Editorial: Reflecting on the implementation of teaching and learning strategies for sustainability

Denise Gaspard-Richards

The University of the West Indies, Open Campus, Trinidad and Tobago

Welcome to our first Issue for 2023! We pause to extend our deepest condolences to the loved ones of our Book/Media Reviews Editor, Professor Edwin Brandon, who passed away in March 2023. We are thankful for the invaluable contribution that "Ed" made to the journal from its founding in 2005 to the time of his passing. May he rest in peace.

In this Issue we present articles from or about South Africa, Nigeria, Canada, Tanzania and Zambia. In Volume 18 our cross cutting themes focused on the implementation and assessment of strategies to facilitate teaching and learning, and we emphasized continuity post COVID-19, and developing sustainable solutions for the future of teaching and learning . In Volume 19 Issue 1, we shift focus and begin the reflection on the strategies that were implemented and the impact on student outcomes.

Refereed Articles

The articles in this section are drawn from geographic locations including South Africa, Nigeria, Tanzania and Canada. The focus is on academic performance, learning gains, using digital tools in the online classroom, mlearning and adoption of technology tools in the articles presented.

LMS use and the academic performance of undergraduate students

In our first Refereed Article **Odekeye, Fakokunde, Metu** and **Adewusi** investigated the perception of undergraduate students on the use of a Learning Management System (LMS) in the teaching-learning process. The researchers employed a descriptive survey design and administered an online questionnaire among undergraduate students at Osun State University. Their findings indicate significant differences in the students' perception of LMS use in instructional delivery. The key variables they discussed were gender, class level of the students and their area of specialisation. While LMS use was considered helpful for reflecting on knowledge gaps in preparation for classes, the cost for access to the LMS, country specific power failures and poor Internet services were identified as major challenges. The authors recommend improvement in literacy skills to enhance LMS use and operational changes by the university to facilitate blended learning.

Student Performance during the COVID-19 pandemic

Continuing the theme of reflecting on student performance, **Ruzgar** and **Chua** examined the effect of attendance levels at online lectures, study time and academic performance, gender and class standing (freshman to senior year), and whether the students had their won rooms for private study during the COVID-19 pandemic. The authors report a positive correlation between study times and performance, except for the first assessment taken by the students and the time allocated for associated study. Interestingly, the authors report on the finding of a positive relationship between academic performance and students having their own room. There was also a difference reported between class standing and performance, however, there were no differences reported based on gender and student performance in the study.

Measuring learning gains from engagement with an online Math curriculum

In this article we present a discussion on Mathematics Education and student outcomes in South Africa. **Isabel Tarling** provides an overview of the Green Shoots Maths Curriculum Online (MCO) program implemented by the Western Cape Education Department in 500 of its primary schools. The author analysed learning gains for learners, parents and teachers who use the curriculum, through the lens of an ABC classification of affective, behavioural, and cognitive learning. Data were compiled from self-reported surveys, MCO usage data, the results of learner assessments and wider project documentation. Findings indicate the learning gains for learners, parents and teachers were distributed across all types of schools since learners, parents, and teachers in all these contexts were accessing and using the program. The author suggests that the study may benefit policymakers and education departments who wish to roll out similar programmes, school, and district leaders who manage short and long-term implementation, and teachers and learners wanting to use comparable programs.

Using digital tools for social engagement in remote learning

The authors note that digital tools have evolved into a way of life, and as a result, they have become a growing area of interest for academics who research teaching and learning. In this study **Nkoala Magoda, Makwambeni, Mshayisa & Mugobo** discuss how digital tools facilitate social engagement, especially in teaching and learning. In this mixed methods study which employed a case-study design at a South African-based tertiary institution, data were collected from across four academic departments at a University of Technology: Media, Retail and Business Management, Entrepreneurship, and Food Science. The authors identified three top ranked communication technologies tools - WhatsApp, video conferencing via Blackboard Collaborate, and blackboard course content, with WhatsApp as the preferred digital tool for communication with lecturers and peers, while Blackboard was the preferred platform for accessing course materials such as readings and videos. From the qualitative reflections, the study found that students were communicating more with their lecturers through digital tools, but there was still a sense that the educational experience was not as engaging as students wanted it to be because of the lack of in-person engagement, during the pandemic.

Perspectives on Adopting Technologies for Public Speaking Skills Development

In this article, the authors note that technology has been shown to reduce students' public speaking anxiety, enhance their delivery skills, and increase presentation self-efficacy. However, students can only garner benefits if technology designed for improving public speaking skills has been adopted and implemented. **Cheng, Boyraz, Taylor & Gilbert** analyzed the relationship between students' communication competence, perceived technology features, technology satisfaction, and intention to use technology designed for improving public speaking. The authors also examined insights from instructors. The findings indicate that students with lower levels of competence in communication tended to find public speaking technologies more useful, and perceived technology usefulness and ease of use were positively associated with intentions of future technology use. Instructor responses also indicated the usefulness of technology for teaching public speaking to assist instructors in offering feedback.

Use of mobile devices in classrooms by preservice and in-service teachers

In this article **Adewumi**, **Asino and Jha** discuss the relevance of mobile learning in formal and informal learning environments in Nigeria. They note the role that teachers adopting technology in the classroom, and the need to probe preparedness for adoption in the classroom. The authors examined the preparedness of preservice and in-service teachers to use mobile devices in their

classrooms. Their findings revealed willingness of teachers to adopt mLearning, however, they noted factors such as an unsupportive curriculum and lack of infrastructure as major impediments. The authors recommend awareness raising to promote adoption of mLearning in the classroom and the development of a supportive curriculum and the needed infrastructure in the classroom to support adoption.

Reviewing a decade of e-Learning implementation challenges

In our final article in this section, **Godfrey Mwandosya** discusses the challenges and experiences associated with the implementation of *e*-learning systems at the College of Business Education in Tanzania. The author's review indicates implementation issues that were neither properly reported nor documented for improvement. The author adapted and extended the Andersson and Grönlund Conceptual Framework for *e*-learning in developing countries. The findings revealed that amongst other factors, technology training, a conducive environment and readiness for *e*-learning pedagogy, posed some of the major challenges in the implementation of *e*-learning for both the teachers and students.

From the Field

The articles in this section focus on issues affecting teaching and learning in South Africa, Malawi, Nigeria, and Zambia. Authors explore challenges to e-learning, teaching and learning post the COVID-19 pandemic and the changing pedagogical landscape. The section closes with two studies that present use cases that may be of interest to readers on resource availability and creative use of digital tools to enhance teaching and learning in resource strained contexts.

Reflections on teaching and learning post COVID-19

In this article **Tiyamike Ngonda** reflects on teaching and learning at two universities in Africa, considering evidence from the literature on the challenges of transition to online teaching and learning and the affordances of the learner management systems they adopted. The author's reflections revealed similar challenges at both universities specific to access to data and devices needed for online teaching and learning, stakeholder difficulties adapting to online teaching and learning, and issues related to the use of incompatible face-to-face pedagogical practices with online teaching and learning. The findings reveal that mastery achieved during the COVID-19 pandemic offers future benefits for the institutions, including less workload for staff, increased student enrolment, and essential skills development for students. The author cautions against any quick return to face-to-face teaching without retaining the good practices developed during the pandemic.

Transforming Teaching and Learning through ICT

In this article, the authors reflect on how technology is fast reshaping the entire landscape of education and the responsibilities of academics. **Thomas and Abanikannda** discuss the challenges and roles of academics and review models of transformation and a framework which provides approaches for transformation of teaching and learning through ICT. The authors recommend that educational institutions establish a department of learning technology to support academics in their new functions, while ensuring the provision of relevant infrastructure to facilitate transformation of the teaching and learning process.

Changing pedagogy for new design platforms

The authors of this article note that for centuries, the pen dominated classroom pedagogy in academia, and in the 1980s, PowerPoint emerged as a significant tool to enhance in-class presentations. They note that for the most part, academic presentations were confined to the four walls of the classroom. In this article **Isabelle Bonnici, Henry Greene, Rose Marie Azzopardi, Joseph Azzopardi, Ran Liu & Joseph Bonnici** discuss changing pedagogy and the tools available for teaching and learning. The impact of the COVID-19 pandemic is discussed in the article, and they explore how the pivot to online tools allow for more flexibility and the integration of the course content with social media. The authors demonstrate how graphic design platforms can be used to create a variety of images for communication in online classes.

An examination of preference for virtual and physical classrooms among undergraduate students

In this study which examined the preference for virtual and physical classrooms among undergraduate agriculture students at the Federal University of Agriculture, in Nigeria, **Ashimolowo, Soetan, Ojebiyi & Omololao** identified the main platforms used by students and the use constraints they faced. Google Classroom and Google Meet were the main platforms used and just over 60 percent of the students expressed preference for and had a positive perception of virtual classrooms. The authors report that the main constraints to learning in the virtual classroom included reduced interaction with lecturers and the erratic power supply. Results from Chi-square analyses revealed that students' preference for the virtual classroom was significantly associated with their age and their level of computer literacy.

Availability of qualified teachers and computer laboratories for teaching computer studies

In this study by **Tuesday Bwalya,** the author explores the need for qualified teachers and computer laboratories to facilitate successful roll out of the computer studies curriculum in public secondary schools in Lusaka City, Zambia. A mixed-methods approach which utilized a survey, interviews, observations and documentary analysis, revealed that many of the computer studies teachers have qualifications in computer studies or information and communication technologies (ICTs) and the majority hold a diploma. However, the teacher-pupil ratio is high. Further, many of the schools have computer laboratories, data projectors and air conditioning units but servers and Internet connectivity are not widely available. The author recommends effort at recruitment of more computer studies teachers and that school managers ensure the availability of facilities such as Internet connectivity in the computer laboratories for successful implementation.

E-learning tools for enhanced teaching and learning of native languages in a rural context

In the final article in this section, we focus on a practical case for rural contexts, in which schools experience more than average challenges such as lack of electricity, unstable WIFI, inadequate classroom space and lack of technology tools. **Masimula, Moodley & Van Wyk** discuss the challenges faced by native language teachers in their preparation of learners for new careers while integrating e-learning tools in their lessons. The authors used the Substitution, Augmentation, Modification, and Redefinition (SAMR) model as a frame of reference to integrate technology at various stages to enhance the quality of teaching and learning of the IsiNdebele language in the rural context. The authors recommend that native language teachers in rural areas use e-learning tools daily, to ensure skills development and provide learners with real-world learning opportunities. The practical tools discussed in the article can contribute development of use cases in different official African languages for rural contexts.

Continued best wishes from the Editorial Team!

We thank all our authors for the lived experience of patience and understanding during the long delays while our peer review panels, and our journal managers work to improve our processes. We acknowledge that 2023 has been no less challenging thus far, but we commit to continuing our efforts in service to you.

A reminder to new and continuing 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 completion by our review panels.

Stay safe and continue to be well as we look forward to the next quarter of developments in teaching and learning.

Denise Gaspard-Richards
Chief Editor, IJEDICT

_____