

Editorial: Using Technology Tools, Perceptions and Motivations to Use, and Institutional Limitations in the Adoption of E-learning

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Welcome to Issue 2. Our year of a “new normal” continues to have a significant impact on HEIs. As we start a new academic year, the narratives have moved beyond transitioning to remote or virtual teaching and learning. We are now actively engaged in rolling out the strategies needed to sustain institutions in the medium and long term, or at least until a therapeutic or a prophylactic that effectively addresses the coronavirus pandemic is widely available. Online teaching and learning has grown in prominence at all levels of the education system and in higher education.

In this Issue we present nineteen articles from or about Tanzania, Nigeria, Botswana, Bangladesh, China, Guyana, Dominica, Turkey, the USA and Brazil. Fourteen articles can be found in our Refereed Articles section, three in our From the Field and two in our Literature Review section, respectively. Mobile learning, use of smart devices, perceptions informing use and motivations for use of ICT and web based learning, and computer aided instruction are some of the themes covered in the articles in this Issue.

Chinese college students’ attitude and intention of adopting mobile learning. Xi Lin and Shu Su examined the relationship between Chinese college students’ motivational needs, their attitude to use, and their intention to use mobile devices for learning. The authors present research that extends the understanding of what motivates Chinese college students to adopt m-learning and also provide higher education professionals with a wider understanding of the influences on the attitude of students toward use of mobile devices for learning.

The impact of interactive Smart boards on students’ learning in secondary schools in Botswana: A students’ perspective. In a study on the use of SMART boards for learning in schools in Botswana, Tsayang, Batane and Majuta discuss how the use of the SMART boards enabled a variety of learning experiences that promoted students’ engagement and interactivity, and increased levels of motivation and improvement in academic achievement. The findings presented highlight the potential of SMART technologies for the transformation of educational practices that better prepare students for their roles in 21st century society.

Learning with Smart Devices: Influence of Technostress on Undergraduate Students’ Learning at University of Ilorin, Nigeria. Continuing on the theme of learning using smart devices, Oladosu, Alasan, Ibironke, Ajani and Jimoh discuss the issue of stress accumulated from the increasing dependency on smart devices among undergraduate students. The authors discuss “technostress” and the impact on students as digital natives. The findings of the study revealed that as undergraduate students use smart devices, they become “technostressed”, and this is negatively influencing their ability to learn effectively, while using the devices. The authors recommend careful review of this phenomenon to determine how these devices can be better used to positively impact students’ learning.

Cloud-based m-learning: A pedagogical tool to manage infrastructural limitations and enhance learning. In this article Okai-Ugbaje et al., discuss cloud based mobile learning and present the tool as a potentially strong fit for higher education institutions in developing countries with inadequate infrastructure. The authors used a case study in which m-learning complemented the traditional teaching and learning in a Nigerian university. This study demonstrates how cloud-

based m-learning delivered in the context of institutional limitations can be effectively implemented to enhance learning in higher education institutions with limited resources.

The Impact of Self-Efficacy and Need for Achievement on Management Students' Perceptions Regarding Web Based Learning Resources. Gautam, Khandelwal and Dwivedi review literature that indicate institutions are investing in the development of web based learning resources (WBLR) to facilitate the learning process. While the authors did not find evidence of a significant impact on need for achievement, the study results confirmed a significant impact of self-efficacy on use of WBLR among management students in India.

Assessing the attitudes of Dominican primary school teachers toward the integration of ICT in the classroom. Moving from a focus on students, Rolle-Greenidge and Walcott assess the attitudes of primary school teachers in Dominica toward the integration of ICT in the classroom. Although teachers were willing to use computers in their classrooms, the study identified challenges such as a lack of resources, limited support structures and services, and insufficient training for use that hindered more extensive use by teachers. This research improves the understanding of teachers' attitudes toward technology use in developing countries and recommends strategies to overcome barriers to classroom technology integration.

Social Media: A Modern Tool to Enhance Communication Skills of the Secondary School Principals in Ekiti State. Olowo, Fashiku, Adebakin and Ajadi examined the effectiveness of Ekiti State secondary school principals in disseminating information. The findings showed that the principals were highly effective in disseminating information and they were using social media such as WhatsApp, Facebook, Twitter, and YouTube. The study concluded that the use of social media by the principals had positive outcomes and enhanced their communication skills in the secondary school environment.

Reflection on e-learning system of the Mzumbe University in Tanzania: Successes, challenges and way forward. Ghasia, Machumu, Zhu and DePryck utilized a case study approach to reflect on the e-learning experiences of a Tanzanian university. Their findings indicate that awareness of the e-learning system, adoption rate and use have been increasing, however they note critical challenges that impact the system. These include limited ICT infrastructure, lack of technical expertise in digital content design and production, as well as over-reliance on the traditional philosophy of teaching and learning. The authors recommend realignment of the initiatives with the strategic policies of the university as a way forward.

The Utility of the UTAUT: An Application to Mobile Learning Adoption in the Caribbean. In this article Thomas, Singh and Renville examine the utility of the UTAUT model to explain behavioural intention to adopt mobile learning. The findings indicate underperformance of the explanatory model across a combination five university-territory in the Caribbean region. The authors highlight the need for further research to strengthen measurement of the factors and to improve the explained variance by determining measures that are relevant to the region, which can be included in a modified model.

Revisiting the Online versus Face to Face teaching evaluations. Baldo, Snyder and Holguin describe a pilot study at a medium sized, western university engaged in the transition of student teaching evaluations from a paper based to an online format. While the main finding of no difference between the two administrative formats offered positive support to the university administration in switching formats, the authors present an argument for lower evaluations on business courses that develop quantitative skills, requiring further study.

Developing digital fluency among teacher educators: Evidence from Tanzanian Schools of Education. In this article Fulgence explores how teacher educators develop digital fluency. The findings show that both individual mechanisms and institutional mechanisms contribute to the development of the digital fluency of teacher educators. The study contributes to the existing body of literature regarding digital fluency as a key competence for teacher educators and recommends on-going training for professional development, supported by continuous practice.

The influence of digital globalisation on an East African university. Tan, Harland and Daniel provide an in-depth analysis of the role of digital technologies in the process of globalisation at a higher education institution located in a developing nation in the Global South. Despite limitations, the findings showed that the university actively sought opportunities afforded by digital technologies to help claim its position as an emerging university in East Africa and develop a global presence.

An empirical study on e-learning uptake by teaching staff at Makerere University Business School. In this article Bada et al., evaluate opportunities for practical e-learning pedagogy among junior university teaching staff. The result of the evaluation indicate that the staff acquired good e-learning pedagogical skills at the end of a specialist training course and course instructors expressed their intention to practice use of e-learning in teaching. The authors conclude that perceived usefulness influences behavioral intention more than perceived ease of use when applied in the context of a learning management system.

Use of Listening Strategies in Advertising: The Case of Middle School Students. In an interesting study of ICT application that sought to determine the use of listening comprehension strategies by middle students and the correlation between various variables and their listening comprehension strategies, Maden and Onal concluded that middle school students in Turkey generally utilized listening comprehension strategies before, during, and after interaction with the media element and there was a positive correlation between the listening strategies and listening achievements of the students.

In our From the Field section authors present research on mobile learning in secondary schools in Tanzania, and e-assessment in higher education in Bangladesh. In their article, **Enriching Performance of Mathematics in Secondary Schools Using Mobile Learning**, Ndume, Songoro and Kisanga present the view that mobile learning has the potential to positively impact the teaching and learning process leading to the improved performance of students in Mathematics in secondary schools in Tanzania. Their results showed that the majority of teacher participants accepted the use of mobile learning in education and were of the view that when used, students' understanding of Mathematics improved considerably. In their article, **Applicability of E-learning in Higher Learning Institutions in Tanzania**, Innocent and Masue discuss the application of e-learning strategies in selected higher education institutions in Tanzania. The findings of their study indicate inadequate skill levels among users and insufficient ICT infrastructure to promote use. The authors recommend greater investment of funds to drive the e-learning initiative and the introduction of ICT in the curriculum from the primary school level to enhance students' attitude towards e-learning. In our final article in this section, **E-Assessment in Higher Education: Students' Perspective**, Huda, Kabir and Siddiq examine the effectiveness of e-assessment in higher education from the perspective of students in Bangladesh. Their findings confirm that students appreciate the use of e-assessment in their courses, however the authors noted some fears about technology-based examinations as students generally do not have an equal level of IT competence to facilitate ease of use.

In our Literature Review section, Usman and Madudili offer an **Assessment of the impact of computer assisted instruction on teaching and learning in Nigeria: A theoretical viewpoint.**

The authors assessed the literature on computer assisted instruction (CAI) as a major contributor to improving the performance of teachers and learners in Nigeria for transformation of the education system. To achieve this the authors recommend increased funding, emphasis on the training of users and improved school supervision, to facilitate effective CAI initiatives.

In the final article for this Issue of the journal, **Information and Communication Technologies (ICT) in educational research in science museums in Brazil**, Bovolenta Ovigli & Colombo Junior review how dissertations and theses submitted over a 25 year period, address the use of information and communication technologies (ICT) in science museums as educational research problems in Brazil. Using the adoption of ICT in science museums, which are largely accepted as non-formal education spaces, the authors contribute to the discussion on possibilities for the development of new practices and investigations in education research.

We trust that you will find the contributions in this Issue useful for practice and we thank all of our authors for their work and the members of our Peer Review Panel for their continuing dedication at this difficult time. As we continue with our efforts to improvement, let us maintain our focus on the effective integration of ICTs in the service of our students, and ensure that we use best practice as our guide, even as we pivot to, or consolidate our transition to remote instruction.

We take the opportunity to remind potential authors of our journal guidelines that should be observed when submitting articles for publication. Your attention to the guidelines will better facilitate our review process and the timely publication of articles.

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Denise Gaspard-Richards
Chief Editor, IJEDICT

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