

ENVIRONMENTAL EDUCATION IN ACADEMIA: BANGLADESH PERSPECTIVE

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ABSTRACT

Due to the ever rising environmental disasters, environmental education has emerged as one of the most talked about issues in academia – all around the world today. To tackle this overwhelming crisis, there is an imminent need for environmental awareness at the mass level – which, of course, can only be provided through environmental education. As Bangladesh is one the most vulnerable countries in terms of environmental disaster, and as environmental education and awareness can play significant roles in ensuring participation of mass people in safeguarding environment; the need of such environmental education here has become an absolute necessity. The aim of this paper is to investigate into the current state of environmental education in Bangladesh, particularly at the university level. In doing so, it considers the existing laws on environmental education in Bangladesh, the role and scope of the universities, and the responsibilities of the teachers in raising learner awareness in environmental issues. Finally it comes up with some recommendations in relation to imparting environmental education and raising learner awareness at the university level.

INTRODUCTION

Incorporating topics of environmental education in pedagogy has recently become a global phenomenon and it reflects a modern humanistic perspective – intending to promote ‘the knowledge, attitudes and skills relevant to living responsibly in a multicultural, interdependent world’ (Fisher and Hicks, cited in Cates 2000: 241). Environmental education is multi-dimensional in nature and it encompasses all the areas of study and human life. Facing the challenges and the reality we are going through, it has become absolutely necessary to raise our learners’ environmental awareness and prepare them to become the agents of change for a better world. And as teachers, we have enough opportunities to raise their environmental awareness while staying devoted to the contents of our individual syllabi. By including relevant themes and content of environmental issues in our pedagogy, we can help our learners to think critically and equip them with knowledge about the real world. Including such environmental topics in the classroom would increase our learners’ interest in the contemporary ecological issues; teach them build a pollution free healthier world; enable them to contribute towards sustainable development; as well as stimulate a positive and meaningful lifelong learning.

DEFINING ENVIRONMENTAL EDUCATION

According to the UNESCO Tbilisi declaration (1978), environmental education is a process of learning that enhances knowledge and awareness of the environment and its associated challenges, develops the required skills and expertise to solve the challenges, and thus develop a strength and desire to make learned decisions and take proper action. On the other hand, the Environmental Education Act of the United States Public Law 91-516 defines environmental education as the educational process that deals with man’s relationship with his natural and man-made surroundings, and it includes the relation of population, pollution, resources allocation and depletion, conservation, transportation, technology and urban and rural planning – in relation to the human habitat.

Paterson (2010) argues that according to the NEEF (U.S. National Environmental Education Foundation) environmental education consists of three levels:

- Environmental awareness: It consists of the basic awareness of the key ecological issues;
- Personal conduct knowledge: It consists of knowledge about transforming awareness into action;
- Environmental literacy: It consists of knowledge about the underlying principles and implementing those in real life situation.

The Inter-governmental Conference on Environmental Education (1977) has specified some guiding principles for imparting environmental education. It implies that environmental education should:

- Define environment as a total unit – including both the natural and the man-made, and whatever that relates to human existence on the planet;
- Be a process of lifelong continuity, making its way from the pre-school to the very end of all formal and non-formal education;
- Be holistic and interdisciplinary, so as to include contents from every and each discipline in order to provide an all-inclusive perspective;
- Consider the environmental issues from both local and global perspective so that learners get a comprehensive input about the global concern;
- Concentrate on both the existing and the potential environmental conditions, while keeping an eye on the past experiences;
- Uphold the value of both local and global cooperation in managing the environmental issues;
- Emphasize on the environmental features while planning roadmaps for future development;
- Create ubiquitous environmental awareness among learners of all age, with special focus on his/her own community;
- Enable learners to feel the symptoms and discern the causes of environmental problems;
- Facilitate the development of critical thinking and problem-solving skills among learners;
- Integrate a holistic approach in pedagogy to ensure that learners get all inclusive practical experience.

ISSUES COVERED UNDER ENVIRONMENTAL EDUCATION

Environmental education covers an extensive range of issues that relate to the co-existence of human life and nature. Such issues include, but are not limited to: diversified air/water/noise pollution, global warming, inefficient use of natural resources, ozone depletion, greenhouse effect, extinction of endangered species, habitat destruction, electromagnetic/chemical radiation and health hazard, use of genetically modified foods, excessive use of pesticides and herbicides, intensive farming, desertification, soil erosion and contamination, water/gas crisis, overfishing etc.

NECESSITY OF ENVIRONMENTAL EDUCATION

Cates (2000) argues that integrating environmental education in pedagogy enables learners to internalize the awareness, commitment and skills required to solve the global problems – along with the individual subject matter being taught. It also helps learners to assess environmental issues, find solutions, and create a pro-environmental behaviour. (Pooley and O'Connor, 2000).

According to UNESCO (2014a), environmental education is essential in instilling a fundamental respect for and awareness of nature among

human beings. It facilitates the safeguarding of human existence and their quality of life – with an increased awareness about protecting the environment, eradicating poverty, minimizing the inequalities and ensuring sustainable development. And hence, the UN has conducted many conferences like: The UN Conference on Human Environment (Stockholm, 1972); International Workshop on Environmental Education (Belgrade, 1975); Tbilisi Declaration (USSR, 1977); Earth Summit (Rio de Janeiro, 1992); Kyoto Protocol (Kyoto, 1995); World Summit on Sustainable Development (Johannesburg, 2002); UN Sustainable Development Summit (Rio de Janeiro, 2012); UN Climate Change Conferences (Paris, 2015); UN Sustainable Development Summit (New York, 2016) etc. to raise awareness among the mass population in safeguarding the environment.

The NEEF (National Environmental Education Foundation, USA; cited in Paterson, 2010) suggests that incorporating environmental awareness education in pedagogy can improve learners' academic achievement and enhance their motivation, critical thinking skills, and attitude towards learning. The incorporation of environmental topics into the classroom promotes learning and personal responsibility inside and outside the classroom.

ROLE OF TEACHERS IN ENVIRONMENTAL EDUCATION

Teachers are the makers and shapers of the future changers, i.e., the present day learners. Hence, they play the most important role in anything related to the future of human existence on earth. McKeown and Hopkins (cited in Yavetz et al., 2009) salute teachers as the most important force in raising environmental awareness, since they hold the key to influence the views, attitudes, and activities of the future changers in relation to the environment.

But teachers do not always have the freedom and scope to add issues related to environmental awareness in the class. They have a fixed syllabus to cover within a stipulated time that makes it difficult for them to teach other subjects besides the core ones. But the study of individual subjects like Law, English, Business Administration, Pharmacy, Computer Science, Journalism and the like cannot make the learners appreciate the wholeness of the environment and its relationship with mankind. Hence, according to Salequzzaman and Davies (2003), teachers can integrate environmental awareness into any of these subjects by adding themes and content of environmental issues into the contents and materials of these individual subjects and thus become an environmental educationist by actively contributing in building an environmentally aware next generation. Application of such pedagogy can be traced in the initiatives of MESA (Mainstreaming Environment and Sustainability in African Universities). The aim of this initiative is to integrate environmental and sustainability issues into research and pedagogy, as well as to increase mass awareness among the African universities; so that learners can properly internalize the importance of environment and actively participate in environment friendly activities (Sisitka et. al, 2015).

CONNECTING CLASSROOM KNOWLEDGE WITH REAL-WORLD ACTIONS

An environmental friendly curriculum develops an understanding and responsiveness towards the environment; imparts knowledge and experience of various types of environmental issues; develops a vital understanding of the interdependence of the environmental substances; enables to acquire skills for identification and solution to environmental hazards; instils a set of norms and values to encourage active participation; enhances ability to integrate and evaluate environmental issues into the educational programmes of each and every subject.

According to Cates (2000), there should be a fusion between the global and the local in the contemporary educational pedagogy. Teachers should integrate the environmental and the global issues into the local classroom instruction, provide learners with activities that would link them to the wider world and global concepts such as social responsibility, environmental awareness and world citizenship.

The easiest and most reliable way to make our learners aware about the environment is to show by doing and providing them with hands on experience. For example, the teacher can first introduce the topic of nature conservation and the importance of preserving trees as part of class instruction and then can lead the example by printing hand-outs on both sides of the paper. This will influence the learners and have a long term effect upon them. After that if he asks learners to print homework/assignments on both sides of the paper, it is very likely that they would start doing so. Such other very significant but usually unnoticed daily habits that teachers can encourage learners to do (and hence contribute towards environmental protection) might include switching off the AC's/lights/fans/computers/water taps when not in use, using recyclable products instead of harmful plastic products, not making excessive noise, avoid smoking etc. and more.

Teachers can also use role plays to link classroom learning with personal responsibilities in the real world. Role-plays, if properly selected, can expose learners to contextually relevant simulated situations, provide them scope to demonstrate their knowledge of ecological issues, inspire them to discuss and express their opinions on contextual issues, encourage them to connect their classroom learning to their daily lives, and also help them to influence others to become more eco-friendly and responsible.

Teachers should create such contextually relevant experiences that can test the learners' outlook to and awareness of the environmental issues. Such contextual activities and experiences, according to Gieve (cited in Pooley and O'Connor, 2000) could help learners to rebuild similar situation in their own and relevant ways. And thus, teachers would achieve their pedagogical goal and our learners would become more environmentally responsible.

ENVIRONMENTAL EDUCATION IN BANGLADESH

According to Farooque and Hasan (2004), there are about 200 laws in relation to environment in Bangladesh. Bangladesh is a signatory to forty four international conventions, treaties, and protocols regarding the environmental conservation. The following is a chronological representation of the development of the major environmental laws in Bangladesh:

- i. The Wildlife Preservation Order, 1973
- ii. Environmental Pollution Control Ordinance, 1977
- iii. National Environmental Policy, 1992
- iv. National Environmental Management Plan, 1995
- v. Bangladesh Environment Conservation Act, 1995
- vi. Environment Conservation Rules, 1997
- vii. The National Water Policy, 1999
- viii. The Environmental Court Act 2000
- ix. Bangladesh Climate Change Strategy and Action Plan, 2009

All these Acts and Policies are commonly related to nature and environment. These all deal with issues that have direct link with nature and environment, and its relation with human life on earth. The aim is to raise awareness of environmental conservation among the mass population in the country.

However, the first step towards introducing environmental education for the first time in Bangladesh came with the National Environment Policy, 1992 – which was revised to Bangladesh Environment Conservation Act in 1995. This Act includes some particular objectives regarding the spread of environmental education, and raising mass awareness in the society. These include:

- i. Removing environmental illiteracy and creating mass awareness in terms of environment conservation;
- ii. Ensuring inclusion and spread of environmental knowledge and information in academia and the media;
- iii. Developing an effective, long term education and public awareness strategy;
- iv. Promoting necessary and relevant research;

However, the National Education Policy (1992) was the first in Bangladesh to recognize that awareness of environment must be integrated in the curriculum at every stage of education. As a direct output of this policy, environmental education was soon introduced in curriculum of both the primary and secondary schools in 1998; and rather than being taught as an independent subject, the theme of environmental education had been integrated with the other major areas of study to raise environmental awareness at the school level. Also, the Fourth Five Year Plan (1996) emphasizes providing environmental education to both teachers and learners in all levels of education. Moreover, the 1997 Environment Conservation Rules provide options for:

- i. Advising persons on sound use of environment and its components;
- ii. Conducting research and facilitating other stakeholders in preservation and upgrading of the environment;
- iii. Collecting, publishing and disseminating information regarding environmental pollution.

Then in 2005, the National Adaptation Programme of Action suggested the integration of environmental issues in the curriculum of both secondary and tertiary levels (MOEF, 2005). Moreover, raising mass awareness and dissemination of knowledge regarding the same were also stressed by the Bangladesh Climate Change Strategy and Action Plan (2009). Later on the National Education Policy (2010) strongly recommended to update the curriculum and syllabus of the school level to teach all the basic subjects with a focus on climate change and Science and Information Technology (Ministry of Education, 2010).

Based on the aforementioned information we can safely assume that there is a strong policy regarding environmental education in Bangladesh. However, it only applies to the school and college level. There is no specific policy of environmental education or of raising environmental awareness at the university level, though the need of such cannot be ignored. The only solution to such a situation would be for Bangladesh to make new laws of environmental education for the tertiary level, for universities to take initiatives to rethink their curriculum and make it more environment friendly, and for teachers to modify their pedagogy and integrate issues and themes of environmental education while teaching their basic subjects.

OBJECTIVE

The objective of the study is to find out:

- i. Whether the universities (in Bangladesh) have any specific guidelines and policies regarding the inclusion of environmental education in their curriculum and syllabus;
- ii. Whether the universities (in Bangladesh) instruct/train their teachers in integrating themes and content of environmental education in their pedagogy;
- iii. Whether the teachers are aware of the necessity of integrating themes and content of environmental issues in academia to raise learner awareness; and
- iv. Whether teachers integrate the themes and content of environmental issues while teaching their core subjects;

METHODOLOGY

The sample of this study consisted of 127 teachers (both males and females) teaching different subjects in 6 public (University of Dhaka, University of Barisal, Jahangirnagar University, Jagannath University, Bangladesh Agricultural University, and Sher-e-Bangla Agricultural University) and 4

private (Eastern University, ASA University Bangladesh, Northern University Bangladesh, and Green University of Bangladesh) universities in Bangladesh. Data were collected from both primary (questionnaire and semi structured interviews) and secondary (various printed and online resources) sources. The questionnaire was distributed to the participating teachers to collect data. Additionally, semi-structured interviews were conducted and recorded to elicit preservable data from the teachers and to get a fuller detail of their responses.

The data collected from both questionnaire and semi structured interviews were initially categorized through a process of qualitative thematic analysis that involves a careful reading of the data, identification of the key issues in them, and grouping of these issues into a set of broader categories. Later they were compared to scrutinize conclusions from two perspectives; elucidating quantitative findings with qualitative examples, and obtaining a significant understanding of why the respondent teachers answered particular questionnaire items in the ways they did.

FINDINGS AND DISCUSSION

The analysed data suggests that though only a handful of the teachers were not sure about the necessity of environmental education, a vast majority of them found it important and agreed that there is a big necessity of adding it in the syllabus. It shows that teachers are very much aware of the necessity of adding environmental education in the syllabus to increase learners' awareness. But most of them also found environmental education not necessary to be taught as an individual subject. Rather, they argued for integrating the themes and content of environmental issues in the syllabus of all the major teaching subjects.

In their opinion, childhood is the time that builds learners' character and hence a proper environmental education at that time will have a lifelong impression upon them. So, most of the teachers suggested that environmental education should be first introduced at the primary level. But most of the teachers very rarely – if at all – integrate themes and content of environmental issues on their own while teaching their core subjects. However, those who do so, do it because the syllabus they use in the class carries such environmental themes and it becomes an automatic choice.

And those who don't integrate such themes and content of environmental education in their core subjects had various reasons for that. These are:

- Time limitation: Teachers have very stipulated time in a semester where they can hardly finish their own syllabus. So, adding additional items in the syllabus become almost impossible.
- Lack of resources: There is also a lack of resource in this area. Even if one wants to add environmental topics in their syllabus, resources are hardly available.
- Lack of proper knowledge/training: There is also a lack of proper knowledge and teacher training. Teachers don't usually get any training or motivational workshop on such issues.

- Non-friendly surrounding: Even the office environment is not much friendly for environmental education, i.e. there is no support from anyone like learners, colleagues, or even the administration. Nor is there any such previous example to be followed.

But even after that, teachers think that they have a significant role in raising environmental awareness among learners. They also strongly believe that teachers need proper training and motivational workshops on this topic to be able to integrate the themes and contents of environmental education in their syllabus and pedagogy. But unfortunately, teachers hardly get any training on this. And neither do the universities have any specific guidelines or policies regarding the inclusion of such environmental education in their curriculum and syllabus. And hence, due to all these reasons, this very important issue still remains much under theoretical consideration.

RECOMMENDATIONS

Based on the findings of the analysed data and the interviews, the following recommendations are made:

- i. Themes and content of environmental education should be integrated into the core teaching subjects.
- ii. Integrating environmental education and raising learner awareness should start at the primary level.
- iii. Universities need to review their curriculum and syllabi to make those more environment friendly.
- iv. Universities need to arrange relevant training and motivational workshops for teachers, so that they can integrate the themes and content of environmental education in their pedagogy in a better way.
- v. Universities should also try to make their library a big source base for resources on environmental education – for both teachers and learners.
- vi. Universities could also form various committees – consisting of members from every level of stakeholders – for raising environmental awareness.

CONCLUSION

Integrating environmental education into pedagogy is very important as it enhances social awareness and facilitates achieving a sustainable future for all. Bangladesh has enacted relevant laws and has taken various steps to integrate environmental issues into the mainstream education at the school level. But there is no specific guideline or policy regarding the integration of environmental education at the university level. Nor do universities have any specific guidelines and policies regarding the inclusion of environmental education in their curriculum and syllabus. And moreover, the teachers are not always aware of the necessity of integrating environmental themes and issues in academia to raise learner awareness; and nor do they get enough chances to integrate environmental themes and

issues as part of their core subjects. Hence it is the need of the time that Bangladesh reviews its environmental education policies accordingly and makes a strong coordination between these two for maximum facilitation and effective implementation of its environmental education and awareness raising plans and strategies. It should focus on including more environmentally relevant themes and contents into the curriculum, syllabus and the textbooks, as well as imparting training and other awareness raising programs especially at the tertiary level. The university authorities also need to be pro-active in this regard and take proper initiatives to integrate environmental education into their curriculum, initiate awareness raising activities within the campus, and provide proper training to their teachers accordingly. And teachers themselves ought to be conscious enough to integrate environmental awareness into their courses by adding environment based themes into the contents and materials of the individual subjects they teach, and thus become an environmental educationist by actively contributing in building an environmentally aware next generation. This study ends with remembering what the German philosopher Goethe said long ago ‘Knowing is not enough; we must apply. Willing is not enough; we must do.’

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