
SUSTAINABLE OF ENVIRONMENT AND GREEN CAMPUS: A STUDY OF GREEN ARTIFACT ENVIRONMENT AWARENESS

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Abstract

This study aims to determine the Level of awareness of green artifacts environment among the community of Politeknik Kuching Sarawak (PKS). Data was collected from 401 respondents, including students, staffs, and lecturers. Qualitative methods and convenience sampling have been adopted in this study. The results of the study show that the level of knowledge about electricity savings is high (mean=4.23), the level of knowledge of water savings is high (mean=4.85) and the 3R awareness of recycle bins is at a high level (mean=4.30). Based on the findings from this study show that the level of knowledge about green artifact environment is generally high. This high level of knowledge demonstrates that the community in Politeknik Kuching Sarawak (PKS) are aware of the green environment artifacts that available around the campus. The awareness and implementation of green artifact environment among students, staff and lecturers is important as it can influence their environmental awareness, practices, and attitudes which can lead towards the green campus.

Keywords: Environment, Environmental awareness, Green artifact environment, Green campus, sustainability.

INTRODUCTION

Green artifacts environment refer to physical elements and designs in an institution that aim to maintain environmental sustainability. These artifacts include structures, materials, and systems that help raise awareness of green practices among those within the institution. Green sustainability has a positive environmental impact, achieving cleaner production, pollution control, and ecological improvement (Song & Yu, 2018). Higher education institutions, like Politeknik Kuching Sarawak (PKS), have started integrating green elements in their design and operations. This study explores how the PKS community understands and practices the use of green environmental artifacts. PKS offers several courses related to green technology, such as “Green Technology Compliance,” which positively influences students by promoting water and energy conservation, as well as the 3R (Reduce, Reuse, Recycle) practices. These courses encourage students to adopt environmentally friendly habits and foster a culture of sustainability in their daily lives (Yahya, M. F. M., 2024). The study also examines whether the PKS community, including students, lecturers, and staff, have the knowledge and awareness to efficiently use the green environmental artifacts available at PKS.

LITERATURE REVIEW

The concept of campus sustainability focuses on improving sustainable practices and raising awareness among students and staff about environmental sustainability (Mohd Fairus Abu Bakar, Nadhrah A Kadir, 2021). Green environments, which are primarily covered by natural vegetation,

enhance both the quality of the environment and the learning atmosphere on campus (Hamzah Jusoh *et al.*, 2014). According to Magnelidan and Kamil (2021), artifacts are human-made objects designed for specific functions, with green artifacts contributing to the improvement of environmental quality. Environmental knowledge encompasses an understanding of ecosystems, environmental issues, the impact of human behavior on nature, and the use of green products (Kaufmann *et al.*, 2013). Recycling is an essential part of green practices, as it involves reusing products to create new materials (Maidiana Othmana *et al.*, 2021). Implementing recycling bins and programs effectively encourages participation in sustainable practices (Mohd Haszami Mat Zaini, Mohammad Tahir Mapa, 2024). Green practices aim to develop responsible individuals who prioritize the protection of the environment and the preservation of natural resources for both current and future generations (Hanifah Mahat *et al.*, 2021). Additionally, campus sustainability includes promoting green initiatives such as waste management, water conservation, and energy efficiency, which are integral to fostering a healthier, more sustainable academic environment.

RESEARCH METHOD

This study employs a quantitative research design, with findings summarized using statistical analysis and presented in numerical form (Baker, 1999). The sampling method used is non-probability, specifically convenience sampling (Malhotra, 2012; Ritter *et al.*, 2015). The population of Politeknik Kuching Sarawak (PKS) is estimated to exceed 3,417 individuals (Poliku, 2024). A sample size of 401 respondents is considered adequate for this study, as it is larger than 30 and less than 500, following Roscoe's (1957) guidelines. The data collection instrument is a questionnaire, adapted from items developed by previous researchers such as Klan-ghee Tiew, Kohel Watanabe, Noor Ezlin Ahmad Basri, Shahrom Md. Zain, and Hassan Basri (2013). The data collection process involves distributing the questionnaire in person through a Google Form link and QR code. Data analysis is performed using the SPSS (Statistical Package for Social Science) software.

RESULTS AND DISCUSSION

The study assessed the knowledge of green environment artifacts among the residents of Politeknik Kuching Sarawak. For electricity conservation, the overall knowledge score was high, with an average of 4.23. The highest awareness was found regarding reducing phone charging (mean = 4.71), followed by turning off lights, fans, and computers when not in use, which had a mean score of 3.87, 3.90, and 3.91, respectively. For water conservation, the overall knowledge score was 4.45. The highest awareness was about turning off water when not in use, with a mean score of 4.11. Other areas, such as monitoring daily water usage (mean = 4.23) and promoting responsible water usage through campaigns (mean = 3.89), also showed strong awareness. Regarding the 3R practices, the overall knowledge score was 4.30. The highest understanding was related to the color coding of recycling bins (mean = 4.71), followed by awareness of the different waste types designated for each bin, with a mean score of 4.66. However, knowledge about specific waste types like glass or non-biodegradable waste was slightly lower but still showed high awareness. The overall knowledge score for all green practices was 4.39, reflecting a strong awareness of environmental sustainability practices among the students and staff at Politeknik Kuching Sarawak. These findings align with previous studies, indicating a high level of knowledge about green practices.

CONCLUSION

This study shows that the community at Politeknik Kuching Sarawak has a high level of knowledge regarding electricity and water conservation, as well as 3R practices. These findings indicate that students are becoming more aware of environmental issues, though there is still room for improvement, especially in recycling practices. The strong awareness of 3R concepts suggests that the campus community understands the importance of waste reduction and recycling. This awareness provides a solid foundation for promoting green practices among students, lecturers, and staff, which is a positive step towards fostering a culture of sustainability and environmental responsibility. The study also highlights that implementing the proposed strategies will help strengthen the green culture at PKS. With effective and efficient implementation, Politeknik Kuching Sarawak has the potential to serve as a model for other institutions in sustainability and responsible environmental management. Through collective efforts to raise knowledge and awareness, and by providing the right infrastructure and programs, the campus can continue to promote green practices. This will make Politeknik Kuching Sarawak more environmentally friendly and sustainable in the future. The study emphasizes that knowledge and awareness of green environmental artifacts are key to advancing sustainability efforts and should be continuously promoted within the campus community.

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