

## **Editorial: Flipped Classroom, mlearning and the Integration of ICT in Teaching and Learning**

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Welcome to Volume 15, Issue 2 of the *International Journal of Education and Development using Information and Communication Technology (IJEDICT)*. In this Issue we present articles from or about Australia, Ethiopia, Guyana, India, Japan, Mongolia, Mozambique, New Zealand, Sweden, Tanzania, South Africa, and Uganda.

In this our second issue for 2019, we present nine articles in our Refereed Articles section and one article in our Research in Progress section, respectively

We begin with Sinha and Bagarukayo's examination of the changing face of "online education in emerging knowledge economies" through the lens of motivating and demotivating factors and potential facilitators in a comparative analysis of Uganda and India. The authors explored potential differences in enrolment, awareness, and preference for online-education on the basis of country location, gender, age, employment status and existing educational qualification, in order to gain better insights for further facilitation and improvement of online-education in emerging economies.

Moving from the potential for online education in emerging knowledge economies, Sandhu, Sankey and Donald discuss the limited access to higher education (HE) in India and the possibilities that a high penetration of mobile phones could bring for leveraging the affordances of mobile technologies in a flipped classroom framework. The authors suggest that making teachers more aware of using the flipped classroom methodology and providing them with adequate training to adopt this methodology and use a social networking site (for example, WhatsApp), may help facilitate uptake of the flipped classroom methodology in India.

Continuing on the theme of ICT implementation, Yamamoto and Yamaguchi introduce school leadership as one of the most influential factors for school reform, and examined four components of transformational leadership - charisma or idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration - and their relationship to ICT implementation at schools in Mongolia. The study findings suggest that the component of inspirational motivation is especially important for ICT use in classroom teaching. The authors conclude that there is support for the relevance of transformational leadership in regard to the implementation of ICT at the school level in the Mongolian context.

In their article, *Barriers Perceived by Teachers for use of Information and Communication Technology (ICT) in the Classroom in Maharashtra, India*, Singhavi and Basargekar explore the use of ICT in education for learner centric engagement and reduction of the digital divide between different socio-economic classes in two types of schools. The authors focused on identifying the barriers to use of ICT from the teachers' perspectives and used logistic regression analysis to determine teacher willingness to use ICT, if some barriers are mitigated, in both types of schools.

Muianga, Barbutiu, Hansson and Mutimucuo examine the curricular reform process and professional development training for teachers since 2000 in Mozambique and the introduction of Student Centered Learning (SCL) strategies as well as the use of Information and Communication

Technology (ICT). The authors use the Technological Pedagogical Content Knowledge (TPACK) model as a theoretical framework and evaluate how, if at all, professional development training has changed pedagogical practice. The outcome of this quantitative study is that professional development has an impact on teachers' beliefs and practices and lends support to the shift from traditional teacher-centered instruction to SCL.

In the article *Using WhatsApp in Teaching to Develop Higher Order Thinking Skills - a Literature Review Using the Activity Theory Lens*, Baguma, Namubiru, Bagarukayo, Brown and Mayisela discuss the use of WhatsApp Enabled Learning (WAEL) to support approaches to learning that promote development of Higher Order Thinking Skills (HOTS) such as inquiry, creativity, critical reflection and dialogue. This article presents a general literature review that examines how WAEL can facilitate development of HOTS using the Activity Theory (AT) framework. The results suggest that WhatsApp has the potential to support development of HOTS due to its affordances such as ubiquity, and AT provides a systematic and practical way to demonstrate this potential and how it can be applied.

Vineeta Persaud and Rita Persaud investigated the feasibility of using a web-based Student Response Systems (SRS) to promote interaction in a large undergraduate class in Guyana. The university is faced with technological challenges that made it impractical for every student in the class to respond individually using the SRS. The authors discuss how the challenges were addressed by using the Think-Pair-Share model and having one student from each group post the group's response using the SRS. Results indicated that there was a significant difference in the average level of student interactivity before and after the study, suggesting that the use of shared response devices to post responses in combination with the Think-Pair-Share model, can increase individual student interactivity even in a large class.

Aaron Bere and Patient Rambe focus on mLearning and introduce the use of mobile smart phones and instant messaging for cost effective collaboration among students in higher education in a developing country context. The authors draw on the social embeddedness discourse and examined the evidence of context-driven use and social embeddedness in student adoption of mLearning using instant messaging in higher education. The findings reported by the authors suggest opportunities for mLearning to facilitate collaborative and active learning in contexts plagued by networked connectivity costs, knowledge gaps and geographical barriers among students.

The government of Tanzania through its ICT Policy for Basic Education, has indicated a commitment to use of mobile phones among other ICTs, as a strategy to enhance the quality of education. In this article, Hamisi Mfaume, examines teachers' awareness of the educational benefits of the device, and barriers to their use for educational purposes. The study findings suggest that the government's commitment to integrate the device in the promotion of quality education has not yet moved beyond policy statements. Thus, the author recommends the need for a concerted effort to train teachers on pedagogical utilization of the device.

In our Research in Progress section, Ergado explores the role of ICT in the Ethiopian higher education system, where there are movements to integrate ICT into teaching and learning practices. The researcher reviewed the literature and interviewed professionals from two of the key government ministries in Ethiopia, noting the critical factors impacting integration and the requirements for improvement.

We have deviated from our practice of publishing three issues per calendar year. This, our Issue 2, was commissioned based on an over subscription of articles at the time of publication of Issue 1 in April 2019. Issue 3 for 2019 will be published in August in accordance with our regular schedule, and Issue 4 will be published in December 2019.

Thank you to the authors that patiently awaited publication of your work and to the members of the Peer Review Panel for your unstinting efforts that ensure our journal can continue to maintain the standards we have set.

We look forward to the continuing support of potential authors and our reviewers.

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Chief Editor, IJEDICT

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