

Environmental Awareness on Bolgoda Ecosystem through Library Services

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Introduction

Environmentally literate individuals who deeply understand the complex human interactions with their surroundings could immensely facilitate environmental conservation and sustainable development. Libraries can serve as documented information providers for the above purpose by presenting them user-friendly and readily available approach. Similarly, traditional library interactions with its users could be expanded focusing on the environment and valuable ecosystems. This project presents an attempt to elevate the environmental awareness on Bolgoda ecosystem for engineering undergraduates at the University of Moratuwa utilizing the library induction sessions during three consecutive years.

Bolgoda wetlands consisting of two large freshwater lakes and an interconnected river system considered to be the largest of its kind in Sri Lanka, with its footprint on Colombo and Kalutara districts. It is a sensitive ecosystem mainly due to the spatial arrangement neighbouring industrial zones, garbage dumps and variety of human activities with respect to its biodiversity. Bolgoda has been listed as one of the “Threatened Lakes of the Year 2018” by the Global Nature Fund in addition to being “One of the natural wonders that one must see before you die”. Despite protective, preventive, and rectification measures that are in place reinforced by policies, rules and regulations, the damage to this valuable ecosystem seems ongoing. Hence, developing neighbouring community awareness including the students at the University of Moratuwa seems a timely requirement. An attempt was made with this regard since February 2022 by initiating a pilot study focusing fresh engineering undergraduates with the objectives of to develop interactive library induction sessions enabling the undergraduates to develop environmental awareness and the Bolgoda Ecosystem; To evaluate the impact on library induction sessions focused on environmental awareness; To identify creative avenues that a library could facilitate environmental awareness with reference to the Bolgoda ecosystem; To encourage and provide opportunities for undergraduate to engage with environmental awareness and protection focusing the neighbouring Bolgoda lake; Enlighten undergraduates on United Nation's Sustainable Development Goals (UNSDG's) and community responsibilities towards sustainable consumption of natural resources.

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Project plan and Methods

The information retrieval regarding the Bolgoda ecosystem was conducted for undergraduates since 2022 (three consecutive years to date for the student intakes of 2021, 2022, and 2023) to the Faculty of Engineering, University of Moratuwa, during their library induction sessions. A two-fold approach was followed in this study to achieve the above objectives aligned to increase environmental awareness through effective sharing of information and library resources. A selective bibliography was published initially on the Bolgoda ecosystem compiling and categorizing available literature on the Bolgoda ecosystem. Both published and unpublished sources via web-based information retrieval systems in the library were utilized for this purpose. Secondly, undergraduates were advised to conduct a literature search on Bolgoda ecosystem during their library induction sessions adhering to a provided guidelines which included specific topics. This information retrieval was followed by an interactive discussion and feedback sessions in addition to students undergoing pre and post questionnaire surveys.

Findings and Discussion

The activity reveals positive student engagement and increased awareness based on student feedback. In response to a Likert Scale survey, 792 undergraduates from the 2021 intake indicated that the activity significantly improved their awareness and attitude towards the Bolgoda ecosystem. Awareness categories of "Poor" reduced from 36.05% to 0%, "Fair" decreased from 14.01% to 5.44%, "Satisfactory" increased from 13.61% to 24.49%, while "Very Good" and "Excellent" awareness levels rose from 4.08% to 45.58% and from 12.24% to 24.49%, respectively.

When Dervin's sense-making framework, which involves seeking, encountering, and using information to address an information need with respect to ambiguous and complex real-world situations, was applied to 496 undergraduates from the 2022 intake, it was revealed that 98.3% of undergraduates selected a topic relevant to the complex situations in the Bolgoda ecosystem and were able to retrieve 98.3% relevant documents and 89.5% of appropriate document categories.

Additionally, the results of a Wilcoxon signed-rank test carried out for pre-test and post-test assessments on facts about the geography, ecology, biodiversity, and socio-economics of the Bolgoda ecosystem for 906 undergraduates from the 2023 intake showed a significant improvement in knowledge after the library induction session. Undergraduates have commented that the library resources (selected bibliography and feature articles) facilitated the information retrieval process on all three occasions.

Conclusion and Suggestions

This project transformed a traditional library induction session to an interactive and informative episode for students. The attempt has positively influenced in developing of environmental stewardship among patrons. This confirms that the libraries could advocate

sustainable practices by appropriately utilizing their resources and programs to empower communities in sensitive ecosystems such as Bolgoda. Furthermore, fresh undergraduates mostly new to the environment that consists of Bolgoda and with a higher probability to spend much of the time within or near by the university premises for at least four years of their academic activities could positively influence the environmental protection in the region by effectively sharing their knowledge with the community through their daily engagements.

Further suggestions can be made to enhance the environmental awareness on Bolgoda ecosystem: Establishment of a disciplinary digital repository as a specialized online platform for storing, preserving, linking and disseminating scholarly works while functioning as a centralized hub where researchers can access and share a wide range of digital content; Promote undergraduate research on Bolgoda utilizing the current body of knowledge and ensure the project outcomes to be accessible to the community for decision making and eliminate repetition of the work; Promote an inclusive strategic management approach based on scientific principles and rational decision-making with respect to SDG's, no.6 (clean water and sanitation), no.11 (sustainable cities and communities), no.13 (climate action), no.14 (life below water), and no.15 (life on land).

Keywords: Library induction, Bolgoda ecosystem, Environmental awareness, Bibliographies

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