

# PROMOTING ENVIRONMENTAL EDUCATION IN MALAYSIAN PRESCHOOLS

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## ABSTRACT

In preserving environment, the Malaysian society might have reached the nominal and functional level but still has a long way to reach the operational stage. Thus it is necessary to change people's ecological, economic and social perceptions concerning the environment. Environmental education based on life experiences should begin during the very early years of life. Such experiences play a critical role in shaping life-long attitudes, values, and patterns of behavior toward natural environments. Preschool is part of Malaysia's education system. In order to enrich the student's potential in all aspects of development; inculcate the spirit of love for the environment; instill awareness about the importance of environmental stewardship through fun activities; and fostering feelings of responsibility to protect nature among the children from their early stage of life; promoting environmental education in Malaysian preschools is deemed necessary.

**Keywords:** environmental education, life-long attitude, enrich, potential, instill awareness.

## INTRODUCTION

The quest of mankind to pursue economic growth without minimizing its negative impact on the environment had contributed to environmental problems. The conflict between development and environment had always been a matter of concern. The report of the Brandt Commission (1977) which was the first major independent global panel to examine the connection between the environment and international development noted that:

*“important harm to the environment and depletion of scarce natural resources is occurring in every nation of the world, damaging soil, sea, and air. The biosphere is our common heritage and must be preserved by cooperation, otherwise life itself could be threatened”*

Therefore, the issue of striking the right balance between development and minimizing the damage to the environment becomes one of the greatest challenges to all nations. As for Malaysia, it is developing rapidly to achieve an industrial country status by the year 2020. Factories, highways, residential areas, hydroelectric dams and other infrastructures are constructed throughout the country. All these activities have an impact on the environment. The cleared forest and the industries that discharge effluents cause erosion, pollute the air and the water system, resulting in siltation in rivers. Issues and problems pertaining to the environment have been debated. Therefore, it is necessary to change people's ecological, economic and social perceptions concerning the environment.

In order to integrate the concept of sustainable development in Malaysian society, and translate the knowledge into actions, to play an active role in the creation of an ecologically compatible, and economically efficient society, education plays an important role. Education makes people aware of environmentally harmful acts which are prohibited. This paper discusses the promotion of environmental education in Malaysian preschools. It deals with environmental commitment and the Malaysian scenario, a view on children and environmental education, theory and research on preschool's environmental education and the impact of environmental education in Malaysian preschools.

## **1.0 Environmental Commitment and The Malaysian Scenario**

In a report by the Ministry of Science, Technology and Environment presented at the United Nations Framework Convention on Climate Change in 2000, the following assertions were given:

- concern over environmental issues among the general public in Malaysia varies widely;
- attitudes are also largely influenced by mass media coverage of environmental matters;
- in spite of the heightened awareness because of the haze and El-Nino Phenomenon of 1997 and 1998, many people lack understanding of the delicate interrelationship between man, and all species of animals and plants; and
- fewer still have knowledge about the various institutional initiatives being taken at the national, regional, international, multi-lateral or global level to improve the environment.

The Malaysian Environment Quality Report (2010) and research conducted by Rahmalan Bin Ahamed (2012) showed that to date not many Malaysians are oriented to translate their knowledge into actions, even though in general they know and realize that the environment needs to be taken care of. This is crucial since the true indicator of environmental commitment is the actions taken by individuals, community and society.

According to the Environmental Performance Index Report which was done by Yale (YCELP) and Columbia University (CIESIN), Malaysia was ranked number 9 of the top 30 countries with the score of 83.3 in the year 2006. However, Malaysia's position of ranking had declined and was not in the top 30 list in the year 2010 (YCELP & CIESIN, 2010). Malaysia ranked 54 out of 163 countries under the Environment Performance Index (Economic Planning Unit, 2010; Ramalan Bin Ahamed, 2012).

In the early 1970s, the environment began to receive more attention in Malaysia. The Department of Environment (DOE) was established in 1975 at the national level in order to enforce the Environment Quality Act (EQA), 1974. The EQA is the main legislation to address environmental problems and issues in the country. Its main aim is to prevent, abate and control pollution. Under this Act, there are various subsidiary regulations and orders. In fact, rules and regulations are not the only means in dealing with environmental problems. Most important is the preventive method which emphasizes on voluntary actions through implementation of environmental standards (Sham Sani, 1997). Thus a strong environmental awareness among individuals is very much needed. The issue is, after so many years, has the Malaysian society attained the standard of an environmental literate society?

Some of the research findings pertaining to the issue will give us some insights regarding the current situation in Malaysia. The findings of a study conducted by the Department of Environment and Frank & Small Association in 1986 about the level of environment awareness among the general public were rather unimpressive - environmental pollution was ranked at seven out of eight items of important public issues, among the respondents and only 46% of them knew the actual meaning of 'environmental pollution' and 'air pollution'. Nevertheless, 64% of the respondents who were more involved in pollution preferred not to take any action. In addition, the willingness to pay for pollution prevention was very low, where 85% of them disagreed to pay any extra costs for the expenses (Department of Environment, 1986).

Apart from that, the Department of Environment conducted another study in 1996. The survey showed that almost 90% of Malaysians were aware of environmental issues and their impacts, and 80% of respondents were concerned with the environmental impacts on the economy. The majority of the respondents preferred stricter environmental control. In fact, the electronic as well as the printed media played an important role in creating environmental awareness among Malaysians (Department of Environment, 1997).

In 1998, the Malaysian Science & Technology Information Centre (MASTIC) also carried out another study. The results revealed that environmental pollution was first in the list of science and technology issues known to the public. The respondents were more aware of environmental issues such as haze, flash flood and hazardous waste dumping compared to issues like ozone depletion, acid rain and global warming. The respondents also agreed that they had obtained most of the environmental information from the electronic and printed media like television, magazines and newspapers (MASTIC, 1998).

The CEO of *Alam Flora Sdn. Bhd.* commented on the behavior of the Malaysian society in managing domestic waste and the pitiable response to recycling efforts by the local authorities (Massa, February, 2003). In fact, the slipshod maintenance culture in Malaysian society – from public toilets, government offices to museums and airports is related to the society's attitude and behavior (New Sunday Times, 28 Sept. 2003). In short, the Malaysian society might have reached the nominal and functional level but still has a long way to reach the operational stage.

As mentioned earlier, development brings about environment degradation, and the conflict between development and environment has always been a matter of concern. It is not an excuse not to protect the environment as if it were the sole responsibility of the government to look after environmental protection. The greatest challenge is the attitude and behavior of the Malaysian society.

In fact, Malaysia had shown serious commitment towards this end. At the national level, sustainable development is addressed in the Development Plans. The Third Malaysia Plan (1976-1980) was the first to address the environment in the context of development. This seriousness coincided with the establishment of the Ministry of Science, Technology and the Department of Environment during the period of the Plan. The Ministry had been restructured to strengthen its role in the conservation of natural resources and the protection of the environment. The Ministry had thus been renamed the Ministry of Natural Resources and Environment in April 2004.

The Seventh Malaysia Plan (1996 – 2000) asserted Malaysia's commitment towards enhancing environment awareness so as to promote a friendly consumption habit and environmental friendly lifestyle throughout the nation. This Plan stated that:

“The relevant ministries will develop policies, strategies and programs on environment education, awareness and training. The imparting of knowledge and instilling of awareness is expected to help Malaysians adopt a more environment-friendly and consumption habit. Environmental ethics and a sense of responsibility will be inculcated, and the population will be encouraged to take an active role in the protection and maintenance of the environment. The private sector, non-governmental organizations, and the media will be encouraged to play a bigger role to complement the government's efforts in this endeavor.”

In addition, in order to promote economic, social and cultural progress through environmentally sound and sustainable development, the Seventh Malaysia Plan also proposed the National Policy on the environment. The objectives of this policy were:

to achieve a clean, safe, healthy and productive environment for both the present and future generation,  
to conserve the country's unique natural resources and diverse cultural heritage with effective participation by all,  
to promote lifestyle and patterns of consumption and production consistent with the principles of sustainable development.

This National Policy on the environment was approved by the Malaysian Cabinet within the period of Eighth Malaysia Plan (Ministry of Science, Technology & Environment, Malaysia 2002). Under the Eighth Malaysia Plan, the integration of the economic, social and environmental dimensions of development was strengthened to promote sustainable development. The government implemented measures to improve the quality of life; promote sustainable consumption and production; protect the environment; sustainably manage the natural resource base; and enhance human, institutional and infrastructure capacity.

In the Tenth Malaysia Plan (The Economic Planning Unit, 2010) Chapter 6 regarding “Building an Environment that will Enhance Quality of Life”, it is stated that,

“From our coastal areas and rivers, our islands and highlands, our forests and the air that we breathe, healthy ecosystems are a key determinant of our physical and economic well-being. Moving forward, Malaysia's agenda will be one of protecting the environmental quality of life, caring for the planet, while harnessing economic value from the process. In achieving this, among others, the Government will be guided by sustainable production practices to decouple economic growth from environmental degradation.” (p. 320)

All in all, in order to achieve the objective of protecting the environment, the government has introduced several policies, laws and regulations to set the national agenda on environmental protection. Therefore, there is a need for continuous public education to influence behavior. Appropriate remedial actions need to be taken, or the future of Malaysian society appears gloomy and our children may not be able to enjoy the same quality of life as we do. Thus, promoting

environmental education from the early childhood and preschool years is deemed necessary in Malaysia.

## **2.0 A View on Children and Environmental Education**

Today's children are facing a rapidly changing society with new challenges. They are citizens in their own lives with rights of their own (UN, 1989). It is in early childhood that children often experience the greatest environmental challenges. During early childhood, values, attitudes, behaviors and skills are acquired. Research showed that even very young children are capable of sophisticated thinking in relation to socio environmental issues, therefore environmental education has to start (Pramling-Samuelsson & Kaga, 2008).

As stated in the United Nations Convention on the Rights of the Child: 'children have the right to be involved and to be heard in matters that are affecting them' (UNCRC, 1989). In addition, in Agenda 21, the United Nations agreement for global sustainable development from Rio 1992, children are recognized as important participants in the shaping of a sustainable future.

"Children not only will inherit the responsibility of looking after the Earth, but in many developing countries they comprise nearly half the population. The specific interests of children need to be taken fully into account in the participatory process on environment and development in order to safeguard the future sustainability of any actions taken to improve the environment".

(Agenda 21, 1992, chapter 25:12)

## **2.1 Theory and Research on Preschool's Environmental Education**

Education is the key factor in ensuring sustainable development (Lakatos, 2002). It is the process of education that leads people to be more sensitive to environmental issues. In addition, learning is an endless process, having innumerable forms in human life outside the school system. According to Vygotsky's socio-cultural theory, learning is seen as a development influencing ways of passing on the child the historical moulded cultural factors through interaction (Valsiner, 1987). Vygotsky's 'social situation of development' assume that a social situation will determine the path which the child will follow in the course of development and learning. Thus, the changes of the environment lead to psychological changes (Vygotsky, 1930; 1978).

From the perspectives of Vygotsky, the zone of proximal development (ZPD) can be observed in a child's learning. From this point of view, good learning environment offers a socially supported environment, where teaching specific learning promotes a more cognitive development that makes it possible to apply the acquired knowledge. Vygotsky's theory is clearly useful in handling the problems of sustainable development and environmental education (Davidova & Kokina, 2002). Vygotsky's theory about learning is moulded from the products of historical evolution. Thus, consciousness, responsibility and actions are important in education and in life. Larson (1999) comments that changing the culture of an organization does not cause momentous changes, but 'small wins' that have the capacity to larger changes in the future. In other words for preschoolers or children to learn about responsibility towards environment, they need to be provided with a socially supported environment whereby they can interact positively with others concerning environmental issues. In this way, the children's sentiment towards environment will be ingrained in them.

Studies showed that children growing up in urban areas tend to develop unfounded fears and feelings of disgust in relation to natural objects (Bixler, Carlisle, Hammitt & Floyd, 1994). Children must develop a sense of respect and care for the natural environment during the first few years of life or they might be at risk of never developing positive attitudes and feelings toward the natural environment, which cannot achieve a competency on the environmental literacy continuum (Stapp, 1978; Disinger & Roth, 1992; Tilbury, 1994; Wilson, 1994). Carson (1956) was one of the first to articulate the importance of environmental education in preschool:

“if a child is to keep alive his inborn sense of wonder...he needs the companionship of at least one adult who can share it, rediscovering with him the joy, excitement and mystery of the world we live in.” (p.45)

Children develop an understanding of their world as they interact with and explore the places and spaces that have meaning for them. As they wonder, investigate, discover their environments, they are learning about the interdependence of people and other living and non-living things. By caring for and learning about living things, children develop an awareness of change and growth, and recognise the intrinsic value of the natural environment and their role in sustaining it. They come to understand that they are part of a much larger world.

Through their investigative and collaborative explorations, children engage in inquiry and problem solving that support their ability to consider possible, probable and preferable futures. Positive, rewarding learning about their world builds an attitude of shared responsibility.

Embracing new ideas and changing our environmental practices can be a daunting task. However, small changes in our ways of thinking and making conscious decisions regarding our choices can, and will make a difference in the long term. Children are the future. It is hoped that the preschoolers are exposed to environmental education and practise sustainable behaviors on a daily basis, to enable them to make decisions after considering their impact on the environment. They will take these skills with them when they leave preschool, and continue to implement them in their daily lives. They will have an impact on their families and the wider community.

## **2.2 The Extent of Environmental Education in Malaysian Preschools**

Environmental education comprises environmental protection, the maintenance of the ecosystem, the efficient utilization of natural resources, and most importantly, responsibility among members of the society.

According to Mac Gregor (2003),

“environmental education is a learning process that increases people’s knowledge and awareness about the environment and associated challenges, develops the necessary skills and expertise to address the challenges, and fosters attitudes, motivations, and commitments to make informed decisions and take responsible actions.” (p. 28).

The United Nations designated the period 2005 to 2014 as the decade of “Education for Sustainable Development”. The summit promises a better future for the earth, and the main target

was to promote action (United Nations Department of Economic and Social Affairs, 2002). Therefore, the true tests of achievements were the actions taken afterward.

In the quest to achieve sustainable development, humanity's best hope and most effective means is education. As mentioned in Chapter 36 of Agenda 21:

'Education, including formal education, public awareness and training, should be recognized as a process by which human beings and societies can reach their fullest potential. Education is critical for achieving environmental and ethical awareness, values and attitudes, skills and behavior consistent with sustainable development and for effective public participation in decision making. Both formal and non-formal education are indispensable to changing people's attitude so that they have the capacity to assess and address their sustainable development concerns'

Environmental education for the early years should be based on a sense of wonder and the joy of discovery. According to Wilson A. R (1994), in order for the Environmental Education (EE) to be successful, preschoolers should be exposed to:

- simple experiences as they learn best through familiar experiences,
- positive outdoor experiences as they need to be immersed in outdoor environment to learn about it
- 'experiencing' rather than 'teaching' because children learn through discovery and self-initiated activities

Besides all the strategies above, a teacher should show a personal interest and enjoy the environment, to be a model to the children to respect and love the environment. Environmental education for sustainability also involves applying knowledge and understanding, skills, attitudes and values in active and informed participation to address environmental issues, problems and opportunities (Commonwealth of Australia, 2005). This includes: a willingness to examine and change personal lifestyles to secure a sustainable future; the ability to identify, investigate, evaluate and undertake appropriate action to maintain, protect and enhance local and global environments; a willingness to challenge preconceived ideas, accept change and acknowledge uncertainty; and the ability to work cooperatively and in partnership with others.

Environmental education based on life experiences should begin during the very earliest years of life. Such experiences play a critical role in shaping life-long attitudes, values, and patterns of behavior toward natural environments. Young children learn about the environment by interacting with it, educators and other adults must attend to the frequency, nature, and quality of child-environment interactions during the early years (Tilbury, 1994; Wilson, 1994). However, many Malaysian young children have limited opportunities for such experiences.

Many young children in Malaysia, especially those from the urban areas, spend most of their time in settings and activities that keep them essentially isolated from direct contact with the natural world. Recreation tends to be indoors (e.g., watching TV, playing computer games); transportation tends to be by car or other motor vehicle versus walking; and daycare programs - where many children spend most of their waking hours - tend to be much more oriented toward

the classroom than outdoors. The result is that many young children are at risk of never developing positive attitudes and feelings toward the natural environment or achieving a healthy degree of competency on the environmental literacy continuum as outlined by Disinger and Roth (1992). Attention to environmental education at the early childhood level is proposed as a partial antidote to this concern.

In fact, “Environmental Education across the Curriculum” has been introduced in Malaysian primary and secondary schools since 1998. Environmental Education (EE) is taught across the subject board and integrated into each subject, from Mathematics to Religious Studies. However, compared to other subjects, this approach appears peripheral, generally not coordinated and not effectively implemented.

In addition, most activities carried out in Malaysian preschools are indoors, teacher centered rather than pupil centered. Environmental topics through fusion of themes as found in Physical World and through the Science and Technology Pillar (*Tunjang Sains dan Teknologi*) and Humanities (*Tunjang Kemanusiaan*) are still limited in scope and quantity. Thus, the extent of the Malaysian National Standard-based Preschool Curriculum 2010 (*Kurikulum Standard Prasekolah Kebangsaan or KSPK 2010*) in playing a critical role in shaping life-long attitudes, values, and patterns of behavior toward natural environment is a major concern.

### **2.3 The Need for Environmental Education in Malaysian Preschools**

The founder of early childhood education Friedrich Froebel began the first kindergarten “Children’s Garden” in the nineteenth century. Froebel believed that children should grow in harmony with nature. In addition, Gardner (1999) also believed that opportunities should be provided for children to experience peace, joy and fascination with nature because these emotions undergird the children in developing knowledge, skills and dispositions.

Creating a preschool situation dedicated to ecological sustainability is primarily about fostering children’s understanding of their relationship with the world and the impact of their actions on the environment. While educating the children in sustainable thinking and practices, these children will influence their parents and the wider community.

One of the hardest things to change is an adult’s attitude, which is fundamentally shaped by the ethical and moral values he/she had imbibed in childhood. Children who respect the environment feel an emotional attachment to the natural world, and deeply understand the link between themselves and nature; will become environmentally literate citizen. Children who are close to nature, their spirit also nurtured by nature that they discover through ‘sources of human sensibility’ (Wilson, 1992).

The early childhood year is a significant time for children to begin to acquire environmental values and dispositions. Positive interaction with the natural environment is an important part of healthy child development. These developments include a sense of wonder, appreciation for the beauty and mystery of the natural world, opportunities to experience the joy of closeness to nature and respect for other creatures, and the world around them (Carson, 1956; Cobb, 1977; Crompton & Sellar, 1981; Miles, 1986/87; Patridge, 1974; Sebba, 1991; Wilson, 1994).

The need for environmental education has been recognized. It can only be implemented one step at a time as it is a long process. Serious recognition needs to be given to the early childhood education sector in order to get 'the ball rolling' towards achieving a sustainable environment. Therefore, promoting environmental education in the Malaysian preschools is a top priority and a prerequisite. More attention will have to be given to efforts to improve the quality of early childhood education in the context of environmental sustainability, such as classroom practices, curriculum and pedagogy and early childhood teacher education. It must include opportunities for children to engage in intellectual dialogue regarding sustainability, and in concrete actions in favor of the environment. In addition, it should incorporate learning to be compassionate and accept differences, and fairness as the world is increasingly interdependent and inter-connected. Instead of talking about the 3Rs (reading, writing and arithmetic), one should refer to the 7Rs for education for sustainable development (reduce, reuse, recycle, respect, repair, reflect and refuse).

### **3.0 Conclusion**

Everyone has a role in the process of deciding on the environment that affects all of us. Nations must work towards solutions to protect the integrity of the global environmental and developmental system. We all need to make sure that the systems we live by are not only for this generation, but all generations that follow (Commonwealth of Australia, 2005). We should ensure that environmental assets and ecological resources are managed sustainably, so that present development needs are met without compromising the future. It is our duty to safeguard it for our future generations.

Education plays an important role in motivating and empowering people to participate in the protection of the environment. Environment education should be taken more seriously, especially in promoting good values among the citizens. Formal environmental education has a profound and permanent effect, and is more appropriate for instilling the 'in, for and about' components of the environment in schools (Fien, 1993). School children are prone to oblige to what their teachers taught, they will obey and follow what their teachers say.

Preschool is part of Malaysia's education system. In order to enrich the student's potential in all aspects of development; inculcate the spirit of love in the environment; instill awareness about the importance of environmental stewardship through fun activities; and fostering feelings of responsibility to protect nature among the children from their early stage of life; promoting environmental education in Malaysian preschools is necessary.

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