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ABSTRACT

Green IT is a resource efficient and effective consumption through the use of information technology with minimal or no impact to the environment. This study is an initial attempt to explore on the Green IT perspective of higher education students in the Philippines. A survey questionnaire was deployed to determine the students’ awareness and practices towards Green IT. The results suggest that students have an average level of awareness and unsatisfactory practices in Green IT. The results indicate the need to integrate Green IT in higher education curriculum to raise awareness among students and engage them in sustainable use of computing resources. Practical and research implications are discussed.

KEYWORDS

Developing Country, Green IT, Green IT Adoption, Green IT Awareness, Sustainability

1. INTRODUCTION

Green Information Technology (GIT) is a resource efficient and effective consumption through the use of information technology and using human, managerial, and organizational competencies towards sustainability. GIT is seen as an approach to attain sustainability in organizations while achieving cost reduction, wastes conversion, carbon and toxic emissions, therefore, helping organizations to achieve sustainable business activities and minimizing their impacts to the environment.

In the developing country perspective, growing environmental challenges are seen to influence the adoption of GIT, thus, it is slowly progressing with an important role to play in environmental sustainability (Wieczorek, 2017). More recently, GIT adoption studies explored on the benefits, issues and challenges, and practices on GIT adoption in developing countries (Asahadi et al., 2017), however, a handful of studies are published that explores on higher education institutions perspectives towards GIT adoption. Firstly, higher education institutions are now designing programs on environmental
studies and sustainability (Jickling and Sterling, 2017), however, limited work has been done to explore on the insights of students, faculty, and decision-makers on GIT adoption experience. Secondly, there is a growing literature of GIT adoption studies in developed countries, more specifically on industry professionals’ perspective, however, few have identified the level of awareness of students in the education sector (Wee et al., 2017; Kang et al., 2017), and to some extent whether students know about GIT, and practice GIT compliant behaviors, a neglected area of inquiry in GIT (Chiong and Mohamad, 2017). Finally, the need for GIT adoption studies is constantly evolving as developing countries contribution to the depleting environment continuous to rise, thus, there is a greater scale of opportunities to explore GIT as one of the strategic approaches in raising awareness to students at an early stage of education and other stakeholders concerned with the policy. Therefore, this study aims to answer the fundamental research question: What is the level of awareness and practices of higher education students in Green IT?

To attain the goal of this study, a survey questionnaire was deployed to the higher education students to measure the level of awareness and practices on GIT in the Philippines, as reference of a developing country. Thus, this work contributes to the literature by providing an initial understanding of higher education students’ perspective towards GIT and sustainability.

The remaining parts of this paper covers (a) literature review of studies on GIT, and awareness in higher education students, (b) a discussion of the methodology, (c) the analysis and discussion of level of awareness and practices of students in GIT, and (d) conclusions, implications and future work based from the findings of the study.

2. LITERATURE REVIEW

This section presents Green IT as an area of inquiry, the benefits, and practices of HEIs, and awareness in GIT in education sector.

2.1. Green IT

The environmental challenges covering the rising carbon footprint emission, depletion of natural resources and increasing waste ending in landfills is gaining more attention and discussion among public and private stakeholders (Hilty and Aebischer, 2015). These challenges resulted in the formation of accords in various regions to understand the implications to human safety, business, technology development, and environmental sustainability (Nisha et al., 2013). Conversely, it is significant area of research in the information systems and environmental education, thus, sustainability through Green IT was conceived as important strategic focus of organizations today. GIT is a resource efficient consumption using IT infrastructure as well as applying managerial and human practices, and organizational policies towards sustainability (Molla et al., 2014). To date, many organizations have been proposing their GIT agenda (Ardito and Morisio, 2014), and anchoring it to the sustainability mission and vision (Hernandez and Ona, 2016), to realize the full benefits of GIT, both for economic and environmental performance. Previous studies suggest that adoption of GIT in organizations have been very limited (Khor et al., 2015), especially in developing countries (Hernandez and Ona, 2015). It requires technological and organizational readiness, and support from external environment to progress from simple to broad – complex GIT adoption activities (Deng and Ji, 2015). Hence, there is a greater need to explore and initiate GIT adoption in organizations.

2.2. Green IT Practices in Education

Previous studies suggest that the role of education sector has been realized for both research and practice, more importantly, in introducing innovations. Šovacool et al. (2017) states that the education sector should not only introduce new concepts or researches, however, it should also respond to the need for sustainability. Thus, the education sector is seen to thrive in institutionalizing sustainability
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