

Movements of Environmental Education in Myanmar

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1. Introduction

The quality of the environment and the quality of human life exist in dynamic equilibrium with the national ideals (culture and religion) national environmental policy and law, and national policies on education. Government policies on the environment and sustainable development are also becoming influential either as a source of strong policy direction and curriculum development or a basis for institutionalizing environmental education initiatives.¹

During the last two decades Environmental Education (EE) has become very popular among world nations. The trend of environmental protection has also expanded in various areas, including the fields of education. The underlying assumptions of these inclusions are that: (a) if people are aware of the need for and ways of protecting the environment, they will act to preserve it (b) schools should assume responsibility for educating about environmental protection, and (c) EE can be effective as a part of a school curriculum.² Such a way of thinking has been born in Myanmar society during this decade.

Nowadays, Myanmar has been faced with environmental degradation and the loss of biodiversity in some parts of the country. It has become necessary to make people aware of the present national environmental problems as well as of the world. It is the right time to develop a suitable EE in schools. To be able to introduce a reasonable EE programme in the future, it is necessary to study the present situation of EE in Myanmar. Because of these reasons, this paper attempts to clarify the current situation of EE in primary education either as in formal or non-formal education in Myanmar. One of the most important tasks in adopting a new educational programme is to know "how" and "to what extent" the intended educational work has already been carried out in reality. It is for this reason, I attempt to trace the environmental movements and EE programmes of the schools and society through the following procedure.

In order to present how EE has been initiated in Myanmar, the outlines of environmental trends of Myanmar will be summarised in the first step. EE is not still included as an academic subject of Middle school and High school curriculum although it has been undertaken in the form of co-curriculum activities. The active curriculum reforms have been carried out at the primary level these days. Therefore, the research will focus at the primary level. It will be viewed on the basis of current environmental movements of Myanmar at the second step. Thirdly, in order to be clear how environmental programmes of Myanmar are being carried out, it will be viewed from the point of environmental awareness of the citizens.

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2.Environmental Trends of Myanmar

The birth of EE in developing countries is connected with their development processes and other reasons. e.g. in the case of Thailand, the country was faced with natural resources degradation and income disparities among urban and rural citizens after remarkable economic success by the national development policies. So, the government made forces to place high priority of environmental protection and income redistribution to rural areas in its current national economic and social development plans. These situations are the main reasons for the birth of EE in Thailand.³

In the case of Vietnam, the birth of EE is connected with its long war of Resistance and an extremely irrational exploitation for construction and firewood in the post-war period. Consequently, severe deforestation, soil erosion and over exploitation of sea resources are threatening the ecosystem and lead to the exhaustion of genetic resources. Natural disasters like floods and droughts are more frequent and severe. The rapid population growth is a cause for the deforestation process. Pollution increasing together with the process of urbanisation, industrialisation and population growth. Because of these situations, Conservation of natural resources and environmental protection has become an important issue in Vietnam⁴

Like other developing countries, underdevelopment and poverty problems have caused Myanmar to face environmental degradation in the country. Therefore, Myanmar' s EE has been originated by her environmental problems such as; deforestation, loss of biological resources and pollution caused by urbanisation. In reality, a king of the last dynasty started the environmental consciousness of Myanmar. It is evident by the record of conservation of forest resources and biological diversity in 1856 by King Min Don.

Despite, Myanmar' s long history of consciousness over nature conservation, there was no central co-ordinating body for cross-sectoral co-ordination in environmental matter until early 1990. Myanmar' s environmental management pattern was directly carried out by the respective ministries without a central co-ordinating environmental institution. There was no institution responsible for comprehensive policy making, co-ordination and legislation.⁵

With the introduction of a market-oriented economic policy in 1988, the situation demanded the need for a central institution to ensure environmentally sound practice in industry and other economic activities. Therefore, the Government formed the National Commission for Environmental Affairs (NCEA) in February, 1990. The commission acts as the national focal point for environmental matters vis-á-vis other countries and international organisations, co-ordinates the work of various line ministries and departments and reports directly to the Cabinet.⁶

The government has announced its "National Environment Policy" on December 5th, 1994. "The wealth of a nation is its people, its cultural heritage, its environment and its natural resources. The objective of Myanmar' s environment policy is aimed at achieving harmony and valance between these through the integration of environmental considerations into the development process to enhance the quality of the life of all citizens. Every nation has the sovereign right to utilise its

natural resources in accordance with its environmental policies; but great care must be taken not to exceed its jurisdiction or infringe upon the interest of other nations. It is the responsibility of the State and every citizen to preserve its natural resources in the interest of present and future generation. Environmental protection should always be the primary objective in seeking development".(Notification No 26/94 dated 5 December 1994, Government of Union of Myanmar). Thus, it can guess the target of EE will be sustainable consumption of natural resources, environmental protection and development process of the country.

After the announcement of the Environmental Policy, NCEA has been trying to educate the people as much as it can. NCEA arouses the environmental awareness of the people through mass media. Its undertakings include holding of the World Environmental Day Celebration nation-wide. Exhibitions and talks, TV & radio programmes, photo & literacy competition of environment also motivate the public awareness. Environmental awareness efforts undertaken by NCEA also include holding of environmental workshops, seminars and conferences to promote environmental education among the government officials.

Under the guidance of NCEA and departmental co-ordination, public awareness and public participation can be promoted through non-formal education. Besides the national conservation programmes of poverty alleviation in the border areas, a nation-wide afforestation campaign, special greening projects and fuel-wood substitution, institution and legislation, international co-operation programmes and promotion of environmental awareness and education development have been carried out since Rio conference. For the sustainable development and environmental conservation of the nation, MYANMAR AGENDA 21 has been improved by NCEA in 1997. Myanmar Agenda 21 is designed on the basis of Global Agenda 21. It will be a framework for integrating environmental considerations in future national development plans as well as for sectoral and regional development programmes in the country. This Agenda 21 is also the expression of the political commitment of the government to sustainable development.⁷

The general aim of Myanmar Agenda 21 is "to facilitate the integration of environmental and sustainable development consideration into the daily life activities and decisions of individuals, households, communities, corporations, and the government". Thereafter, a specific aim of the agenda is "to facilitate the incorporation of environmental and sustainable development policy consideration into the decision-making and policy formulation process of government in the economic and social sectors".⁸ In Myanmar Agenda 21, the promotion of EE is included as one of the programme areas of the agenda.

3. Current Movements of Environmental Education in Myanmar

Here, current movements mean the recent changes concerning EE in the field of education. By the situations of environmental concerns of world nations and the influence of the recent national environmental movements, changes occur in the field of higher or basic education. According to the

main aim of this paper, to be able to point out how EE has been forced by environmental movements at the primary level, the changes at the primary education will be described.

(1) Primary Education

① Education for All Programme

In Myanmar, EE is more extensively carried out in non-formal education compared to formal education. Recently, in order to provide the needs of the country and promote EE, some non-formal education programmes are being carried out by the UNESCO, UNDP and UNICEF with co-ordination of Myanmar Education Research Bureau.(MERB), Departments of Basic Education (DBE) and NGOs. In the projects of "Education for All" EE is undertaken in the section of non-formal education. It is especially offered as a literacy education programme. This programme was started since 1996-97 in 30 townships. In 1997-98 it was extended to 80 townships and its activities are being completed in 110 townships at present. It is expected to be carried out in the whole country by the year 2000. EE is inculcated in different types as skill-based literacy for women and girls, and functional literacy programme for all of illiterates.

Table 1. Themes of EE in the Literacy Education

No.	Themes of EE in the Functional Literacy Programme	No.	Themes of EE in the Skills-based Literacy Programme
1.	Surroundings of our village	1.	The importance of water
2.	Preservation of Resources	2.	Good crops from good soil
3.	Finding solution for Water	3.	Compost of fertiliser
4.	Finding solution for Fuels-problem.	4.	Garden fruits
5.	Prevention from natural disasters	5.	Insects and betel leaves
6.	Our forests	6.	Selection of good stocks
7.	Village sectory diseases.	7.	Personal Hygiene
8.	Man & his environment.	8.	Family nutrition
9.	Our environment	9.	Prevention of communicable disease
		10.	Reproductive health
		11.	First aids
		12.	The danger of narcotic drugs.
		13.	Gardening trees and plants
		14.	Environmental sanitation and health.
		15.	A Clean Environment for good health.

(Myanmar Education Research Bureau)

As seen in Table 1, the curriculum is made up with the development and sustainable educational ideals. Culturing knowledge, skills and attitudes for solving environmental problems relating with daily living are the main aim of the programme. Population, energy problem, consumption of natural resources, soil preservation, health care, home economy etc are emphasised in the contents of the education programme.

In the literacy education, EE is involved as environmental issues of familiar environment and problems of daily life. Language ability, numerical skills, moral values, environmental ethics etc are stressed in the curriculum. More than environmental problems, health education, social education, poverty elevation, national spirits and vocational education are involved in the programme and it is like synthesis learning. This education plays from a very important role in improving the educational and social standard at the grassroots level.

②MYA/96/004 Project

Another non-formal education programme started to be carried out in 11 selected townships is "Improving Access of Children, Women and Men of Poorest Communities to Primary Education for All (MYA/96/004)" and it is sponsored by UNDP and undertaken by the activity of DBE. Here, MYA means Myanmar and the project number 004 that is started in 1996 for primary education for community development. In this programme, EE curriculum is designed systematically and constructed with a child-centred approach. In the first place, the curriculum materials and games will be developed and tested in selected schools. If this experiment is successful, those curriculum materials and games will be delivered and the education programme will be carried out in the formal school education of primary level as co-curriculum activities. This curriculum aims to get environmental awareness, environmental appreciation, environmental protection and love of nature etc. The Objectives of EE in the Project- MYA/96/004 are as below.

(a) to love and appreciate the environment

(b) to understand the environmental ideas and principles (i.e. understanding conservation of resources, giving up of waste materials, conservation of species, preparation for the future, inter-communication, environmental conservation and environmental changes).

(c) to know environment and environmental problems. (Felling and cutting of trees and forests, soil erosion, water pollution, land and air pollution, breaking the life circle and natural cycling process, poverty and greedy human action cause to environmental degradation etc.)

(d) to develop thinking abilities to solve environmental problems.

(e) to develop the environmental attitude and environmental ethics (i.e. having sense of responsibility, and taking the responsibility.)

(f) to develop learning, social and living skills. (i.e. language, science and mathematics learning, individual and community life, vocational skills etc.)⁹

Table 2. Curriculum themes in EE of MYA/96/004

No.	Themes of EE in the Project MYA/96/004
1.	Our Environment
2.	Development and circles
3.	Trees
4.	Grass and Insects
5.	Soil and Natural Fertilisers
6.	Garbage and Recycling
7.	Clean Water
8.	Clean Air
9.	Solving Environmental Problems.

UNDP (Yangon)

For each theme, there are detailed syllabus and learning procedures and activities are outlined for the teachers shown in Table 2. These EE curriculum guidelines will be offered in either pre-service or in-service teacher training courses for primary level. It is expected to bringing up environmentally conscious citizens in the near future. It is systematically developed for primary school level of any region of the nation. The basic knowledge, attitude and skills for environmental phenomena, eco-system and environmental systems are emphasised in the contents. Environmental understanding and basic environmental ethics are expected as the aims. Environmental health and sanitation are also stressed in the curriculum. Language skills, numerical and problem solving skills are hoped to be cultivated from this programme. It can be thought that this curriculum is constructed as a nature study. Outdoor education is important aspect in this curriculum implementation. Discovery learning will be the most effective way for instruction. Familiar environment of the children will be the learning atmosphere for the pupils where they will be learning about, for and in the environment.

③ EE in Formal Primary Education

Here, the EE movements in formal education will be presented. Before presentation of EE consideration, the educational reform in primary education and the changes of educational ideals will be summarised. For the purpose of improving the current curriculum to be all-round development, such social needs as peace and tranquillity, national consolidation, improving personal character and cultural status must be recognised. Considering the above ideology, a proposed curriculum has been designed.

A. Aims of Primary Education in the proposed primary curriculum.

- (a) to develop basic language skills and mathematics skills,
- (b) to become a responsible and civilised citizen,
- (c) to develop social justice to all communities,
- (d) to take care of personal and healthy-living relating to life skills.¹⁰

In this proposed curriculum, Basic Science, General Studies and Social Studies will be introduced in the upper-primary level. At lower primary level, merely general study will be added. The lower primary's General Studies includes Moral and Civics, Life skills and Aesthetic education. In upper primary, life skills and Aesthetic education will be taught in stead of general studies. Social Studies consist of Geography, History, Moral Education and Civics. In this curriculum, the bringing up of citizen is stressed more than the current curriculum. By learning Myanmar Language, Mathematics, English and Basic Science, it is expected mainly to develop cognitive domain. General Studies and Social Studies manifested the affective domain that deals with attitude, appreciation, habit and change of behaviour. In this curriculum, how EE is inculcated in the different subject areas will be expressed.

B. Aims of EE in Basic Science.

- (a) to understand and take care to personal hygiene and family health,
- (b) to love and appreciate the natural environment, conserve and improve the environment.
- (c) to get habits of effective investigation of the natural environment,
- (d) to understand the importance of natural resources for daily life and to what extent they are useful for human life.¹¹

Concerning the social studies curriculum, only geography and history are included in and the aims of the subjects are no so differently changed. However, the stress of teaching of social studies is to nurture the ability of cause and effect relationship and problem solving. The new idea of this curriculum is focused in the principle of inter-dependency of the people within a country, among countries and global society.

C. Aims of EE in Social Studies

- (a) to repulse the natural barriers and interference.
- (b) to understand the value of natural resources and to conserve those resources and to love and cherish their motherland.
- (c) to love and cherish the national and cultural heritage and to appreciate the importance of these heritage.¹²

D. EE in General Studies

- (a) to build up a healthy body for a healthy life.
- (b) to observe the natural and social phenomena of their environment by investigation.
- (c) to understand the relationship of human's living and natural phenomena.
- (d) to become interested in and appreciate the traditional festivals and cultural heritage. Then to understand the importance of co-operation within a community.¹³

(3) Pre-primary Education

In the proposed curriculum, pre-primary education is one of the important educational innovations in Myanmar. In this curriculum, there are six learning domains; Basic Skills, Physical development, Character development, Aesthetic development, Nation Spirit Building and Special Experiences. In

this curriculum, EE is involved in civics and moral education of Character development domain. Especially, EE is given as Special Experiences. The name of the subject will be “Environmental Study” and the objectives of teaching this are as follows.

Objectives of EE in Pre-primary Education of the Proposed Curriculum

- (a) to develop the five senses (scent, taste, vision, audio, touch(or)feeling) ,
- (b) to know the needs of air, water, land and food for health and living of human-beings.
- (c) to understand how the materials are useful.
- (d) to understand the nature of birds and animals,
- (e) to develop the genes (inheritance character) and hobby (interest) of the children by observing their environment.¹⁴

②Contents of the syllabus

With the purpose of nurturing good citizens in the future and making a happy childhood, pre-primary education has begun in Myanmar and EE is introduced like Table 3. To enhance physical, mental and social development, the pre-primary curriculum is made up with Myanmar language, English, Arithmetic, Physical education, civics, moral education, music, fine arts, national values and environmental study. Learning about the environment is the main aim of EE in this level. The nearest environment and first hand experiences of the children are the centre of the curriculum.

Love of nature, interest in the environment, enjoying nature by playing are the expected learning outcomes for the children. The personality of the individuals will be able to nurture from this stage by making them discovery learning and learning in environment.

Table 3. Content of EE in Pre-primary level

No.	Titles of the themes
1.	Perceptible materials (by children)
2.	Scents
3.	Different taste of foods
4.	Different sounds
5.	Various materials felt by the children
6.	Vision and light
7.	Hearing and sounds
8.	Needs of air, water, land and foods
9.	Heat and coldness
10.	Weight of matter
11.	Motion of matter
12.	Shaping with paper
13.	Observing the natural environment(Mountains, Land, Rivers, Lakes, Living things etc)
14.	Field trips.

(Ministry of Education, Union of Myanmar)

4. The Specificity of Environmental Education of Myanmar

EE leads to environmental awareness which, in turn, stimulates environmentally protective behaviour. Numerous studies indicate that there is a positive relationship between education and participation in outdoor recreation. Individuals with higher grades, more years of schooling, and college experience are likely to participate in almost all forms of outdoor recreation with greater frequency than those with modest educational attainments. Similarly, one might expect those with a high environmental awareness, including awareness to participate relatively often. So, environmental awareness including awareness of recreation opportunities, stimulates participation which itself generates greater awareness and increased participation.¹⁵ (Geoffery Wall, 1976) Accordingly, the level of public participation in environmental programmes will relate with the educational background of each individual and the ways of educating the public. In the previous research how the effectiveness of environmental programmes is related with public participation are pointed like the following.

Public awareness, education and public participation play a crucial role in protecting the environment and promoting sustainable development. Effective implementation of the environmental programmes and activities will depend to a large degree on the commitment and involvement of the public that individuals, groups, and organisations and local communities comprising youth, women and indigenous people. (Yin Yin Lay). In Myanmar, a unique study has been developed at the primary level, which makes use of outdoor activities as a means of developing environmental sensitivity and a love for nature. "Patwinkyin" or "Surroundings" programme was developed in Myanmar in the early 1980s.¹⁶ During these days, this consideration becomes popular in the field of education again.

Environmental programmes will not be effective without public being aware of the importance of environmental conservation and without their active participation.¹⁷ (Khin Khin Myint Oo, 1996). Through EE and communication, environmental awareness to foster public participation in environmental protection has been going on.¹⁸ (Mi Mi Kyi)

Therefore, the effectiveness of EE can be traced by how can it stimulate public participation. To be able to design a future EE curriculum for an intended group it is necessary to review to what extent the present EE is meaningful to the respective groups. To know the meaningfulness of the present EE programme, it should be viewed how it has been born, how it is being carried out to get the public awareness and their participation and how it can call the involvement of the society. How environmental programmes of Myanmar can stimulate the public participation in environmental conservation and improving activities can be viewed like the following.

Myanmar's EE has been originated by the result of the real condition of the environment and the influence of its degradation to the people's daily living. The environmental trends and movements forced the birth of EE in Myanmar. In Myanmar Agenda 21, the importance of EE is directed like this. "The ability of a country to implement sustainable development is determined by the

knowledge of its people and its institutions. EE and awareness at all levels of government and society produces a strong impetus for sustainable development. It helps individuals to understand environmental problems and behaviours and respond to them in a responsible manner.”¹⁹ This statement points out the basic environmental philosophy of Myanmar’s EE. By this ideology, the overall aim of EE in Myanmar can be thought of sustainable development of the nation and the earth.

To meet the demands of the time and conditions, such a way of thinking occurs in the field of education. “The goals of sustainable development can be met through public education, awareness creation, information dissemination and public participation”.²⁰ By this ideology, EE programmes are introduced in Literacy education, community development education, primary school education, pre-primary education of Myanmar to attract public participation.

Public participation in environmental conservation and environmental improvement activities are of paramount importance in an EE programme of a nation. In Myanmar Agenda 21, the importance of public participation in national sustainable development is expressed like this. “One of the prerequisites for the achievement of sustainable development is public participation in decision-making. Individuals, groups and organisations should participate in making decisions, which potentially affect them. Active involvement and participation of all the stake-holders such as local communities, non-governmental organisations and business investors is also necessary to provide funding for physical and human resource support.”²¹

Therefore, non-formal education programmes of sectors and departments show this consideration. Moreover, most of the EE programmes of primary level community education is stressed in familiar environmental issues that related to the economic and basic needs of daily life of the people. Hence, it can be expected to support the people’s consciousness of the importance of natural environment for the survival of living things. Another good point of the programme is that it is involved in health promoting aspects and solving social problems such as drugs and AIDS. Such slogans have become popular among the people such as; let’s conserve mangrove forests for food security, conserve environment in line with the Buddha’s teaching, let’s use husk stoves, let’s plant more trees, let’s transmit our heritage for the new generation by forest conservation etc.

In the basic education curriculum, there are many activities for participating in the national environmental conservation movements such as “greening” the environment, school gardening and plantation programmes, afforestation plan, environmental health and sanitation programmes etc. For the purpose of cultivating new environmentally conscious citizens, changes in educational ideals and curriculum (discussed above) are being carried out recently. Suitable EE curriculum contents could be introduced in academic subjects soon. Through the guidance and activities of NCEA, it can be said that at the national level, there is a growing awareness to ensure a good quality of life for the present and future generations. It can be said EE has been offered as a lifelong and continuing education in society. The EE programmes carried out in Myanmar have been effective within its limitation.

EE will be effective, if it is undertaken with the co-operation of local community, home and

school. This principle should be adopted well in implementation of school curriculum for continuing the student's good nature and ability acquired in school to their adult life. This consideration should be adopted in Myanmar schools. The present literacy and community development programmes are trying to train this principle at the grass-root level.

5. Conclusion

The introductions of EE programmes in primary level of Myanmar are highly connected with the overall educational ideal of the nation. About 20 years ago, the subject called "Patwinkyin" or "Surroundings" was included as curriculum activities with the aim of developing the environmental sensitivity and love of nature in the children. Adoption of this subject in school is mainly concerned with development of the children's aesthetic and moral standard. In this academic year (1998), it is introduced again in the curriculum. This time, the occurrence of this subject is mainly concerned with the educational ideal of bringing up of all round developed citizens. The point that is clear by this paper is the re-introducing EE in primary level education is to supply the demands of the sustainable development of the nation and the world.

It can conclude that EE of current primary level is strongly forced by the current environmental issues and current environmental movements of the nation. EE is more widely and actively undertaken in the societal education than in school education. In the society's education, EE is carried out in literacy education and community development education. Consumer education and vocational education are stressed in these programmes. In formal education, EE is offered either as co-curriculum activities or academic subjects. It is a part of science, social studies, moral, civics, life skills and aesthetic education. The expectation of these EE programmes is bringing up of the dutiful citizens for sustainable development.

Presently, EE is only offered in the primary level. So, the range of EE should be widened to middle and high school education urgently. In order to improve the environmental ethics of the public, EE programmes for all of the citizens needs to be developed more than present situation. The longer year of schooling is one of the most important factors to encourage the active participation more frequently in environmental programmes. Hence, compulsory education should be offered in Myanmar schools like Japan.

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