thus, the increased use of digital education in the future will require a redefinition and revisioning of education, and special attention is required on the systematic organization of online learning in terms of curriculum, pedagogy, and assessment.

Chomunorwa, Mashonganyika, and Marevesa explored "*Educator perspectives on the use of technology in schools in previously disadvantaged communities.*" A systematic literature review was used as the methodology for this study and included research papers published between April 2020 and December 2021 that included keywords such as South Africa, education, inequality, COVID-19, and digital transformation. This study highlighted the challenges of digital transformation in South African education and explored approaches that can be used to guide education through blended learning methods that promote an inclusive education system.

Moll, Dlamini, Ndlovu, Drennan, Nkambule, and Phakathi explored the e-Wits model of the pedagogical affordances of ICTs under the subject "*A developing realist model of the pedagogical affordances of ICTs.*" Firstly, the paper models a hierarchy of technological potentials, sourced initially in the capability of tools themselves, which afford a succession of action possibilities for teachers, from technological literacy, to the representation and re-contextualisation of knowledge, to pedagogical engagement with learners. Secondly, it reveals how recognition of these affordances by teachers is manifest in pedagogical decision-making in the ongoing knowledge construction that characterises classroom activities.

Mutanga and Molotsi in the article entitled, "*Investigating the use of mobile communication technology in professional development: A connectivist approach*" investigated the experiences of university educators in the use of WhatsApp Messenger to learn about inquiry-based pedagogy as a professional development course. The findings showed that by learning about

inquiry-based pedagogy on the WhatsApp Messenger platform, the university educators managed to transform their professional identities as well as improve their pedagogical practices. It also recommended that universities use WhatsApp Messenger for professional development through online communities of practice.

Doomun and Van Greunen reported on "*A qualitative investigation of student experience in a gamified course at the Open University of Mauritius.*" According to the authors, the biggest challenge to transition to digital education and online learning remains the lack of motivation and engagement of the online student. They defined gamification as the use of game design elements in an online learning context to encourage motivation and engagement. The findings revealed that perception and experience of the students about the gamified online course was based on gamified online course, general feelings and experience of students, personality of the tutor, traits of the students and collaborative work. Students showed a positive attitude as they referred to the learning experience as fun, stimulating, motivating and encouraging. The integration of the game elements in the design lessons were recommended by the students.

Makokotlela reported on "*Self-directed learning in primary schools in Limpopo province.*" The study explored how primary school teachers in Limpopo Province supported learners to develop and use self-directed learning (SDL) in an environmental education course. A qualitative approach and interpretive paradigm were employed. The findings indicated that teachers lacked the skills and knowledge to support learners to develop and use SDL. There was a shortage of educational technologies. The study recommends that teachers should be trained on issues of SDL so they can support learners to develop and use SDL.

This special edition focuses on research that helps us to understand how digital education and online learning widen access to education. We are of the view that digital tools open up exciting and innovative instructional avenues that may be used to overcome student passiveness, time and enhance inclusive pedagogies. We therefore invited the submission of papers for this special issue to gather a collection of high-quality papers that reflected various perspectives on digitalisation and online learning.

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