

Reconstructing Green School In Malaysia: An Outdoor Learning Experience of Rainbow Troop and Toto Chan

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Abstract.

With the current development in the pedagogy of teaching and learning in the world, not many studies have been done on outdoor learning in Malaysia. This paper aims to reconstruct a new framework for elementary school design in Malaysia by introducing a new typology called green school. In reference to the unique approaches of the Rainbow Troops in Indonesia and the story of Toto Chan's outdoor learning space, it challenges our perception of Malaysian common school design by introducing more open and outdoor oriented learning approaches. The discussion will consist of four parts; first part will discuss on the current problem and situation in teaching and learning in Malaysia, while the second part will explore and review on the definition of outdoor learning and its importance and character in learning environment. The third part will focus on the lesson from the Natural School approaches and philosophy of learning while the last part will analyse the 3rd year design studio in the architecture department of Universiti Putra Malaysia (UPM).

The Problems of Primary School Learning System in Malaysia

As we know, the primary school learning system that has been used in Malaysia is based on indoor learning system. The most critical learning and teaching problem is the system which is based on the value (total marks, grade) and the "position or standing" in the class. It led to deterioration in the education quality in terms of appreciation and the grade value basis is from memorization, not to appreciate, understand, and feel. There are curriculum standard for all the primary school institutions provided by the

Ministry of Education, Malaysia that should be followed by all the primary school institution in Malaysia. Most of the primary school in Malaysia is using the indoor learning method by showing a video, photo, picture and imagination visual (Trianto, 2010). However, research on certain primary school students in Indonesia shows the increase of interest and understanding up to 40% by using the outdoor learning and teaching methods (Komunitas Sekolah Alam, 2005).

Outdoor Learning Definition

There are many definitions in order to express the meaning of the outdoor learning. The definitions are classified into two categories; 'Psychosocial definitions' and 'Environmental Definitions'. According to C. A. Lewis (1975), the outdoor learning in terms of 'Psychosocial definitions' is referring to 'the use of the senses - audio, visual, taste, touch, and smell - for observation and perception'. The definition in terms of 'Environmental Definitions'; the outdoor learning is - 'an experiential method of learning by doing, which takes place primarily through the exposure to the out-of-doors. In outdoor education, the emphasis for the subject of learning is placed on RELATIONSHIPS: relationships concerning human and natural resources.

Research and Case Study of Green School in Indonesia

Several primary school institutions in Indonesia called "*Sekolah Alam*", especially in Jakarta are successful in practicing the outdoor learning and teaching technique by using the five senses and life experience. The Ciganjur Green School is discussed as a precedent in this writing.

Sekolah Alam Ciganjur (Ciganjur Green School)

Sekolah Alam Ciganjur is located in the middle of the metropolitan town in Jakarta. This green school is using 3 concepts in learning and teaching which are; 1) Akhlaqul Karimah (teaching the child on excellent moral with the main method based on the Qur'an and Hadith); 2) Knowledge Philosophy (teaching the child on the manner of logical thinking, respecting the nature and surrounding and using it as the learning media with the action learning and discussion); and 3) Leadership (teaching the child on excellent leadership and spiritual through the "Out Bound" and "Dynamic Group" (Figure 1).





Figure 1: Green School of Ciganjur

Rainbow Troops by Andrea Hirata and Totto-chan, the Little Girl at the Window Laskar Pelangi (English: *The Rainbow Troops*) is a 2008 Indonesian popular novel set in 1970s by Andrea Hirata. The novel follows a group of 10 schoolboys and their two inspirational teachers Muslimah and Harfan as they struggled with poverty and developed hopes for the future in Gantong Village, Belitung, Sumatra (Figure 2).



Figure 2: Rainbow Troops by Andrea Hirata

Totto-chan, the Little Girl at the Window is a children's book written by Tetsuko Kuroyanagi. It was published originally as *Madogiwa no Totto-chan* in 1981, about the values of the unconventional education that Kuroyanagi received at Tomoe Gakuen, a Tokyo elementary school founded by the educator, Sosaku Kobayashi during World War II. The book begins with Totto-chan's mother coming to know of her daughter's expulsion from public school. Her mother realizes that what Totto-chan needs is a school where more freedom of expression is permitted. The book goes on to describe the times that Totto-chan has, the friends she makes, the lessons she learns, and the vibrant atmosphere that she imbibes. All of these are presented to the reader through the eyes of a child (Figure 3).



Figure 3: The Little Girl at The Window by Toto Chan

The Experiments in Reconstructing Green School in Malaysia

The third year architectural students in the Faculty of Design and Architecture, University Putra Malaysia (on 2013) were experimenting the "Green School" as the studio design project. The project site is located in Taman Tasik Cempaka at Bandar Baru Bangi. This site was chosen due to its socio-economic and environmental condition.

Bandar Baru Bangi is a newly developed middle class area, it consists of medium density housing especially for the younger generation. There are many small children in the area which perfectly match the target unit for the proposed green school. Taman Tasik Cempaka which is an urban park is managed by the National Landscape Institute. The area is very active with lots of activity including aerobic class, skate boarding, family gathering point especially during the weekend. There is a community library nearby, which makes it a perfect place for both, knowledge and physical activity. As a park, the site consists of natural and artificial forest which will be very useful as an outdoor learning laboratory for the school (Figure 4)

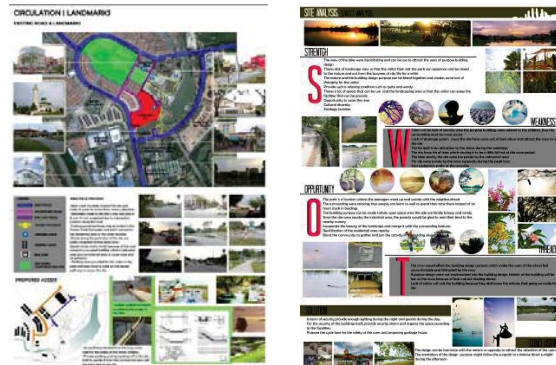


Figure 4: Site Analysis, Nuraini Zakaria and Nurul Fatimah binti Alwi

The studio started by introducing the Rainbow Troop and Toto Chan books to the students. The students were helped to visualize the contents of the book by showing movies which are inspired by these two books. Students were then required to come out with conceptual model which would help them to visualize their idea. Then a green school design was developed based on the idea that the learning space for the children should start and focus on the outdoor space rather than internal classroom.

The result of the design was very interesting as the learning space had "moved out" from the classroom and students started to think about more physical and hands-on activity like gardening, planting a tree, raising an animal, fishing, story-telling, sport and other outdoor activities which suit very well with the character of the children as the users (Figure 5).

Weakness in Malaysian Education System

1. Students often are required to memorize facts and formulas in their classes.
2. Students are often asked to learn how to write essays instead of writing.
3. Rote learning and Tracking system is another big problem in Malaysian Education.
4. The huge amount of school works being assigned to students each day.

Amenda Tech, Education Expert

Issues & Problem Identification

Compare Japanese education to Malaysian education.

"School is about teaching kids how to survive their life in the future"

Parents in Malaysia always says **NO to their Children** and is very dangerous that mental development...
 "What is the theory?"
 They are not allowed
 They demands too much on Their Parents
 They don't let enough chance to explore
 Kids because more Parents against their own knowledge

Who is Toto Chan ???

Passionate
 Willing to Learn
 Love Making
 Friends
 Girls with Lots
 of Curiosity
 Imaginative
 Love to Explore
 and Hyperactive

More than **3 Million** People in Malaysia are exposed to Mental illness and **80%** of them are Children

Aliza Abdullah dan Marikh Kishangopal
 (A/2010)

Learning From Toto Chan



Why We Need Green and Sustainable School

Concept

The Flow of Learning

Design Statement

1. Learning + Playing = Retaining Learning
2. Learning by Observing Nature (God's Creator)
3. Teacher as Tutor & Friend = Informal Pedagogical Learning

Design Objective

1. Creating informal spaces for learning and playing
2. Creating Space for Positive interaction between Student and Teacher
3. Creating space for active interaction between Students and Nature

Location & Site Plan

Learning from Nature with "Toto Chan's Green School"

Conceptual Board

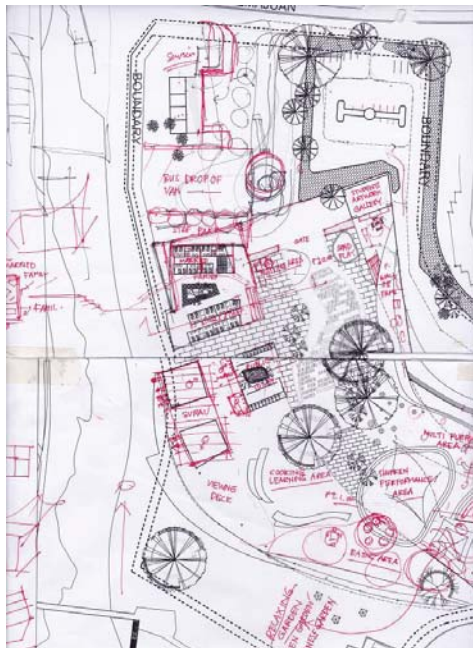




Figure 5: Concept and Space Development, Nuraini Zakaria

Along with input lectures in the studio, characteristic of the space and its border were defined. As can be seen in the picture below, the focus of the design was not on the normal classroom layout as normally seen in the school, but on the outdoor space which is to cater for the outdoor activity (Figure 6).

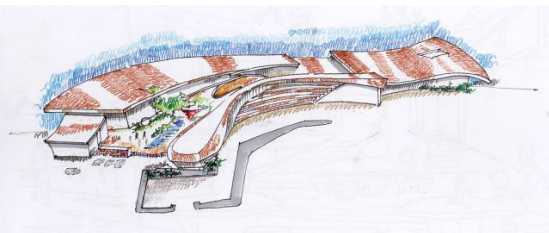


Figure 6: Sample of Design Scheme produced, Nuraini Zakaria and Nurul Fatimah binti Alwi

Conclusion

Green school is different with the current and formal school generally. The adapted curriculum was prepared by the educators to match the student ability. Learning and teaching process in Sekolah Alam combines the theory and adaptation. The students are not only learning inside the classroom but they learn everywhere and from anyone. They are not only learning from books but there are learning from the natural surroundings. This is a stepping stone for a new primary school teaching and learning system and module in Malaysia in order to produce more intellectual, critical, outspoken, independence and expressive generation. The studio exercise has shown a different

