

Biodiversity Literacy of Undergraduate Students at the Open University of Sri Lanka: Understanding the “Knowing-Doing Gap”

W. Lasal Dewmika Rathnasooriya, Minasha Ramali Abeykoon, K. D. Buddhi Nilanga, Yashaswin Dineth Bamunusingha, Chanika D. Jayasinghe*, D. D. G. L. Dahanayaka

Department of Zoology, The Open University of Sri Lanka, Sri Lanka

Abstract

Biodiversity loss is a pressing global concern, and enhancing biodiversity literacy among future decision-makers is critical for sustainable conservation efforts. This study assessed the biodiversity literacy of undergraduate students at The Open University of Sri Lanka (OUSL) while also examining how academic discipline and gender influence their knowledge, attitudes and behaviour. A cross-sectional, quantitative survey design was used to collect data from 380 undergraduates across five faculties through a structured

Correspondence should be addressed to **Dr Chanika D. Jayasinghe, Department of Zoology, Faculty of Natural Sciences, The Open University of Sri Lanka, Sri Lanka*

Email: cdjay@ou.ac.lk



<https://orcid.org/0000-0002-2204-8967>

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questionnaire that covered key domains including demographic data, knowledge, awareness, attitudes, and behaviours related to biodiversity. The majority of participants (92.1%) were aware of biodiversity loss. Significant differences were observed across faculties ($\chi^2 (4) = 158.71, p < 0.001$), with science students exhibiting higher exposure to biodiversity-related content (e.g., zoology, botany). Notably, social media was the most used source of biodiversity information among the respondents. Students who studied biodiversity-related content were significantly more likely to obtain biodiversity information from formal sources ($\chi^2 (12) = 87.29, p < 0.001$) such as research papers and books, and those who consulted lectures and research-based sources exhibited higher awareness of threats to biodiversity ($\chi^2 (6) = 14.20, p = 0.027$). Faculty affiliation significantly influenced the belief in biodiversity's economic value ($\chi^2 (3) = 41.23, p < 0.001$), with Science and Management students reporting stronger agreement. Female students were more likely to acknowledge socio-economic benefits of biodiversity (Mann-Whitney $U = 13,714, p = 0.015$). Majority of the respondents showed willingness to contribute to environmentally friendly university initiatives (89.21%) and nearly half (48.16%) expressed their interest in biodiversity-related careers. Despite awareness and attitudes, only 39.7% participate in biodiversity-related activities such as tree planting, reuse, and recycling of plastic. Overall, this study highlights a critical gap between awareness and action, underscoring the need for integrative educational strategies such as interdisciplinary education.

Keywords: *Attitude, biodiversity, literacy, knowledge, OUSL, practice*

Introduction

Biodiversity is the totality of all the varieties of life spanning from the level of genes to ecosystems on Earth (Wilson & Campbell, 1996). Biodiversity, through its diverse ecosystems, provides a wide array of essential products and services that support human life (Gomes et al., 2021; Zhang et al., 2022; Raihan, 2023). The global human population has been growing dramatically and has reached the 8 billion mark in late 2022 (United Nations, 2023). Moreover, the increased per capita consumption has caused the unsustainable

exploitation of the Earth's biological diversity, leading to numerous anthropogenic environmental impacts (Rands et al., 2010). Evidence has been mounting to showcase that the extinction rates of species have increased to a historically unprecedented level (Wilson & Campbell, 1996). Furthermore, numerous taxa of fauna and flora are currently exposed to extinction risk from diverse anthropogenic activities (Brummitt et al., 2015; Humphreys et al., 2019; Lughadha et al., 2020).

A Global Assessment Report by the Intergovernmental Platform on Biodiversity and Ecosystem Services states that 1 million animal and plant species are now susceptible to extinction, which is marked at the highest level on record (IPBES, 2019). Many scholars have suggested that our planet Earth could be undergoing the sixth event of mass extinction (Algeo & Shen, 2024), which unlike prior occurrences, is primarily and predominantly driven by human-induced factors (Ceballos et al., 2015; McCallum, 2015; Régnier et al., 2015; Ceballos et al., 2020). The ultimate consequence of altering biodiversity will threaten human well-being as it undermines the essential ecosystem-derived services vital to survival and development (Chapin III et al., 2000; Crist et al., 2017; Johnson et al., 2017; Vijeta et al., 2021).

Habitat loss, rapid urbanisation, introduction of invasive alien species, overexploitation of natural resources and pollution are some of the direct drivers of biodiversity loss (Hughes, 2017; Vijeta et al., 2021; Prakash & Verma, 2022), while low environmental awareness is a crucial indirect factor (Milkisso, 2020). Awareness about environmental issues relates to concerns about the environment and willingness to prevent environmental degradation (Takala, 1991), thus, awareness and literacy are more or less interlinked (Lobron & Selman, 2007). Biodiversity literacy encompasses aspects of biodiversity knowledge, attitudes and behaviour (Milkisso, 2020). Understanding about biodiversity among the young people in higher education institutions is pivotal as they are poised to influence the future policy making frameworks (Kuruppuarachchi et al., 2021). Moreover, their ability to bring up solutions to new and unforeseen

environmental problems is essential in combating biodiversity loss in the future (Milkisso, 2020). Amidst the context of increasing globalization, university students will play a key role in future global initiatives and therefore, it is essential to equip them with knowledge and skills to perceive environmental problems effectively on a global scale (Wong, 2003).

Scholars have delved into diverse facets of biodiversity literacy, including knowledge, attitudes, and behaviours among undergraduates (Muderrisoglu & Altanlar, 2011; Nisiforou & Charalambides, 2012; Huang & Lin, 2014; Milkisso, 2020). Many other researchers have examined aspects like students' awareness of human-nature relationships, understanding of biodiversity, and responses to environmental challenges (Wong, 2003; Selvam & Abdul Nazar, 2011; Arbuthnott & Devoe, 2013; Liu & Lin, 2014; Yazici & Babalik 2016; Akkor & Gündüz, 2017). Furthermore, studies by Gülgün et al. (2008), Vicentre-Molina et al. (2013), Katili et al. (2021), and Turner-Erfort (1997) have documented a comprehensive exploration of factors influencing environmental behaviour, levels of biodiversity literacy, and awareness among both students and the general public.

In Sri Lanka, however, only limited scholarly attention has been given to assessing this matter on an undergraduate level (Kuruppuarachchi et al., 2021) or at any other level of society (Kuruppuarachchi et al., 2023). A comprehensive understanding of the existing knowledge of people in different layers of society about the environment is a crucial factor in implementing environmental conservation-related strategies (Kuruppuarachchi et al., 2021). Additionally, it is critical in designing and constructing effective educational strategies that can ultimately lead to the protection of biological diversity (Hungerford & Peyton, 1994).

The Open University of Sri Lanka (OUSL) is the leading higher education institute in Sri Lanka that offers the Open and Distance Learning (ODL) mode of learning. It is the only state university in Sri Lanka that offers the ODL mode of education, providing educational opportunities for many students who have limited access to higher education at conventional universities, regardless of their age,

employment, or marital status (Kulatunga et al., 2023). Currently, the OUSL serves over 30,000 students registered under 6 different faculties: Natural Sciences, Engineering Technology, Human Studies & Social Sciences, Health Sciences, Education, and Management Studies. OUSL offers its services through several regional and study centers spread around the country, and thus, the student population is distributed across all parts of Sri Lanka. Due to all these factors, the OUSL student population provides a better cohort to investigate the awareness, knowledge of biodiversity.

This study primarily aimed to evaluate the level of biodiversity literacy amongst undergraduate students at the Open University of Sri Lanka. Specifically, it sought to answer the following questions: 1) What is the level of biodiversity knowledge and awareness among the students, including their understanding of its importance and threats? 2) What attitudes and sense of responsibility do students hold towards biodiversity conservation? 3) To what extent are students engaged in pro-environmental and biodiversity-related behaviours, and what gaps exist between awareness and action? and 4) How do factors like source of information, academic discipline and gender influence students' biodiversity literacy?

Methodology

Data collection

This study employed a cross-sectional, quantitative survey design to assess biodiversity literacy among undergraduate students at the Open University of Sri Lanka. A structured questionnaire was administered to a randomly selected sample of 380 students representing five faculties of the university namely, Natural Sciences, Engineering Technology, Education, Management Studies, and Human Studies & Social Sciences, using both online (Google Forms) and paper-based distribution methods between the month of September and December 2024. The Faculty of Health Sciences did not provide data and was therefore excluded from the data analysis.

The questionnaire was developed based on existing literature (Gülgün

et al., 2008; Huang & Lin, 2014; Akkor & Gündüz, 2017) on biodiversity literacy and covered five key domains: 1) demographic background, 2) awareness and knowledge of biodiversity, 3) attitudes and emotional responses, 4) perceived responsibility, and 5) behavioural intentions and actual engagement in pro-environmental practices. Questionnaire items included a culmination of multiple-choice and Likert-scale questions, with responses recorded on a five-point scale reflecting levels of agreement or behavioural frequency. To ensure the content validity of the questionnaire, it was reviewed by subject matter experts, and a pilot test was conducted with 35 participants. Internal consistency of the responses was evaluated using Cronbach's alpha. Informed consent was obtained from all participants, and responses were anonymized to ensure confidentiality and voluntary participation.

Data analysis

Descriptive statistics were used to summarise demographic characteristics and response distributions. Inferential statistical analyses were conducted using SPSS version 26 to draw conclusions based on the collected data. Chi-square tests, Kruskal-Wallis H tests, Mann-Whitney U tests, Wilcoxon signed-rank tests, and Spearman's rank-order correlations were employed, as appropriate, based on the violation of normality and the types of variables assessed. In cases where the assumptions for chi-square tests were violated, Monte Carlo simulations were used to adjust significance levels. All statistical tests used a significance level of $p < 0.05$.

Results and Discussion

Demographic overview

The study included 380 students from five faculties of the OUSL. The majority of respondents were aged 18-25 (72.11%), and 66.05% of the respondents were female. Students from the Faculty of Natural Sciences constituted the largest academic faculty group with 56.58% of respondents. A substantial percentage (60.26%) of participants were unemployed (Table 1).

The pie charts illustrate the distribution of participants based on the

age group, gender, employment status, and the faculty they were studying in providing an overview of the demographic composition of the sample (Figure 1).

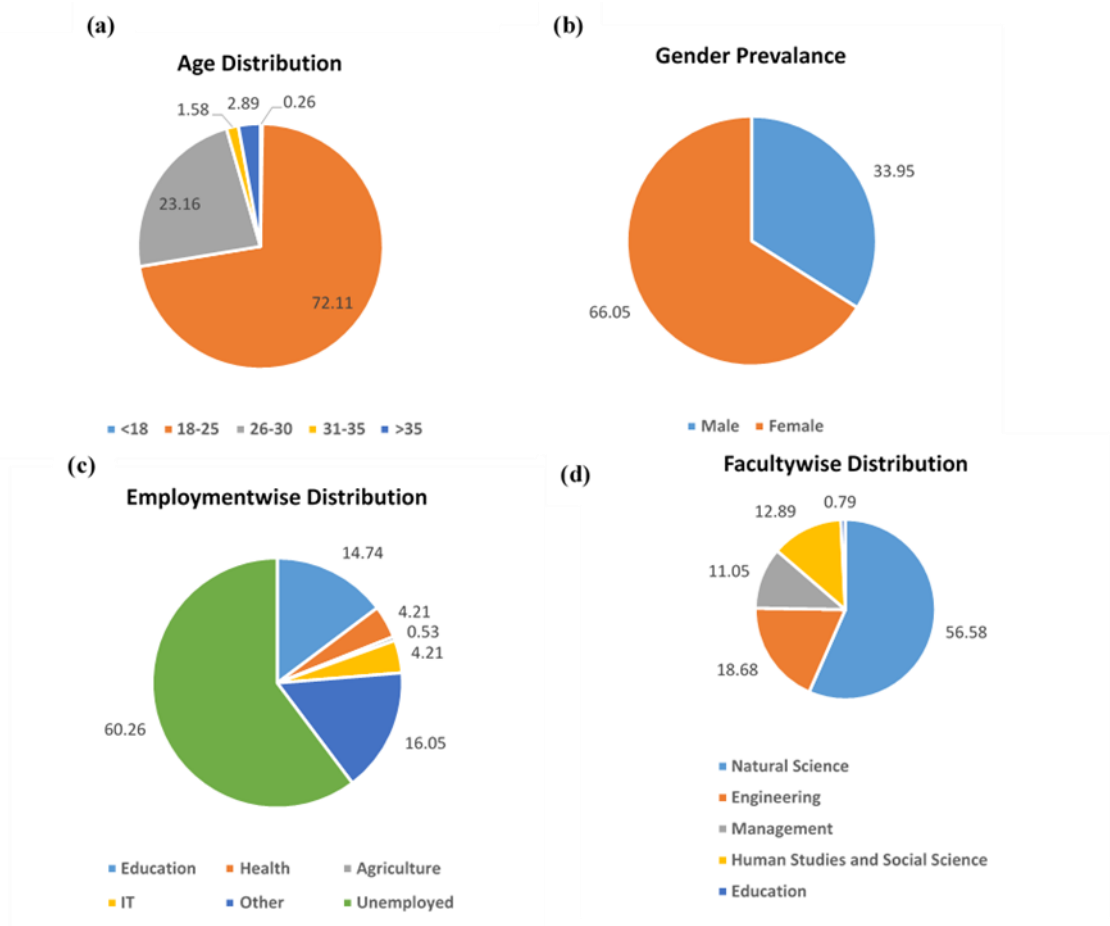


Figure 1. Pie charts showing the (a) Age distribution, (b) Gender distribution, (c) Employment distribution, and (d) Faculty distribution among the study population. Note: All are represented in percentage values.

Questionnaire item distribution

Table 1 provides a detailed overview of the distribution of participants' responses to the questionnaire items, measured on a five-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree".

Table 1. *The Frequency of the Participants' Responses to the Questionnaire Items*

Questionnaire Item	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total Agree
Q1: We are currently in an era where anthropogenic actions are putting biodiversity at a significant risk.	0.26%	1.05%	6.58%	27.89%	64.21%	92.10%
Q2: The loss of habitats is a major threat to biodiversity.	0.26%	2.11%	9.74%	39.21%	48.68%	87.89%
Q3: Biodiversity offers numerous benefits to human health.	1.05%	2.63%	11.32%	46.32%	38.68%	85.00%
Q4: Biodiversity offers numerous economic benefits to humans.	0.53%	2.11%	13.68%	49.21%	34.47%	83.68%

Q5: The loss of biodiversity leads to a wide range of socio-economic problems.	0.00%	1.58%	11.84 %	46.05 %	40.53%	86.58%
Q6: It saddens me to learn that since 1970, anthropogenic activities have led to a 70% decline in the global animal population.	0.00%	2.11%	11.32 %	30.53 %	56.05%	86.58%
Q7: I believe the damage caused by the decline in animal populations must be stopped and reversed.	0.26%	0.26%	7.89%	30.00 %	61.58%	91.58%
Q8: It's acceptable to sacrifice a small portion of biodiversity for human development.	15.00%	12.11%	16.84 %	32.11 %	23.95%	56.06%
Q9: The present generation is duty-bound to preserve	1.05%	0.53%	4.47%	24.47 %	69.47%	93.94%

biodiversity.						
Q10: The government is duty-bound to preserve biodiversity.	1.32%	0.53%	5.26%	21.05%	71.84%	92.89%
Q11: I am personally duty-bound to preserve biodiversity.	0.26%	1.32%	6.32%	31.84%	60.26%	92.10%
Q12: I am actively participating in a biodiversity related club/organization.	32.63%	16.05%	11.58%	14.21%	25.53%	39.74%
Q13: The social media pages I follow feature a significant amount of content related to biodiversity.	19.74%	12.63%	21.05%	11.84%	34.74%	46.58%
Q14: I am interested in pursuing a career related to biodiversity.	11.58%	6.84%	33.42%	17.63%	30.53%	48.16%
Q15: I would like to personally	1.84%	0.53%	8.42%	24.74%	64.47%	89.21%

contribute to environmentally friendly initiatives at the university (Ex: Advocating for a ban on plastic use within the campus premises).						
Q16: I am willing to buy an environmental-friendly product even if it's a bit expensive/difficult to use.	2.63%	1.05%	20.79%	27.11%	48.42%	75.53%
Q17: How often do you recycle plastics and polythene?	9.21%	13.95%	40.26%	24.74%	11.84%	36.58%
Q18: How often do you participate in activities such as tree planting, beach cleanups, or environmental trips?	4.47%	24.47%	47.11%	16.58%	7.37%	23.95%
Q19: How often do you get to discuss a biodiversity related issue with	3.68%	18.42%	43.68%	25.26%	8.95%	34.21%

your family and friends?						
Q20: How often do you read/watch/listen to content related to biodiversity?	13.42%	28.42%	35.26%	14.47%	8.42%	22.89%
Q21: How often do you participate in biodiversity-related workshops/programmes?	9.47%	15.79%	20.53%	16.32%	37.89%	54.21%

Knowledge and awareness

The majority of respondents, 92.1% for Q1 and 87.89% for Q2, agreed or strongly agreed that habitat loss and human activity pose serious threats to biodiversity, indicating a high level of awareness in the responses to these questions (Table 1). This suggested that the audience is knowledgeable and aware of how urgent the issue is. Appreciation of the importance of biodiversity to human health and the economy by the participants was demonstrated by Q3 and Q4. The respondents emphasised that they value biodiversity beyond ecological contexts, with the majority agreeing or strongly agreeing (84% and 83.68%, respectively). A majority of respondents also agreed (86.58% totally agreeing) that loss of biodiversity leads to many socio-economic problems.

Attitudes and emotional responses

Emotional response to biodiversity loss was represented by Q6 and Q7, which reveal that hearing about the 70% reduction in the world's animal population since 1970 causes melancholy and a strong desire

to undo the harm. More than 86% firmly believed that action must be taken to halt and undo the harm caused to biodiversity. Therefore, these results demonstrated a strong emotional bond with the loss of biodiversity by the participants.

Perceived responsibility

Duty-bound to act related questions, which elaborated a strong sense of ethical responsibility, were Q9, Q10, and Q11. Most people believed that protecting biodiversity is an obligation of the current generation (93.94%), the government (92.89%), and themselves as well (92.1%). This shared sense of duty interpreted through the responses suggested potential for collective action if avenues for participation are available.

Behavioural intentions and actual engagement in pro-environmental behaviour

However, when it comes to active engagement, the responses indicated a gap in active involvement despite the high level of awareness and concern. For example, in Q12, more than 60% of the respondents are not actively involved in organisations relevant to biodiversity, with only 39.74% agreeing or strongly agreeing to do so. Furthermore, the recycling behaviour represented by Q17, only 36.58% of respondents agree or strongly agree that they recycle frequently, indicating that recycling plastics and polythene is not a commonly practised activity.

Interest and action willingness were represented by Q14, Q15 and Q16. Responses to Q15 and Q16 showed a strong interest in ecologically friendly efforts (89.21%) and a desire to buy eco-friendly items (75.53%), which implies an interest in environmentally friendly actions. With regard to biodiversity career aspirations, 48.16% of respondents agreed or strongly agreed that occupations in biodiversity are interesting. However, the high neutral response (33.42%) to Q14 indicates hesitancy about following such career routes. This indicated a lack of knowledge or opportunity regarding employment options in domains related to biodiversity.

Engagement with biodiversity related content was assessed through Q13 and Q20, whereas, they indicated a modest level of interaction with biodiversity content on social media (46.58%) and in other formats (22.89%), respectively. Therefore, these findings suggested room for improvement in using digital platforms for advocacy and education on biodiversity awareness. Engagement in activities associated with biodiversity was assessed through Q18 and Q21. It demonstrated low participation in hands-on activities such as workshops on biodiversity, tree planting, and cleanups. For instance, while 37.89% of people attend seminars, the majority do not, and just 23.95% have taken part in events like planting trees. This reaffirms the necessity of improved motivation and accessibility for these activities. Awareness and communication were represented by the responses to Q19. The results showed that 34.21% of respondents have regularly talked to friends and family about biodiversity concerns. Therefore, this highlights the need for community engagement and initiatives to make biodiversity topics more accessible in informal discussions.

Inferential statistical analysis

1. Sources of information and exposure to biodiversity related academic content

Exposure to biodiversity-related content varied significantly by faculty ($\chi^2 (4) = 158.71$, $p < 0.001$, $f = 0.85$), with Science students (Natural Sciences) reporting the highest exposure. Male students reported significantly greater exposure to biodiversity-related content in their coursework than females (Mann-Whitney $U = 12,719.5$, $p = 0.001$). However, we did not explicitly control the gender imbalances within the faculties.

Social media was the most preferred source for biodiversity-related information (31.32%), followed by books (30.53%). Research papers and lectures had comparatively minimal use (1.84% each). Students who studied biodiversity-related content (e.g., zoology, botany etc.) were significantly more likely to obtain biodiversity information from formal sources ($\chi^2 (12) = 87.29$, $p < 0.001$, Monte Carlo adjusted). Moreover, lectures and research-based sources correlated with higher

awareness of biodiversity threats ($\chi^2 (6) = 14.20, p = 0.027, f = 0.195$), whereas, social media users exhibited lower awareness.

2. Attitudes and perceived responsibility

Students demonstrated strong agreement with the value of biodiversity for health, economy, and well-being (mean scores >4.0). Most respondents felt personally responsible for biodiversity conservation (92.1%) and believed this duty is shared by the government (92.89%) and society (93.94%). The Wilcoxon test determined whether the students attributed different responsibility levels for biodiversity conservation to themselves compared to the government. However, the analysis showed no significant association between these two paired responsibility ratings ($p = 0.751$), suggesting that students perceived personal and governmental responsibility as equally important.

Faculty affiliation significantly influenced the belief in biodiversity's economic value ($\chi^2 (3) = 41.23, p < 0.001, f = 0.35$), with Science and Management students reporting stronger agreement. Gender differences were also observed, with females more likely to acknowledge the socio-economic benefits of biodiversity (Mann-Whitney $U = 13,714, p = 0.015$).

3. Behavioural engagement, eco-friendly actions, and career choices

Despite strong attitudinal support, behavioural engagement was moderate. Participation in biodiversity clubs was low (39.74%), and fewer than 24% regularly took part in biodiversity-related activities such as tree planting. Social media engagement correlated moderately with active involvement (Spearman's $r_s = 0.370, p < 0.001$). However, no significant associations were found between biodiversity awareness and willingness to buy eco-friendly products ($\chi^2(4) = 2.051, p = 0.726$), nor between media type and activity frequency ($\chi^2(4) = 4.41, p = 0.354$).

A high willingness to contribute to environmentally friendly university initiatives (89.21%) and purchase eco-friendly products (75.53%) was reported. While 48.16% expressed interest in biodiversity-related careers, a significant neutral response (33.42%) suggested hesitation

or a lack of awareness regarding such career paths. Furthermore, career interest in biodiversity was found to be unrelated to educational level (Spearman's $r_s = -0.054$, $p = 0.294$). The summary of the statistical analysis results are given in Table 2.

Table 2. Summary of the statistical analysis results (statistical significance indicated at $P = 0.05^*$)

Component	Test Type	p value	Result
Sources of information and exposure to biodiversity-related academic content	Chi-Square Test	$p < 0.001^*$	Science students had the highest exposure to biodiversity-related content.
	Mann-Whitney U Test	$p = 0.001^*$	Male students reported significantly greater exposure to biodiversity-related content in their coursework.
	Chi-Square Test	$p < 0.001^*$	Students who studied biodiversity-related content were significantly more likely to obtain biodiversity information from formal sources.
	Chi-Square Test	$p = 0.027^*$	Lectures and research-based sources correlated with higher

			awareness of biodiversity threats
Attitudes and perceived responsibility	Wilcoxon Test	$p = 0.751$	No significant association was observed in responsibility attribution for biodiversity conservation between oneself and the government.
	Chi Square Test	$p < 0.001^*$	Faculty affiliation significantly influenced the belief in biodiversity’s economic value
	Mann–Whitney U Test	$p = 0.015^*$	Gender differences were also observed, with females more likely to acknowledge the socio-economic benefits of biodiversity.
Behavioural Engagement, eco-friendly actions and career choices	Spearman’s Correlation	$p < 0.001^*$	Social media engagement correlated moderately with active involvement

Chi Square Test	p=0.354	No significant associations were found between biodiversity awareness and willingness to buy eco-friendly products
Spearman's Correlation	p=0.294	Career interest in biodiversity was found to be unrelated to educational level.

Discussion

This study investigated the biodiversity literacy amongst undergraduate students at OUSL, revealing both encouraging trends and critical areas for improvement. The overall awareness of biodiversity and acknowledgement of its threats, such as habitat loss, was notably high among students, aligning with previous research that similarly found high awareness levels among university populations (Lindemann-Matthies & Bose, 2008; Nisiforou & Charalambides, 2012). Almost all respondents in the present study reported having heard of the term “biodiversity”, and 92.1% acknowledged human-caused biodiversity loss. Findings by Turner-Erfort (1997) reported widespread support for biodiversity conservation even among individuals unfamiliar with the term. However, this broad awareness did not consistently translate into deep conceptual understanding or active engagement. While the majority of respondents were familiar with the term “biodiversity,” a closer look at their behaviours and practices exhibited only a moderate engagement in biodiversity-related activities. This gap between awareness and action has been observed in various contexts (Nisiforou & Charalambides, 2012; Yazici & Babalik, 2016), and reflects what Arbuthnott & Devoe (2013) identified as overconfidence

in understanding biodiversity without corresponding depth of knowledge, particularly regarding interdependency among species and ecosystems.

One of the clearest patterns revealed in this study was the influence of academic discipline on biodiversity literacy. Students from the Faculty of Natural Sciences reported significantly higher exposure to biodiversity-related content and displayed greater understanding and more favourable attitudes towards biodiversity. This was consistent with prior findings that Science and Engineering students are more environmentally literate and more likely to engage in pro-environmental behaviours in general compared to their peers in Social Sciences or Humanities (Müderrisoglu & Altanlar, 2011; Vicente-Molina et al., 2013; Huang & Lin, 2014).

Gender also emerged as a significant variable in this study. Female students reported stronger pro-environmental attitudes, particularly concerning the socio-economic benefits of biodiversity. This finding aligned with several studies reporting higher environmental concern and eco-centric or dual-centric attitudes among women (Müderrisoglu & Altanlar, 2011; Akkor & Gündüz, 2017; Milikisso, 2020). However, it should be noted that some studies report no gender-based differences in environmental behaviour (Shafiei & Maleksaeidi, 2020), indicating that these patterns may be context-specific and shaped by socio-cultural dynamics.

Behavioural engagement in biodiversity conservation was moderate in this study, with relatively low levels of participation in biodiversity clubs or hands-on activities like tree planting. Despite 89.21% of students expressing willingness to support eco-friendly initiatives, only 39.74% were actively engaged. This mirrored the well-documented gap between environmental attitudes and action-based behaviour (Selvam & Abdul Nazar, 2011; Yazici & Babalik, 2016). Similar findings by Vicente-Molina et al. (2013) emphasised the importance of psychological factors, such as motivation, perceived consumer effectiveness (PCE), and self-efficacy, in translating knowledge and attitudes into behaviour. These constructions may be

underdeveloped among OUSL students, potentially contributing to a lack of structured interventions and opportunities to engage in biodiversity-related actions.

The role played by the media platforms in shaping biodiversity literacy constituted another significant finding of the study. Students who obtained information from research papers and lectures demonstrated a greater awareness of biodiversity threats, whereas, reliance on social media was associated with lower awareness. This supported the findings by Gulgun et al. (2008) and Kuruppuarachchi et al. (2021), who emphasised the limited effectiveness of mass media in fostering deep understanding and called for more formal education interventions beginning from early childhood.

Interestingly, the perceived responsibility for biodiversity conservation was widely shared among students, who placed responsibility on themselves, society, and the government. This shared sense of responsibility, also noted by Huang & Lin (2014), suggests a potential foundation for collaborative action if properly mobilised. However, the lack of difference between perceived self-responsibility and government responsibility in this study might reflect a passive outlook where students view conservation as a collective duty but await institutional direction.

The study also revealed that the exposure to biodiversity education significantly predicted higher awareness and engagement, reinforcing the argument by Lindemann-Matthies & Bose (2008) and Arbuthnott & Devoe (2013) that formal and informal education, especially when emphasizing interconnected ecological processes, can shape literacy. The observed preference for social media as an information source, however, contrasts with these findings, indicating a disconnect between the sources which students use and those that actually enhance literacy.

Additionally, a substantial percentage of the students (48.16%) expressed interest in biodiversity-related careers, while a significant fraction (33.42%) remained neutral, pointing to uncertainty or lack of information about such career paths. The studies, Nisiforou & Charalambides, 2012 and Huang & Lin, 2014 reported that very similar hesitation was observed where students supported

environmental causes in theory but were reluctant to commit professionally or behaviourally.

Conclusions

Overall, the findings of this study were consistent with the broader literature in emphasising the complex interplay between knowledge, attitude, and behaviour in biodiversity literacy. Even if the undergraduate students of OUSL demonstrated commendable awareness and positive attitudes, translating this awareness into consistent and meaningful action remains a challenge. Thus, addressing this gap may require targeted curriculum reforms, integration of biodiversity topics across all disciplines, and institutional support for experiential learning and engagement programmes.

Conflict of interest

The authors declare no conflict of interest.

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