Editorial

Delving Into Unsustainability in Diverse World Scenarios: Probing into our Search for Sustainability Through Insightful Research Projects

The current volume contains articles from different parts of the world, particularly research from our cooperation partners from South Africa, Jamaica, Lesotho, Indonesia and Malasia that reflects diverse ways of dealing with unsustainability in our world, by offering rich solutions for sense making processes in the middle of global crises. The papers from the USA, Germany, Indonesia and Nigeria offer rich insights and wisdom for developing agency in global crises in dealing with complex issues and suggest healing through rethinking human-nature relationships, developing environmental literacy and advocating sustainability efforts by engaging readers in the process of co-thinking and co-acting for a more sustainable future. Practical suggestions have been offered by the authors from South Africa in dealing with the capacity building of STEM teachers by equipping them with sustainable competencies in order to educate proficient thinkers and problem solvers who understand complex problems, tolerate ambiguity and uncertainty, as well as produce potentially viable solutions. Sustainability of digitalization processes has been discussed both in higher education setting and in prison setting by the authors of this volume by elaborating how digitalization is reshaping our ways of doing and teaching. The authors are addressing complex challenges associated with the digitalization processes and the adaptability of new technologies, as well as disparities in technology access and equitable implementation of Industry 4.0 technologies. These challenges are related to the United Nations Sustainable Development Goals (SDGs) for contributing to more sustainable ways of being, and building a more sustainable society of the future. The papers offer diverse perspectives by keeping in mind nested social, ecological, cultural and political contexts to make sense in the time of volatility, uncertainty, complexity, and ambiguity. Studies included in this volume offer transcontextual richness that stem from place-based approach towards the issues of study. Diverse perspectives reflected in the papers expand the boundaries of dominant Western worldviews and value systems and lead to transformed understandings towards collective flourishing and sustainability.

The studies invite readers to reflect on their capacity to make conscious and critical framings when they deal with unsustainability and gain new insights and wisdom, as well as develop global ecology of perspectives.

The article written by **Mahsa Kazempour** utilizes a mixed-method research approach to explore college students' experiences and engagement in an undergraduate science weekly discussion forum focused on communicating and discoursing about

environmental issues addressed in the news and various forms of media. In general, students mainly shared national and international news stories gathered from major mainstream media outlets as opposed to local news. Positive findings included increased awareness of various worldwide environmental issues and the positive and negative impacts of human activity on the environment as well as a sense of urgency to reduce ecological footprint and take greater action to address issues. The current study addresses the gap in the literature dealing with the interaction between students' environmental literacy and media and information literacy, particularly at the post-secondary level.

Clavia T. Williams-McBean in her paper responds to the need for insights on how sustainable development outcomes can be measured by presenting a model that large-scale test developers and classroom teachers can use to construct these tests. This model can be used to develop stand-alone or integrated SD examination items and systems. The paper also proposes that the influence of large-scale summative tests on teaching and learning (teaching to the test) at all levels of the education system can be used to facilitate the integration and development of sustainable development competencies. In this way, assessment can lead to the curriculum and practice reforms necessary for education to drive or facilitate the achievement of the other SDGs and achieve its own end.

The study by **Vimbi Petrus Mahlangu** examines the distribution of time that prison students dedicate to e-learning, specifically exploring their drive to study despite the challenging conditions of being in prison. E-learning offers these individuals a vital opportunity for education, which is essential for their rehabilitation and eventual reintegration into society. These programs not only provide knowledge and skills but also foster a sense of hope and purpose in offenders. Interestingly, a considerable proportion of students prefer to study during the nighttime hours, notably from 9 p.m. to 3 a.m. because of the more tranquil and less cacophonous setting. This decision displays their unwavering resolve and innate motivation for self-improvement. Engaging in nocturnal study sessions offers a chance for concentrated and uninterrupted learning, resulting in enhanced knowledge retention and skill improvement. The study emphasizes the importance of supporting e-learning in prisons as an essential component of rehabilitation.

The paper by **Joshua Abah Abah, Clement Onwu Iji and Taurayi Willard Chinaka** explores the exigencies of global issues as they influence STEM education with specific attention given to 21st century skills, impact of technology, mathematics competencies, climate change, global competencies, and equity, diversity and inclusiveness. The work is premised on the fact that the dynamics of Science, Technology, Engineering and Mathematics (STEM) teacher preparation has changed very dramatically in line with present-day realities and the demands of the emerging global environment. The article canvases for novel approaches to preparing STEM teachers who are skilled and knowledgeable practitioners, culturally aware, know about world events and global dynamics, literate for the 21st century, collaborative team members, effective users of technology and media, and responsible and ethical citizens. Recommendations on the knowledge, skills and attitudes that STEM teacher preparation should project were also given.

The study by Ediyanto Ediyanto, Iva Nandya Atika, Hari Widi Utomo, Ardiana Pangestika Konita, Irvan Budhi Handaka, and Rohaida Mohd Saat focuses on the impact of online learning during the COVID-19 pandemic, specifically among students in the Special Education Program at Universitas Negeri Malang. The research uses a

survey method and purposive sampling technique to evaluate student satisfaction with online learning. The survey results revealed that most students were satisfied with online learning, although some expressed dissatisfaction with the support provided during the learning process. The study also highlighted differences in satisfaction levels based on gender, with female students tending to be more satisfied than male students. These findings emphasize the importance of considering the overall learning experience of students and the factors that influence their satisfaction with online learning.

The study by Ephraim Kgwete reflects how secondary school principals apply professional discretion in managing drugs in schools. The argument of the study is that principals need to understand how to apply professional discretion in their practice and be accountable for their judgements and decisions to avoid the notion of negligence when managing drugs in schools. A qualitative research design was employed to collect data from secondary school principals of disadvantaged schools in the Gauteng Province of South Africa. The study revealed that some principals make professional discretions that are influenced by emotions and violate the rights of learners in the process while managing drugs in schools. The study further revealed that some principals are not even aware that the High Court of South Africa supports the discretionary powers of principals provided it is within the confines of the law, justifiable and it is fair. The study recommends that, principals should be workshopped on how to apply professional discretion especially on managing drugs in their practice

The paper by **Jason Gradidge and Mmalefikane Sylvia Sepeng**, reflects on monastic education that has a rich history rooted in discipline, community, intellectual pursuits, and spirituality, and which continues to influence students in monastic boys' schools today. As parents in South Africa grapple with choosing the right school for their children, this article delves into the pivotal role of monastic educational principles in shaping the educational journey. Through a qualitative study involving twelve participants from four schools, including principals and department heads, the impact of these principles is scrutinized. The findings underscore the enduring resonance of monastic traditions in education and emphasize their role in equipping young men for a well-rounded life. The study recommends a fervent emphasis on the inculcation of monastic principles by educators, pointing to a direct correlation with enhanced academic performance for the benefit of the students.

A study conducted by **Lipolelo Thamae and Lihotetso Gloria Matee**, investigates effective pedagogical practices and the roles of both teachers and learners in sustaining critical literacy among English as a Second Language (ESL) learners in a rapidly evolving global context. Using a mixed-methods approach grounded in Legitimation Code Theory and Constructivism, the research explores how critical literacy skills can be simultaneously enhanced and sustained. Data was collected through a variety of methods, including tests, questionnaires, document analysis, focus groups, and observations. Analytical tools such as thematic analysis, Excel, and ANCOVA via Strata17 in SPSS were employed. The findings revealed that applying the semantic gravity (SG) and semantic density (SD) is key to sustaining critical literacy. The null hypothesis (h_0) was rejected, demonstrating that SG and SD significantly inform teaching practices. This study contributes to the ongoing discussion of how to best equip ESL learners with the literacy skills necessary for critical thinking and active participation in global discourse.

The paper by **Makabelo Tenane & Tsepo Mokuku** explores biology learners' conception on wetland ecosystem, where wetlands in Lesotho face challenges related to pressures like overgrazing and burning. The study employed Ecological Literacy as

the theoretical framework. The research was conducted using mixed research approach and data was collected using observation and a close-ended questionnaires. The generated data were analysed using mixed method approach which strengthened data and enhanced the validity of research findings. The research findings revealed that most participants had moderate ecological knowledge of a wetland ecosystem and students' conceptions were mostly based on their social and cultural background not much from biology class teaching. Findings also revealed that boys were more ecologically literate than girls. The recommendation is that, data should be collected from the learners in many schools chosen randomly and data analysis should include other demographic variables, such as age and home background.

Detlev Lindau-Bank and Margit Stein in their paper discuss the need for further training and qualification of the teaching staff on implementation of ESD in the school context. They discuss that schools need a practicable framework curriculum for ESD. This article reports on an ERASMUS + project that reflects document analysis, curricular concepts, primarily from the United Nations discourse context, reflecting on ESD framework curriculum that enables the individual school at local level to design an ESD concept tailored to local and regional needs. This article reports on an ERASMUS + project that has dedicated itself to this task from a European perspective. This involved solving two tasks: based on a document analysis, curricular concepts, primarily from the United Nations discourse context, were compared and condensed into an ESD framework curriculum that meets the global, European and national requirements for ESD in schools and enables the individual school at local level to design an ESD concept tailored to local and regional needs.

The study by **Seda Gündüzalp and Zübeyde Yaraş** aims to examine academic research on teachers' digital literacy through bibliometric analysis methods. The dataset for the study consists of publications indexed in the Web of Science (WoS) database. Bibliometric analyses were conducted in the following categories: distribution of publication and citation counts, distribution by document type, distribution by country, keyword analysis, co-authorship analysis, country-level co-authorship analysis, citation analysis by journal, citation analysis by author, and citation analysis by country. VOSviewer software was used to create bibliometric visualizations. The results indicate a steady increase in the number of publications, with Spain being the leading country in this field. Based on the findings, it can be concluded that efforts to enhance teachers' digital competencies remain crucial for sustaining digital transformation in education.

We would like to thank all the reviewers and the authors of this volume for their valuable contributions. In these unpredictable times, the significance of carefully constructed, insightful research projects is invaluable in upholding the integrity of education systems universally. Our research community has modelled the striving for excellence in all areas of current education. That striving thrives on the underlying aim of Sustainability of Learning. In line with UNESCO millennial goals, this issue provides exciting evidence of sound education universally.

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