# FACULTY PERCEPTIONS ON INTEGRATING ENVIRONMENTAL ETHICS INTO OPEN SCHOOL CURRICULA AT THE BANGLADESH OPEN UNIVERSITY

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*Abstract— Environmental ethics—emphasizing sustainability, ecological responsibility, and moral obligations to nature—is increasingly vital in the context of global climate challenges and the Sustainable Development Goals (SDGs). However, there is limited integration of environmental ethics within the existing curricula of the Open School (OS) at Bangladesh Open University (BOU), particularly in the Secondary School Certificate (SSC) and Higher Secondary Certificate (HSC) programs. This qualitative study explores faculty perceptions regarding the incorporation of environmental ethics into OS curricula. Interviews were conducted with 20 faculty members using a structured checklist focusing on key themes such as curriculum content, green practices, paperless education, and the university's role in advancing SDG targets. The findings reveal that environmental ethics are largely underrepresented in current course outlines, and faculty members acknowledge this gap. They believe integration is both necessary and feasible through curriculum revision and strategic inclusion of relevant topics across subjects. Participants also highlighted the potential of BOU's distance education model to promote sustainable practices like digital content delivery and reduced paper usage. The study concludes by recommending the deliberate inclusion of environmental ethics in curriculum planning as a step toward fostering responsible, sustainability-conscious learners in alignment with national and global goals.*

## I. INTRODUCTION

Biodiversity in Bangladesh is facing significant degradation for several factors, such as deforestation, climate change, habitat loss, and unsustainable resource use. As one of the world's most densely populated countries, it is particularly vulnerable (Mukul et al., 2017). Although government of Bangladesh has undertaken various initiatives, their impact remains limited, largely due to low public awareness of environmental issues. That's' why, environmental ethics has emerged as a concern in education. In the face of escalating environmental degradation, climate change, and unsustainable resource consumption, educational institutions play a vital role in shaping environmentally responsible citizens (Orr, 2004; Sterling, 2010; Gal & Gan, 2020). The inclusion of environmental ethics into curricula fosters awareness, and moral responsibility towards nature among learners. Generally, this aligns with the growing emphasis on sustainable education as outlined in the United Nations Sustainable Development Goals (SDGs), particularly SDG 4 (Quality Education) and SDG 13 (Climate Action) (UNESCO, 2017). In Bangladesh, a country vulnerable to climate change, the importance of environmental awareness is even more pronounced (Kabir et al., 2018). Yet, there is limited reflection of environmental ethics in the secondary curricula. Bangladesh Open University (BOU), country's only provider of open and distance learning (ODL), holds a unique position to reach learners across the country, including those in remote areas (Islam & Selim, 2020). BOU's Open School delivers education to thousands of learners through its SSC and HSC programs using open schooling system. This is system is already known as environmentally friendly as it promotes home study and uses technology. Despite BOU's potential, the integration of environmental ethics in the Open School curricula remains minimal. There is a growing need to reassess how ethical perspectives on environmental responsibility can be embedded within course content to support green practices. This article explores faculty perceptions of environmental ethics in the existing curricula of the Open School at BOU. It aims to identify gaps, assess the relevance of integrating sustainability topics, and offer recommendations for embedding environmental ethics into future curriculum development efforts.

### Objectives

i) To examine the current status of environmental ethics integration in the SSC and HSC curricula of the Open School at Bangladesh Open University.

ii) To explore faculty members' perceptions and awareness regarding the importance of embedding environmental ethics in secondary-level open and distance learning.

iii) To identify key challenges and opportunities in incorporating environmental ethics into course content, delivery methods, and institutional practices at BOU.

iv) To provide recommendations for curriculum development and institutional strategies aimed at effectively integrating environmental ethics and promoting green practices within BOU's Open School programs.

## II. LITERATURE REVIEW

Environmental ethics, which emphases moral obligations to nature and sustainable living, has been increasingly recognized as central to education (Liu et al., 2019; Otto & Pensini, 2017; Babatunde & Mavuso, 2023).). The field spans multiple philosophical approaches, including virtue ethics—emphasizing traits like humility and stewardship—and extensionist perspectives that expand traditional virtues to consider the environment (van Wensveen, 2000), sometimes collectively referred to as Environmental Virtue Ethics Environmental humanities integrates this ethical dimension by exploring the intertwining of values, culture, and nature (Milstein & Castro-Sotomayor, 2020) which shift beyond cognitive learning toward moral accountability (Rose et al., 2012).

Formal schooling often treats environmental education as explore the integration of Islamic environmental ethics into mathematics education, with ethics as an afterthought (Mauluah, 2021), resulting in occasional mentions of climate change but limited moral framing. In South Africa's GET and FET phases, subjects like life skills and social studies include environmental issues, yet ethical depth remains lacking. Writers like Kronlid and Öhman (2012) argue for embedding values such as care, compassion, and responsibility as central themes, not add-ons

In ODL settings, the ethical dimension becomes even more critical. Online and blended learning can support environmental sustainability by reducing carbon footprints—through fewer commutes, paper-free formats, and digital resources (Brozović, 2022,; Md Harizan, et al., 2015). Alharthi and Spichkova (2016) emphasize that sustainability in e-learning systems requires addressing both environmental and social dimensions—supporting learner collaboration, digital resource reuse, and institutional sustainability planning.

Innovative methods are transforming the teaching of environmental ethics. Virtual reality (VR) environments, for instance, have shown promise in enhancing student engagement and eco-ethical understanding (Liu et al., 2019; Li, 2018) Arts-based environmental education (AEE) uses artistic expression to heighten environmental sensitivity, bridging aesthetics and ethics. STSE (Science, Technology, Society & Environment) frameworks also embed ethical questions alongside scientific content, promoting civic responsibility and critical thinking (Pedretti & Nazir, 2011; Ozden, 2020).).In ODL programs,

transaction-distance theory (Moore, 2013; Achuthan, et al., 2024).) stresses that independent learners may struggle without rich interaction—especially when tackling complex ethical issues; online dialogue and collaborative activities help mitigate this distance (Kasch et al., 2023).

A consistent finding across contexts is that teachers are frequently underprepared to integrate environmental ethics meaningfully. South African studies report that while environmental education exists, ethics is often overlooked due to lack of teacher training and insufficient curricular scaffolding (Babatunde & Mavuso, 2023). Surveys from multiple countries show that a disconnect exists between teacher capability and curriculum demands, and advocate for continuous professional development to build pedagogical content knowledge and ethics-infused pedagogy.

Bangladesh's vulnerability to climate change makes embedding ethics in education an urgent national priority (Kabir et al., 2018). Islamic ecological worldviews—rooted in stewardship of the natural world—have been invoked in Bangladesh to promote pro-environment attitudes (Sayem, 2018). However, mainstream curricula, especially at the secondary level, seldom integrate environmental ethics in a structured way.

Bangladesh Open University (BOU) is well positioned to drive change: through its dual formal/non-formal mandate, it already addresses issues such as health, disaster management, and environment across regions via low-carbon digital materials (Wikipedia, 2025). The Open School—serving SSC and HSC learners via distance modes—offers opportunities to embed ethics across subjects and via interactive digital pedagogy. Yet formal curriculum reviews and faculty engagement around environmental ethics remain absent, signaling a critical gap in both policy and practice.

Together, the literature identifies following gaps:

- A strong ethical grounding is necessary to move from factual environmental education to responsibility-driven engagement.

- Pedagogical tools like VR, AEE, and STSE frameworks show efficacy in other contexts, but have rarely been trialed in ODL.

- Teachers' preparedness remains the weakest link, calling for in-service training and ethics-focused curriculum design.

- ODL's inherent environmental advantages (e.g., paperless delivery) should be leveraged into both content (courses) and practice (institutional sustainability).

- There is a critical absence of context-specific empirical data, especially in Bangladesh's ODL system.

Understanding faculty perceptions is essential—they serve as gatekeepers of curriculum change. Faculty attitudes influence whether ethical content is introduced, how it's taught, and whether green practices are modeled in delivery. Insights gleaned from faculty can shed light on both structural barriers (e.g., lack of policy, training) and intrinsic motivations that may catalyze integration.

The literature highlights the importance of integrating environmental ethics into curricula. This is especially relevant in ODL, which expands access and supports environmental goals. Innovative pedagogies exist and show strong results. Still, gaps remain in teacher readiness and curriculum design. At BOU's Open School, underserved learners are reached. This creates a promising but underused chance to embed ethics and sustainability. Exploring faculty perceptions here is a vital step for meaningful reform.

### III. METHODOLOGY

This qualitative study explores how subject teachers at the BOU Open School perceive the integration of environmental ethics into the school curriculum. The research is situated within an interpretivist paradigm (Scotland, 2012), which allows for the in-depth exploration of participants' understandings, beliefs, and contextual experiences related to ethical environmental education. A total of 20 subject teachers from the Open School participated in this study. Table 1 illustrates teachers represent diverse academic backgrounds of the respondents:

**Table 1: The respondents**

| Subject Area | Number of Teachers |
|---|---|
| Bangla | 1 |
| English | 3 |
| Sciences | 5 |
| Humanities | 6 |
| Business Studies | 5 |
| Total | 20 |

This purposive sampling approach (Nyimbili & Nyimbili, 2024) was adopted to ensure broad disciplinary coverage, acknowledging that environmental ethics may be conceptualized and implemented differently across subject areas. Participants were selected based on their involvement in curriculum development or teaching within the Open School's SSC and HSC programs.

Data were collected through semi-structured interviews, which allowed participants the freedom to reflect on their pedagogical practices, content priorities, and any institutional or personal efforts to include environmental values in their teaching. Interview questions focused on their understanding of environmental ethics, perceived relevance to their subject areas, challenges faced in integration, and suggestions for curricular or institutional improvement. Each interview lasted approximately 30 to 45 minutes and was conducted either face-to-face or

online, depending on participants' preferences and logistical feasibility. All interviews were conducted in Bangla or English, based on the language comfort of the participants, and were recorded with consent for transcription and analysis.

Data analysis followed a thematic coding process, using Braun and Clarke's (2006) six-phase approach: familiarization with the data, initial code generation, theme searching, theme review, theme definition, and report production. NVivo software was used to facilitate the coding and organization of qualitative data. Key themes that emerged included disciplinary perspectives on ethics, institutional priorities, resource limitations, and opportunities for embedding environmental concerns into subject content.

To ensure trustworthiness, triangulation was achieved by comparing responses across subject groups. Credibility was enhanced through participant validation, whereby selected teachers reviewed summarized findings for accuracy. Ethical approval was obtained from the relevant academic authority, and all participants gave informed consent. Confidentiality was maintained by anonymizing names and references throughout the reporting process. The methodology was designed to elicit deep, context-specific insights into the perceptions and practices of teachers across different disciplines, ultimately aiming to inform strategies for integrating environmental ethics in the Open School's ODL curriculum.

**Discussion and Findings**

The qualitative analysis of interviews with 20 subject teachers at the BOU Open School reveals a complex picture of the awareness, integration, and perceived importance of environmental ethics in secondary education curricula. Thematic coding of the data produced four dominant themes: (1) Awareness of Environmental Ethics, (2) Integration in Subject Content, (3) Institutional and Pedagogical Challenges, and (4) Opportunities and Recommendations.

**Awareness of Environmental Ethics**

A common pattern among the participants was limited conceptual clarity regarding environmental ethics. While many educators expressed concern for the environment, few could articulate a clear understanding of what "environmental ethics" entails in an educational context. A science teacher commented, "We talk about pollution and climate in science, but ethics... that's a philosophical term, not really in our scope."

This highlights a key conceptual gap—environmental ethics is often perceived narrowly as scientific content rather than a broader ethical commitment to sustainability, intergenerational responsibility, and ecological justice (Ref). The limited awareness also demonstrates the disconnect between national and global environmental priorities, such as the Sustainable Development Goals (SDGs), and what is actively taught in the classroom.

**Integration in Subject Content**

Teachers across disciplines acknowledged the absence of explicit environmental ethics themes in existing SSC and HSC curricula. A business studies teacher noted, "We could teach corporate social responsibility better if there was something on environmental ethics in the syllabus. Right now, it's not prioritized." English and Humanities teachers, in particular, emphasized the potential for integrating environmental themes through literature, history, and ethics. One English teacher suggested, "Even a short story on ecological crisis could provoke reflection and discussion among students. It's not about adding chapters but weaving ethics into what we already teach." This aligns with Noddings' (2013) view that moral education, including environmental ethics, must be integrated across the curriculum rather than isolated in one discipline. Yet, teachers admitted that they often bypass such discussions due to time constraints or lack of institutional encouragement.

**Institutional and Pedagogical Challenges**

Several educators pointed out structural limitations in promoting environmental ethics within the ODL (Open and Distance Learning) framework. A humanities teacher commented, "We use printed modules. They are standardized and don't get updated regularly. So even if we want to include something new, we are restricted." This illustrates the rigidity of content delivery systems in distance education, where centralized curriculum production often delays innovation (Daniel, 2020). Furthermore, another teacher shared, "BOU should lead in green practices, but we still rely heavily on paper. There is no institutional message promoting paperless, sustainable behavior." Such observations suggest a contradiction between the ethos of environmental responsibility and the actual institutional practices of the university. Without strategic leadership, even well-meaning teachers are unable to drive significant curricular or operational changes.

**Opportunities and Recommendations**

Despite the challenges, participants proposed practical ways to embed environmental ethics in the curriculum. A Bangla teacher proposed, "Why not include a poem on nature and its destruction? That would be impactful and relevant." Others suggested teacher training, module updates, and the use of digital platforms to promote environmentally conscious practices. One science teacher stated, "An online discussion forum or short video on sustainability could be more effective than static textbook content." These suggestions indicate that teachers are willing to innovate but need institutional support and curricular flexibility. Their insights reflect broader recommendations in the literature, such as ensuring alignment between curriculum design and SDG implementation (UNESCO, 2017).

**Findings**

From the analysis, the following Table 2 findings emerge:

**Table 2: Summary of findings**

| Theme | Key Findings |
|---|---|
| Awareness of Environmental Ethics | • Teachers show concern for the environment but lack conceptual clarity.<br>• Environmental ethics is seen mainly as scientific content, not as an ethical commitment to sustainability and justice. |
| Integration in Subject Content | • No explicit inclusion of environmental ethics in SSC/HSC curricula.<br>• Potential for integration across disciplines (literature, history, CSR, etc.).<br>• Teachers bypass discussions due to time pressure and lack of institutional encouragement. |
| Institutional & Pedagogical Challenges | • ODL framework limits innovation due to rigid, standardized printed modules.<br>• Lack of updates and flexibility in content production.<br>• Institutional practices (e.g., heavy paper use) contradict sustainability goals.<br>• Absence of strategic leadership for green practices. |
| Opportunities & Recommendations | • Teachers suggest integrating poems, stories, and CSR content with environmental ethics.<br>• Training, updated modules, and digital platforms could help.<br>• Online forums, videos, and blended approaches recommended. |

From the analysis, the following findings emerge:

- Most teachers lack a holistic understanding of environmental ethics, often reducing it to science-related issues.

- The current SSC and HSC curricula do not explicitly incorporate environmental ethics, leaving integration dependent on individual teacher initiative.

- The centralized and rigid nature of ODL content production restricts innovation and context-based inclusion of ethics.

- Teachers across disciplines expressed willingness to integrate environmental ethics if given resources, training, and institutional backing.

- There is a lack of visible commitment to sustainability in BOU's own practices, such as excessive reliance on paper-based delivery.

**Critical Reflections**

The findings show that while individual educators recognize the relevance of environmental ethics, systemic issues within the curriculum development and delivery process at BOU hinder its integration. This reflects a broader challenge in ODL systems globally—how to remain responsive and ethically relevant when content is centrally designed and slow to change. Integrating environmental ethics into the curriculum should not be treated as an additional burden but as an ethical imperative in shaping responsible citizens. As Jickling and Wals (2008) argue, education must shift from simply informing learners about environmental problems to actively engaging them in ethical decision-making and sustainability practices.

BOU has a unique opportunity, as the largest distance learning institution in Bangladesh, to lead by example. Developing green campuses, promoting digital learning over print, and revising modules to include ethical reflection are steps that can drive meaningful change. Without such initiatives, the rhetoric of sustainability risks remaining disconnected from actual pedagogical practices. Ultimately, the integration of environmental ethics in the Open School's curricula is both a pedagogical and moral necessity. The teachers' voices in this study call for a shift in institutional priorities, one that places ethics and sustainability at the heart of educational design.

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