

Editorial

Education for Sustainable Development in the Built Environment

Introduction

The importance of this special issue on *Education for Sustainable Development in the Built Environment* is timely following the adopting of the Sustainable Development Goals (SDGs) by the 193 UN member states in 2015; the 17 universal goals measured by 169 targets should be achieved by 2030 (UN, 2015). Sustainable development goal 4 is aimed at “ensuring inclusive and equitable quality education that promotes lifelong learning opportunities for all”. More importantly, target 4.7 requires that all learners acquire the knowledge and skills needed to promote sustainable development by 2030 (UN, 2015:21). The built environment is also described as critical for the achievement of the sustainable development goals due to the impact of the built environment on a number of SDGs. Opoku (2016) believes that the built environment could have high impact on achieving a number of SDGs including Goal 7 (Affordable & Clean energy), Goal 9 (Infrastructure & Innovation), Goal 11 (Sustainable Cities & Communities), Goal 13 (Climate Change) and Goal 15 (Biodiversity).

Education for sustainable development (ESD) or sustainability literacy will provide graduates with the knowledge, skills and motivation to tackle the challenges society faces today (SDSN Australia/Pacific, 2017). This can only be achieved when teaching and learning is delivered through cross-disciplinary, multi-stakeholder engagement and experiential learning approaches. ESD can play a fundamental role in providing learners with the knowledge, skills and values to develop solutions to the global sustainability challenges through innovative pedagogy that enhances quality (UNESCO, 2014:3). Education and for that matter Higher Education Institutions (HEIs) have a crucial role to play in achieving the sustainable development goals through research, innovation and leadership (SDSN Australia/Pacific, 2017).

Overview of this Special Issue

This special issue (Volume 14, Issue 1) went through a very rigorous blind review process consisting of three stages; 16 full papers were submitted for the first stage of double blind review.

The papers were reduced to 9 papers for the second stage of the review process; after the third and final review process, 4 papers were accepted for publication for this special issue on Education for Sustainable Development in the Built environment.

The first paper by **Holt *et al.*** examines learning styles of undergraduate students in Construction Management (CM) bachelor's degree Programs in the United States. The study utilized the Felder-Silverman model and the Index of Learning Styles (ILS) as a survey instrument. The survey population consisted of 1069 CM students from 36 university offering CM programs across the Associated Schools of Construction regions. The findings show that CM students were visual, active, sensing, and sequential learners.

However **Opoku and Egbu** explore the relevance of sustainability literacy to postgraduate students enrolled in a Quantity Surveying (QS) course at a London University in the UK. The study adopts a mixed methods approach that examines students' perspective on the importance of sustainability literacy and how it has been integrated in the program through interview with 15 students followed by a survey with 98 part-time and full-time students enrolled on the course. The results revealed that students value sustainability knowledge and skills needed by graduates to be competitive in the job market.

The third paper by **Pearce *et al.*** presents the use of sustainability boot camp as a multidisciplinary, immersive, co-curricular learning experience aimed at bridging disciplines to create a sustainable future. The paper describes the design and pilot testing of a sustainability boot camp at Virginia Tech University involving a team of nine interdisciplinary faculty fellows from 6 colleges and insight from over 200 sustainability experts from multiple domains. Learning outcomes were developed based on thematic analysis of industry interviews from multiple sectors, yielding a set of competencies that companies seek in new hires for sustainability positions.

Finally, **Jiang *et al.*** adopted the morphing method and EnergyPlus (E+) software to investigate the impact of climate change on commercial building energy use under the A2 medium-CO2 emission scenario. The study simulated electricity and gas consumption of nine types of commercial buildings in eight cities, representing three climate zones in Florida-United states. The nine types of commercial buildings included apartments, hotels, offices, and schools. In general, gas and electricity demands for heating are projected to decrease, and electricity demand for cooling increases, at different rates in various areas of Florida. The study provides guidance for

policy-makers and utility companies as they craft their response to climate change in various regions of Florida.

Conclusion

The increasing need for sustainability-literate graduates by most employers is encouraging the integration of sustainability literacy into built environment programmes at all levels of Higher Education. This need therefore clearly shows the importance of education for sustainable built environment and hence the need for this special issue. The built environment needs individuals and organisations with the relevant sustainability literate skills, knowledge, capacity, values and motivation to respond to the negative impact of the sector on the environment. Sustainable literacy should therefore be embedded across the curriculum in higher Education to equip graduates with the right sustainability knowledge, skills and experience for the world of work.

References

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