# Editorial: Technology Integration, e-Learning and Course Design, and Practical Uses of Social Media Apps, Web Portals and AI/AR/VR to Transform Education Systems

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Greetings and welcome to Issue 3, 2021. In this Issue we present articles from or about Nigeria, Ghana, Bangladesh, Jordan, India, Finland, Denmark, South Africa, Azerbaijan, and the USA. The articles in this Issue focus on topics that include the integration of mobile devices in teaching and learning; learning management systems; computer aided instruction; social media and digital apps in education; teacher perception and attitudes in online instruction; strategies for developing online courses; and ICT use, including AI/AR and VR in education for sustainability.

### Refereed Articles

In our refereed articles section, we bring articles that discuss attempts to integrate e-learning in the education system, beginning with: Gordon Bubou, and Gabriel Job's **Benefits, Challenges and Prospects of Integrating E-Learning into Nigerian Tertiary Institutions: A mini review.** The authors assess the e-learning ecosystem in Nigeria's higher education sub-sector, and articulate the benefits, challenges, and prospects of integrating e-learning. The authors also offer recommendations to address the challenges in the Nigerian context.

Continuing the theme of e-learning integration, Reuben Dlamini and Alton Dewa introduce and discuss social and cultural capital in the South African context in an article entitled **Beyond Optimistic Rhetoric: Social and Cultural Capital as Focal Deterrents to ICT Integration in Schools**. The authors argue that various configurations of ICT pedagogy, including teachers' technological knowledge, acumen, and adequate ICT infrastructure are necessary for teachers to integrate ICT in the classroom. In addition, they argue that social and cultural capital is fundamental to the current state of ICT use in schools. They argue that where the uptake has been characterized as very slow, and there is scant attention to the distribution of computing infrastructure, the discourse on how technology fundamentally transforms education is limited.

On a related theme, Md. Amin and Mahmud Zaman present the case of Bangladesh in the article **Assessing the Adoption Behavior of E-Learning in a Developing Country in South East Asia: Predicting an Alternative Path to Behavioral Intention to Use.** In their assessment, the authors note the major impediments to the use of various e-learning platforms, such as, a lack of self-confidence and inadequate technical skills, along with insufficient knowledge. They note that while previous studies have focused on the adoption behavior of information systems and information technology among students, educators, and the professions, little is known about how to enhance learners' skills and capacity prior to the adoption of the emerging e-learning platforms among the HEIs in Bangladesh. The authors propose that the findings of their study could contribute to the existing regional literature on e-learning acceptance and could be quite useful for accelerating the e-learning penetration rate.

In an article that discusses the transformation of teaching, learning, and evaluation processes in HEIs, through the implementation of ICT, Artificial Intelligence and Augmented-Virtual Reality, Dwivedi and Joshi highlight the Indian experience in **ICT Perspectives of Productive and Sustainable Development for 21st Century Higher Education Institutions.** The authors examine the attendant opportunities and challenges for rural and remote areas in developing

countries, more so, the responsibilities of the leadership of HEIs to promote ICT-integrated pedagogy, staff-training, and up-grading of infrastructure. Their findings will be useful for policymakers in these societies as they work on implementing sustainable ICT practices in higher education. They recommend the wide promotion of ICT-digital technologies to overcome the lack of motivation, willingness, training opportunities, and facilities that are presented as barriers to adopting ICT and new technology tools in HEIs.

While most of our authors have presented cases for the integration of technology and e-learning in our education systems, we take note of the perspective shared by Chin, Jones and Little in **A Comparative Analysis of Smartphone Security Behaviors and Practices**. The authors present comparative findings on smartphone security behaviors and practices, using previous student surveys at a regional comprehensive university in 2011 and 2014 and their continuing work in December 2019. The article highlights specific areas where security behaviors have improved and pinpoint those areas where necessary precautions are still lacking. The study provides useful insights for developing educational programs and training on proper smartphone security protocols.

Moving from the theme of integration of e-learning and improving smartphone security practices, to use of social media and digital apps in education, Oteyola, Oveniran, Awopetu and Bello discuss the results of their survey in an article entitled **Students' Acceptance of WhatsApp/Telegram for Online Classes: Osun State, Nigeria as a Pilot.** In their study, they examin the argument for and against adoption of the emerging technologies and posit that skill level as well as parental background influences respondents' acceptance of WhatsApp/Telegram for online classes. The study concluded that the acceptance of WhatsApp/Telegram among the sample of secondary school students was slightly high and that none of the demographic variables (gender, parental background) influenced acceptance of the technologies.

In a study that utilized the logit model to determine the **Dynamics of Social Media on the Academic Performance of Students in Private Universities in Ghana**, Richard Okoampa-Larbi, John Adu-Kumi, Caroline Tettey, Godfred Amissah and Solomon Aboagye conclude that Information and Communication Technology can be beneficial if well managed and integrated, but they also note a conditionality, that is, the need for a clear online policy to be established to guide users.

Lawal-Adebowale and Oyekunle in the article **Appraisal of Agro-Students' Exploitation of Digital Education Apps for Academic Tasks Performance in Federal University of Agriculture** present the results of a study that assessed the use of apps in a practical setting**.** They discuss the potential of integrating digital apps for self-learning and the performance of academic tasks among agriculture students at a university in Nigeria. The study revealed that digital apps such as Wikipedia/Google engine, WPS/Office Pro, Notability, Calculator and Grammarly had significant impacts on the completion of academic tasks. The authors recommend sustaining and strengthening the opportunities for use of the apps among students.

Festus Oliha continues the discussion in an article entitled **Usability Evaluation of Web Portals in Fostering Social Learning** in Nigeria. The author evaluates a social-academic platform as one of the vital services that fosters collaborative learning. The author notes the absence of social and academic aspects in the platforms available to the Nigerian institutions in the study, which has resulted in usability concerns and reduced use for interactions between their vital stakeholders - tutors and students. The study suggests the need for a social academic web portal platform that is adaptable and able to foster social academic interactions between lecturers and students in learning institutions, particularly in the current environment of the COVID-19 pandemic.

The articles in this section also reflect on the application of computer aided learning tools. Odewumi in **Empowering Students' Cognitive Learning of Creative Colours**

**through Computer-Based Concept Maps**, using a quasi-experimental design with pre and post-tests found that students taught using the Computer Based Concept Map (CBCM) strategy performed better than the other group in the study that was not exposed to the strategy. The author notes that there was no significant difference based on gender. Based on the study findings, the author recommends the use of CBCM for teaching of the arts and other subjects in the school system.

In an article that argues that the teacher is the deciding factor defining the depth and breadth of the effectiveness of technology, in and outside of the classroom, Svetla Ben-Itzhak brings insights **On the Varying Effectiveness of Computer/Mobile-Assisted Language Learning**. The author, in an application to language learning, notes that good teachers must precede technology for it to be effective in language learning. To improve the likelihood of effectively employing technology, Ben-Itzhak outlines key questions for teachers to consider when deciding whether to include technology in language instruction.

The final article in this section focuses on teacher perceptions during the pivot to remote instruction in Jordan. Salameh Fleih Obeiah in an article entitled **Jordanian EFL Teachers' Perceptions of the Utility MoE-Enforced Online-Based Instruction during COVID-19 Pandemic** explores the utility of online-based instruction from the teachers' perceptions of the online platform used for remote instruction during the COVID-19 pandemic. Five domains are explored in the study: the logistic and technical support, the content, the teaching and assessment strategies, and the utility of online instruction for both students and parents. The findings revealed challenges with Internet connectivity, access to tools, lack of basic technology skills among teachers and learners, limited online ready content, and supplementary materials, and inappropriate study spaces at home, alongside limited support from parents to facilitate student progress.

### *From the Field*

In our From the Field section, we introduce four articles. First, Gaspard Mucundanyi reviews **Design Strategies for Developing an Engaging Online Course in Higher Education** using Technological, Pedagogical, and Content Knowledge (TPACK) lens. Mucundanyi discusses five strategies for designing an engaging online course - clear and consistent design, developing a detailed syllabus, creating a learning community, instructor presence, and prioritizing free educational materials. Online instructors and instructional designers may find these strategies useful for the improvement of student engagement in online courses.

In an article that presents a **Review of Prevailing Trends Barriers and Future Perspectives of Learning Management Systems (LMSs) in Higher Education Institutions**, Sharifov, Safikhanova and Mustafa bring us views from Azerbaijan. The authors provide an informed overview of e-learning platforms and review different features of Learning Management Systems (LMSs), while exploring the implications, general issues, and challenges in the context of the e-learning pedagogical perspective in Azerbaijan.

On the theme of communication efficiency, Stephen Olorunsola and Francisca Ogwueleka provide an **Assessment of Teachers' Perception On Modern Technology (ICT) And Communication Efficiency: A Case Study.** In this article, the authors examine the perception of secondary school teachers in Kaduna State, Northern Nigeria on the impact of ICT deployment for communication efficiency in the teaching and learning process. The findings suggest that ICT media, such as the computer and the Internet, have a significant impact on communication efficiency in the teaching and learning process by facilitating clarity, ease, speed, security, and prompt feedback in the communication process.

The final article in this section also focuses on teachers in the classroom. In an article on **The role of teachers' attitude towards the use of the tablet in the first-grade elementary classroom**, Fabio Dovigo analyses the attitude of schoolteachers towards the introduction of the iPad in their teaching practice in the first-grade of the elementary school system. The authors consider the positive and negative aspects of teachers' didactic experience with the use of tablets.

### *Research in Progress*

In this section, Lais Leite and Altti Lagstedt bring us a perspective from Finland and share their ongoing work on use of the CIT Model in an article entitled **The Collective Integration of Technology (CIT) Model: Helping Teachers Incorporate Technology Meaningfully in their Everyday Work**. The authors note the lack of consensus on how educational technology solutions should be integrated in practice. They contend that although several related models exist, none of them covers how education digitalization should be implemented and managed in a collective manner in schools and among teachers. While their evaluation of the CIT model suggests that it covers several aspects of different existing models and theories well, and, can be considered theoretically validated, they propose ongoing work to improve the model and the testing of a new version.

To all our stakeholders, we cannot overemphasize our continuing appreciation, and we thank all authors for your patience during the long delays, while our peer review panels and our journal managers worked to bring your articles to our readers. Despite the challenges of our competing work interests and the demands of our profession at this critical time in our social history, we pledge to continue in service to you our valued stakeholders, as we continue to improve our output.

We take the opportunity once again to remind potential authors of our journal guidelines that should be observed when submitting articles for publication. Your attention to the author guidelines at: http://ijedict.dec.uwi.edu/submissions.php#guidelines will enhance our review process and improve the time to publication of your articles.

Our continued best wishes.

Stay Safe and Well!

Denise Gaspard-Richards
Chief Editor, IJEDICT

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