EDITORIAL

Capacity Building for New Modes of Learning and Teaching

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In many educational development initiatives across the globe, and especially in the Commonwealth by the Commonwealth of Learning (COL), capacity building at all levels and for all categories of people has been underlined as the foundation to shifting to new modes of teaching-learning-training during Covid and also in the post-COVID-19 era. The change management formulation through the model of 'policy-technology-capacity building' had emerged as a significantly effective strategy toward development and especially 'learning for development'. We need more research evidence to further support this formulation, and also to contribute to possible directions for national, institutional and individual goal-setting and strategic applications in-context. It is hoped that the contributions to this issue of *JL4D* will further enlighten our understanding and suggest pathways toward implementation of education and training programmes in national, regional and institutional contexts.

Our '*Invited'* and peer-reviewed paper in this issue, by Caton, Bradshaw-Ward, Kinshuk and Sevenye, deals with the theme of digital literacy, which is foundational to almost all aspects of life today, and, in this case, its effectiveness in enhancing the cognitive flexibility of learners. The research review highlights the contribution of digital literacy to facilitate cognitive flexibility and adaptability, deep problem solving, and reduction in cognitive load in dealing with various technological tools.

In the '*Research'* section, we have included eight research papers dealing with the theme of this issue. The first paper by Kuppuswami and Ferreira focuses on the outcome of an online training programme for capacity building in gender equality and women's empowerment, based on the knowledge attitude and skills (KAS) model. The results of the study indicate positive impact of the training on knowledge, attitude and skills in respect of gender equality at the individual level, and enabling environment, policies, structures and practices at the organisational level. In the second paper, Aluko and Ooko present the findings of research on the digital learning experiences of teachers in rural South Africa. The results show existing gaps between expectations and experiences, based on which the researchers recommend realignment of the teacher education curriculum with national skill requirements along with required teacher support. Lubuva, Ndibalema and Mbwambo in the next paper report the findings of a qualitative research study on teachers' ICT competencies (against the UNESCO-ICT competence framework) in Tanzania. The results show that while teachers' ICT knowledge acquisition was high, their ICT knowledge deepening was low, suggesting, thereby, low levels of technological pedagogic knowledge. Since the regression analysis results showed that practice had a positive effect on knowledge-deepening, the researchers suggest intensive hands-on training to enhance the ICT-pedagogical competencies of teachers.

The next five papers focus on digital technologies, online learning, expert systems for career guidance for open and distance learning, educational web application, and indigenous education, especially

during the time of the COVID-19 pandemic. Otamas and colleagues report the findings of their analytical and survey-based study on university distance and online learning in Ukraine during the pandemic. While the pandemic-induced shift toward online education contributed to significant pedagogic transformation from traditional to modern methods of teaching, the survey of teachers and administrators especially for distance vocational education, showed constraints relating to access to online platforms, distance and blended course design, and student digital literacy vis-à-vis social media platforms, which the researchers suggest should be effectively addressed for effective blended learning in higher and other levels of education. In the next paper, Chisag and Tabuena present the findings of a SWOT analysis on online learning during COVID-19 in Ecuador. The documentary analysis-based qualitative study suggested that while there has been slow progress at the school level in the adoption of online and blended learning, there has been an increase in the number of educational start-ups during the pandemic in Ecuador. In a study on technology-enabled career guidance based on online secondary sources, Shilpa Gunwant concluded that irrespective of the existence of rule-based, case-based and fuzzy logic-based career guidance systems, the expert systems (ES) for career guidance have wider applicability especially for ODL students. In another study conducted during COVID-19 on university students' perception of the usefulness on educational web applications toward personalisation of learning mathematics in Mexico, Salas-Rueda and colleagues report the effectiveness of web applications in increasing student satisfaction, assimilation of knowledge, development of mathematical skills and distance learning. In the final paper in this section on indigenous students, Sianturi, Suliantin and Fitrianti suggest that in Papua New Guinea, at the school level, while cognitive style did not have any significant relationship with student mathematics learning outcomes, it did have a positive effect in the case of university students. The researchers suggest appropriate technology-enabled mentoring intervention in strengthening the cognitive style of school students so that they could achieve quality learning experiences at the stage of higher education.

In the next section on '*Case Studies'*, we report the findings of two cases – TVET through ODL in Namibia and Yoga Education through ODL in India. Sichombe reports the findings of a tracer study during the pre-Covid years of the TVET students of NAMCOL. The mixed-methods design research suggested significant impact of ODL TVET on the graduates' knowledge and skill adequacy for the job market. However, the experience of the graduates on the constraints during their study suggested further strengthening of the adequacy of equipment for training and internship while studying through open and distance learning. In the second case, Biplab Jamatia reports the findings of research through a pre-post-test design on the effectiveness of online yoga training in reducing the perceived stress level of students. The researcher suggests that yoga training, through the online certificate programme, reduced the self-perceived stress of the students, and therefore both yoga education and online training delivery have been effective in taking care of personal health status of students during the COVID-19 pandemic.

The various research studies included in this issue of *JL4D* clearly support the change management formulation that the 'policy-technology-capacity building' model has proved effective in dealing with institutional and individual changes. The reported research and case studies indicated that effective capacity building in respect of digital literacy/learning, online training, training on ICT-pedagogical competencies, distance and online vocational training, and mentoring in educational web applications

could support the new modes of teaching-learning during the pandemic, and are also pointers to changing technology-enabled teaching/learning/training for the post-pandemic world.

We hope the papers included in this issue will interest our valued readers and contribute to further discourse and reflections in the policy-technology-capacity building formulation toward effective and sustainable 'learning for development'.

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