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**Title of the Paper: A Malaysian Initiative in Embedding Sustainability:
Sustainable School - An Environment Award**

Category: Embedding Sustainability

A central mechanism in embedding sustainability is education. Once people embrace sustainability in their daily lives sustainable development becomes achievable. This paper is about a collaboration between the Malaysian Department of Environment (DoE) in the Ministry of Natural Resources and Environment; the Ministry of Education, Malaysia, and Institute for Environment and Development (LESTARI), The National University of Malaysia providing the conceptual and technical support. The main argument is that if we can make school children aware of the importance of protecting the environment (and hence the relations to the other two pillars of sustainable development), they can be agents promoting sustainable development in the country and elsewhere. The Sustainable School - Environment Award initiative is designed to recognize the achievements of primary and secondary schools in Malaysia in a particular year based on five pillars of environmental related activities, namely the curriculum, the co-curriculum (extra-curricular), the school administration of environmental activities, the greening programs and the special eco-projects. The Environment Award is open to all the primary and secondary schools in Malaysia. Feedbacks from the evaluators at both the State level assessment and at the Federal level, as well as the data from the analyses of the 'school brief' highlight the following observations. First, there has been a steady increase in the number of participation from the primary and secondary schools over the three Environment Award sessions. Second, schools have enhanced their environmental activities to demonstrate their sustainability. Third, environmental activities in the schools are functional in that they are being used to complement the class room learning. Fourth, schools have created a more conducive surrounding for academic activities. Finally, there are noticeable spillover effects of activities in the schools to the surrounding communities.

Key words: sustainable development, sustainability, education for sustainable development, Environment Award, primary and secondary schools.

INTRODUCTION

A basic mechanism in embedding sustainability is education. Through education society is made aware of the need to conserve resources and protect the environment while seeking economic growth. Seeking such a 'balance' between environmental conservation, economic growth and social development is the basic thinking underlying the sustainable development concept (WCED 1987). In the process of developing sustainably we need to make people understand and act in accordance with the spirit of sustainable development. Once the thinking and action taken by the people become habitual, in the long run these habits will turn into a culture of sustainable development (Komiyama & Takeuchi 2006). Through education the society inculcates awareness of development with the environment, slowly cultivate interests and commitments of people to participate in the agenda for sustainable development.

Since the Rio Earth Summit in 1992 The United Nations has emphasized among other things, the importance of education in achieving sustainable development. More recently UNESCO made a declaration known as the Decade of Education for Sustainable Development covering the period from January 2005 to December 2014. It is clear that the United Nations demands a concerted effort to expand environmental education around the world to realize sustainable development (McCormick et al., 2005). This call is inline with Chapter 36 of Agenda 21 of the Rio 1992 and reaffirmed again at the meeting in Johannesburg in the year 2002.

Since then many countries have embarked on education for sustainable development through the school systems. Hence, eco-school programs have been reported in New Zealand, Britain, Australia and Europe, just to name a few countries (Ministry of Education New Zealand 2004; Department of Environment and Heritage, Australia 2005; Department of Education and Skills, United Kingdom 2006; Eulefeld 1995). The program in each of the countries has its own specific objectives, targets and focus. For example, the Enviroschools program in New Zealand is meant to enhance existing environmental education while the Green School Award in Sweden is to support the teaching and learning about sustainable development. Another example is the Green School project in China which is broader in scope than just engaging school children (Henderson & Tilbury 2004).

Where do this process of embedding sustainability through education begins in Malaysia? The Malaysian Department of Environment (DoE) in the Ministry of Natural Resources and Environment; the Ministry of Education, Malaysia, and Institute for Environment and Development (LESTARI), The National University of Malaysia (from hereforth known as the Partners) believe that it begins at school, both at the primary and secondary levels. It is in the school children that we pin our hope for a more caring society today and generations to come. The Malaysian school statistics show that about 500 thousand pupils are leaving the school system after finishing their secondary education, and about that number enters the primary level every year. Over a period of five years for example the country will have about 5,000 budding environmental 'ambassadors' circulating among the people throughout the country, spreading words about environmental conservation and protection while the government is pursuing robust strategies of economic growth to pay for social development.

This paper will discuss the nature of the current Malaysian school initiative for tracking sustainable development. Its focus is on school environmental activities other than the curriculum to embed sustainability. Indirectly this paper reports a collaborative initiative between the Department of Environment, Malaysia in the Ministry of Natural Resources and Environment, the Co-curriculum Division of the Ministry of Education and our Institute for Environment and Development, National University of Malaysia providing the conceptual and technical support on an educational program to embed sustainability in the Malaysian society. (The three Institutions are referred to as the Partners for the rest of the paper).

The gist of the initiative is to develop awareness about sustainability to achieve sustainable development among the school pupils who are future drivers and stakeholders of Malaysia's development. With such awareness, development activities in the future will be more balanced between the pursuit for fast economic growth, vibrant social development and environmental conservation. The pupils who have completed their school education are not only more informed about sustainable development but have also participated to realize the goal. More of them will join the rank in subsequent years, spreading the ethics of good human-environment relations, and showcase activities in harmony with their environment. In time they will be part of the growing civil society responsible to people and nature (Harvey 2000).

THE MALAYSIAN INITIATIVE: SUSTAINABLE SCHOOL – ENVIRONMENT AWARD

To get the Malaysian schools to participate, there should be a competition at the end of which an award is given to the overall winner. Such a strategy would make it attractive for schools in the country to take part. Malaysian schools have become accustomed to the idea of competing in environment-related competitions organized by the Ministry of Education and by the non-governmental organizations such as the World Wildlife Federation. Responses to such competitions have been encouraging. The entire school community- from the Principal down to the gardeners and general cleaners working together to win the competition. However, in the process of preparing for the competition the school community would evolve ideas about collaborative works especially between teachers and pupils, pupils and their parents, and so on in maintaining the school compound clean, green and attractive. The hidden value of respect to environment and to fellow human would emerge in the school community.

The Award is a holistic and integrated approach in the sense that the program acts like an umbrella for all environment related activities organized by the schools. All of the environment activities in the school are organized into five pillars; they are the school curriculum, co-curriculum, the school's administering of environmental issues, greening programs and special ecological project(s). Each pillar comprises several criteria; In turn each criteria has a number of sub-criteria (Table 1 below); All the sub-criteria are used to evaluate the schools for the award. The school curriculum is however, not assessed since all schools in the country have the same sets of curriculum for all school subjects. To assess the curriculum is tantamount to assessing the pedagogic aspects of teaching which is beyond the scope of the program. But the impacts of the curriculum and the pedagogic inputs from teachers should reveal themselves in the other four pillars.

The competition is open to all 10,000 primary and secondary schools in the country. The primary schools are grouped into the primary school pool and likewise the secondary schools in the secondary school pool. Any school entering the Award has to submit a 50 page- 'school brief' highlighting activities in all four pillars including activities with the parent-teacher associations.

The Evaluation Process for the Award

The evaluation process was conducted by an independent panel of evaluators. These evaluators were appointed by the Department of Environment (DoE) Malaysia from volunteers with diverse affiliations, academic backgrounds and interests in aspects of the environment but all have a common commitment to see Malaysia one day having healthy and sustainable living in an impeccable environment. They represent the non-governmental organizations, the business and industry groups, government agencies and the academia. The evaluators are given a series of training weeks before the actual evaluation work was carried out. The training was done by the Secretariat at the Department of Environment with speakers from the Department of Environment and the Institute for Environment and Development. This training is essential to get a standard marking.

The evaluators from the State and Federal level (about 90) are gathered in a hotel away from the DoE for an intensive briefing and discussions on the methods and marking procedures of both the school brief and the school visit. Then another day is spent on a visit to a school for the second part of the training. They do a mock-up assessment followed by discussions on the marking.

Each evaluators is to give his own score but at the end of the day group leader is to submit one consensus mark for each school evaluated to the secretariat at the Department of Environment. Each evaluator is to give a score within the range of 1, being the lowest to 5 the highest. To each of the sub-criteria is shown in the Table 1 below.

The process of evaluation is divided into two parts. The first part involves the evaluation of the school brief submitted by each school that has sent in its letter of intention to participate in the program. The document contains a brief report on the school co-curriculum activities based on the four environment pillars stated earlier, and outlined in the Guideline for Implementation and Evaluation of Sustainable School- Environment Award. These guidebooks have been sent to the schools much earlier.

The evaluation of each school is done by at least three evaluators, one of whom will be identified by the group as its group leader who co-ordinates all the tasks given to the group including submitting the final mark and remarks to the Secretariat at the Department of Environment. The evaluation of the school brief carries 40% of the overall mark in the 'competition'.

The second part involves actual school visits by the panel of evaluators. The school visit carries 60% of the total marks, thus giving a total score of 100%. Overall, the school visit is an important part of the evaluation process as it not only offers actual ground level

verification of the contents of the school brief but also to let the evaluators see and feel the ‘real world’ conditions of the four environmental pillars in a particular school.

The Process of Evaluating a School

The evaluation of schools for the Environment Award was conducted at two levels. The first level assessment of school was conducted at the State level (for all 14 States in Malaysia). The evaluators for the state level assessment comprise a representative of the State DoE officer, an officer from the co-curriculum division of the State Education Department. From the marks given to the school brief and the school visit the evaluators nominate schools which have obtained a total mark of at least 70 % to go for the national level evaluation.

Evaluation at the national level was conducted by two group of evaluators, one for the primary school and the other the secondary school. The two team leaders for the primary and secondary school evaluators were experienced judges for a range of awards in the country. The evaluation processes are summarized in the “Evaluation Procedure Manual for Sustainable School-Environment Award (2006).

For the purpose of these paper only three pillars of the sustainable school, namely the school management of the environment, greening of the school and co-curriculum activities is discussed. The criteria and sub-criteria for each of the three pillars are shown in Table 1.

Table 1: The Components, Criteria and Sub-Criteria of School Environmental Status

COMPONENTS	CRITERIA	NO OF SUB-CRITERIA
Management	<ul style="list-style-type: none"> • School Vision/Missions • Sustainable School Organization • Implementation Strategy and Action Plan • Monitoring System • Reporting System 	47
Co-Curriculum	<ul style="list-style-type: none"> • Club and Association Green Project and Activity • Awareness Project or Campaign • Environmental Information System and Development • School Networks • Capacity Building • Reporting System 	35

Greening of School

- Greening Strategy and Action Plan
- Garden and Landscape Management System
- Garden and Landscape Design
- Greening Implementation Process and Activity
- Resources Management for Efficiency and Savings
- Enhancement of teachers, students and staff mind-set and practicality for environmental conservation.
- Use of environmental friendly products and technology

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WHAT HAVE THE PARTICIPATING MALAYSIAN SCHOOL SHOWN?

To date the Sustainable School-Environment Award has gone into its third session. Each session took two years to complete, starting from the announcement date by the Department of Environment to the time of finalizing the marks for the award ceremony. There has been a commendable increase in the number of schools participating in the Award from session one to session three (Figure 1). Figure 2 gives the breakdown of the participating schools into the primary and secondary levels and by state over the three sessions. As shown in the diagram, the Initiative has steadily attracted more schools to come onboard.

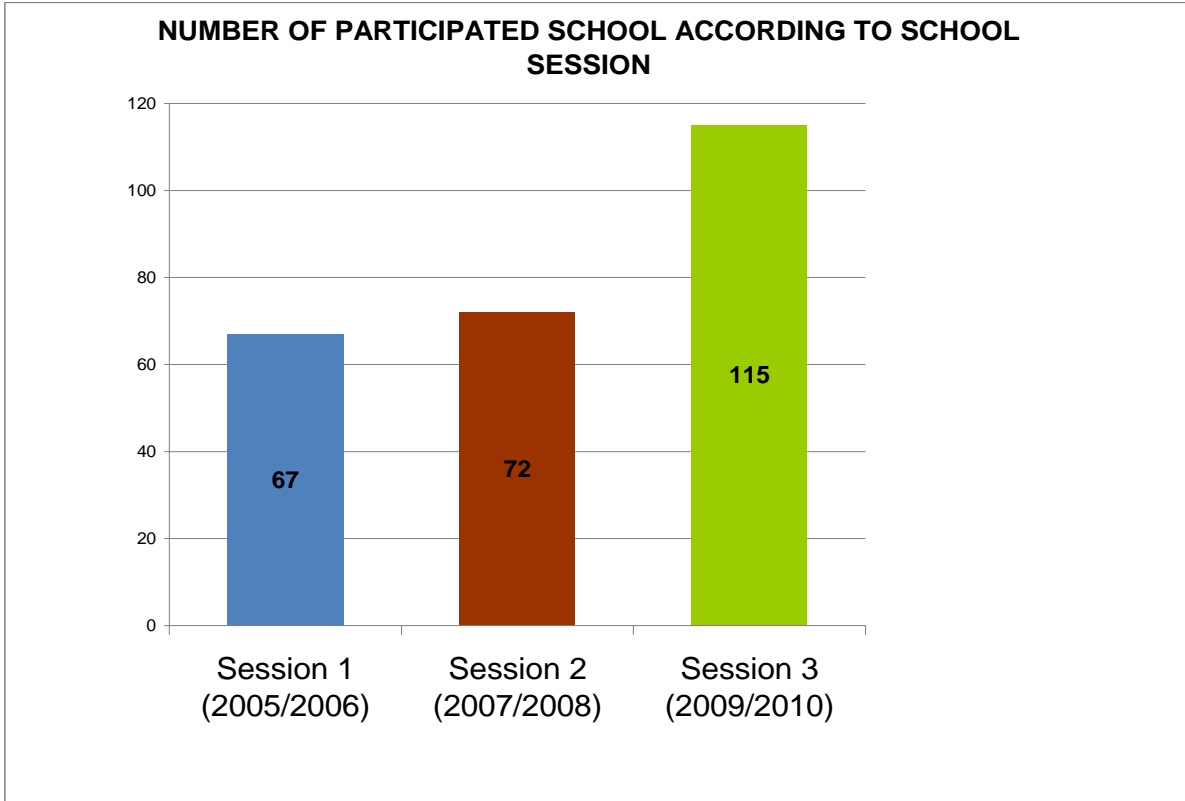


Figure 1: Number of participating School according to Award session

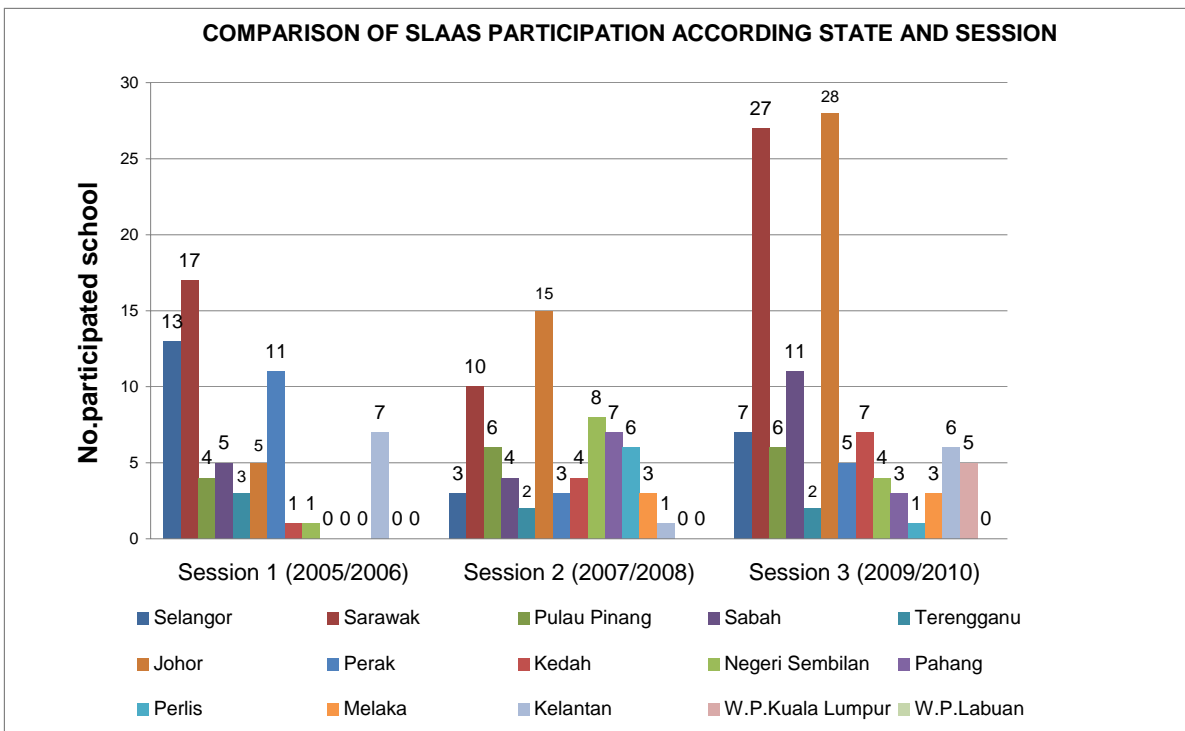


Figure 2: Comparison of Sustainable School- Environment Award participation according to State and Session

It should be pointed out that although the participation for the award was open to all schools it took some time to get all schools from every State to join in. Schools in the country gave their highest priority to obtaining good results for their pupils in all government examinations. A good show of their pupils in these national examinations would determine the schools' standing in the academic performance landscape of the country. Thus, despite the encouragement given by the Ministry of Education for schools to participate in the Environment Award, the education departments at the State level and district levels are more reticent. They tend to allow only schools with good academic performance record in public examinations to participate in the Environment Award.

Given the circumstances, the Environment Award initiative is still able to attract an increasing number of schools each session. Through these participating schools the Partners in the initiative are able to showcase to the public and to the countries in the region the number and varieties of environmental activities in the schools. These activities embed sustainability living directly among the school children.

To illustrate the point further, information was extracted from the school briefs in Session 2 of the Award process. At the time of writing the third session for the Award is about to begin with the national level assessment; and the school brief is yet to be thoroughly looked at. The first session was more of a trial run, and the information from the school brief was somewhat less complete. The writers argue that the school brief from the second session of the Award provides the most appropriate information coverage for some useful insights into environmental activities that help to embed sustainability among schools in the country. The main results are shown in the diagrams below.

In Figure 3 the overall performance of the school administration supporting environmental activities in the school is shown. The support given by the school authority helps to strengthen environmental awareness among the school pupils, allowing the pupils to have practical experiences from participating in these environmental related activities of the school.

Moving on to the other two pillars, the co-curriculum and greening activities demonstrate the diversified activities around the school. The pupils are the major stakeholders besides the Headmasters, the teachers, and the school's administrative and maintenance support staff. From Figure 4 the variety of co-curriculum activities are shown. All these activities are run by the pupils themselves with active supervision by the teachers in charge. The assessing teams reports both at the State and the Federal levels revealed that the co-curriculum activities helped the pupils experience real world ecological realities, doing things around the school for the benefit of all, and to put into practice lessons learnt in the classroom.

Likewise greening activities around the schools promoted a pleasant atmosphere for learning. Figure 5 highlighted the greening aspects that helped train the pupils to manage their environment. Groves around the school are used in Biology and Geography classes to illustrate and highlight concepts such as carbon sink, the importance of environmental protection, as well as the health aspect of keeping the school clean.

Reports by the team of evaluators both at the State and the Federal levels to the Steering Committee also pointed out the presence of ecological initiatives done by the pupils at the secondary school level that are not covered by the original list of indicators. Efforts such as rain harvesting for use around the school, modifying old refrigerators and washing machines for growing flowers, and linking the environmental activities with industrial establishments, that often supports all related green activities are worth noting and rewarded. There are schools that have started to take steps to reduce electricity use by investing in solar panels for electricity supply; with the cost being met by the Parent-Teacher Association. Nearby housing area have adopted similar greening activities. These activities in the adjacent housing areas demonstrate the spread effect from the activities of the school.

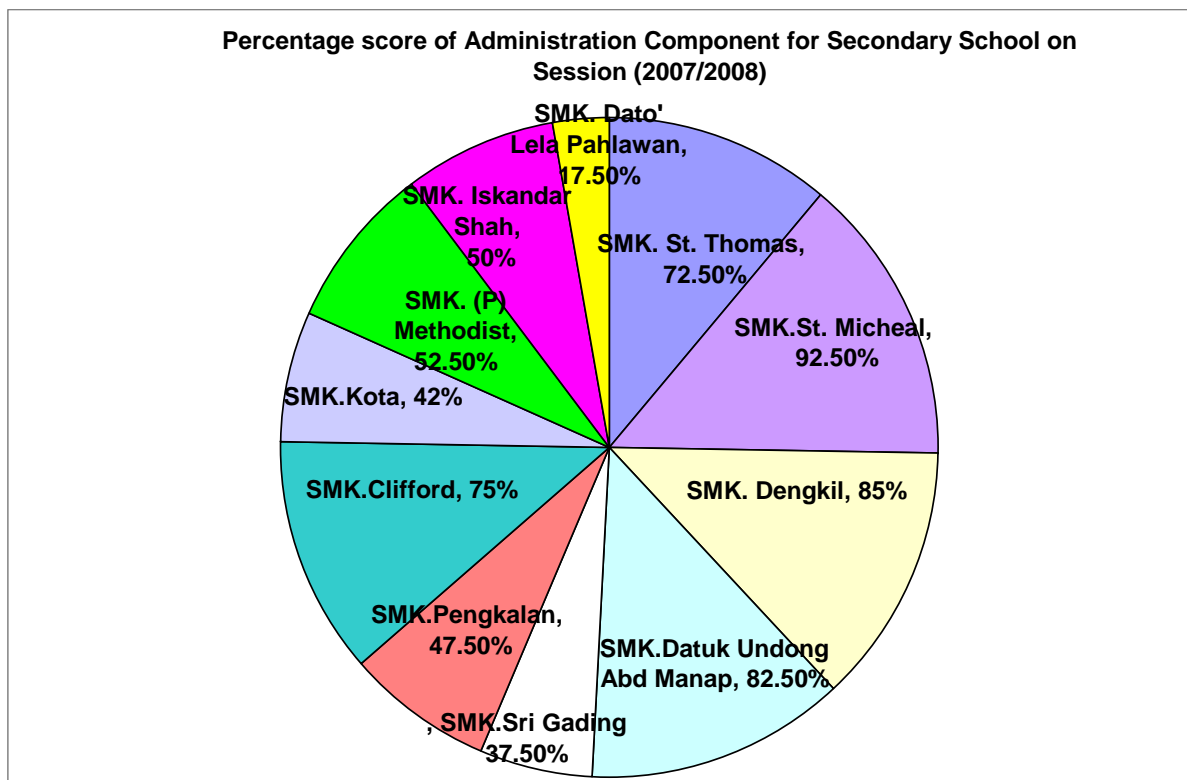


Figure 3: Percentage Score for Administration

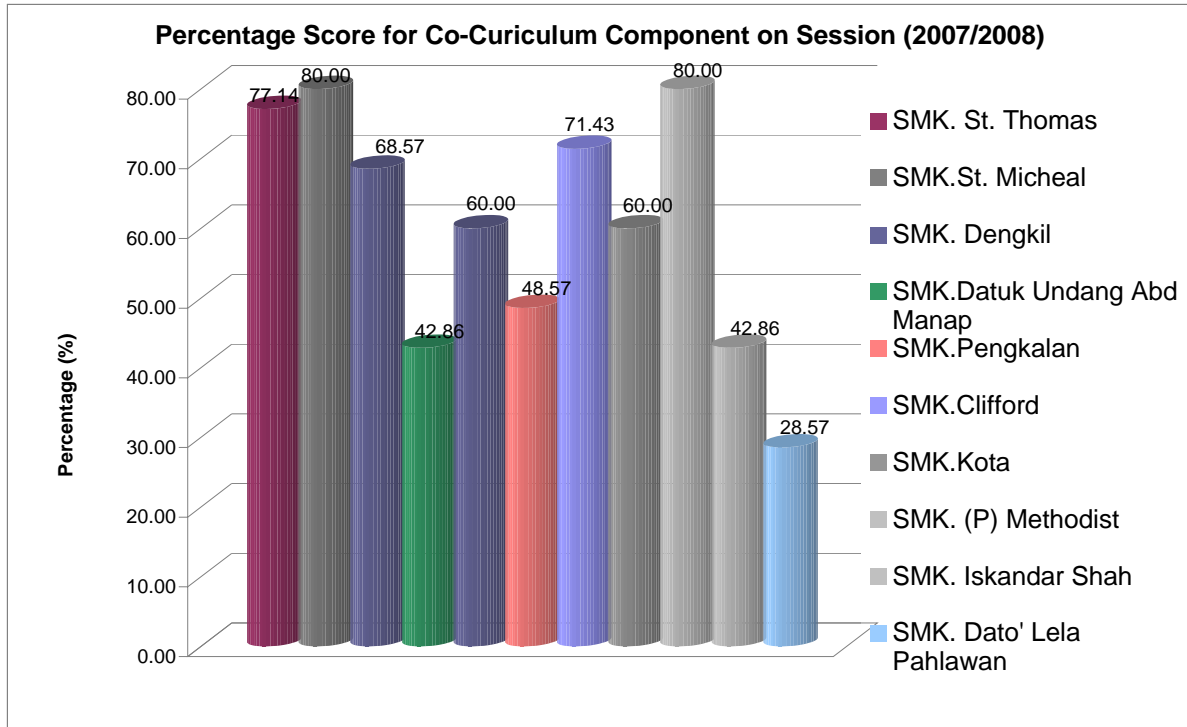


Figure 4: Percentage Score for Co-curriculum Component

Coming back to the main argument of the paper, the participating schools opened the window to see the range of activities related to the environment that the pupils are exposed to, participated in, sustaining the initiative in greening projects, and influencing parents through the parent-teacher association to extend the greening projects outward to the surrounding neighborhoods. These extensions are commendable local initiatives to embed sustainability. In a recent meeting, the Partners are in agreement that the Sustainable School-Environment Award Program should be continued.

CONCLUDING REMARKS

It is a little early to start drawing conclusions from the Sustainable School –Environment Award project as an effective way to embed sustainability. From the observations presented the initiative has generated excitement among schools nationwide to participate in the Award. The representatives from the Ministry of Education in the working committee of the Award have always emphasized the Award’s educational value. Schools all over the country are improving and upgrading various aspects of the four sustainability pillars that are emphasized in the Award. More importantly, the schools are integrating all aspects of the pillars in their teaching programs. The students are the prime movers of these activities with the teachers playing a supervisory role. About 1.5 million young people have left schools since the Sustainable School-Environment Award appeared in the Malaysian school landscape. These young people have at least been made aware of the need to look after the environment which is undergoing constant assaults from unethical developers pursuing growth.

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