AFFORDANCES OF HOMESCHOOL JOURNEY IN RURAL ENVIRONMENT FOR CHILDREN’S PERFORMANCE

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Presented at ASIA Pacific International Conference on Environment-Behaviour Studies Mercure Le Sphinx Cairo Hotel, Giza, Egypt, 31 October – 2 November 2012
“Future Communities: Socio-Cultural & Environmental Challenges”
CHILDREN AND OUTDOOR ENVIRONMENT

Children perceived environment as interesting and challenging place for exploration which inspire them to discover more affordances (Tai et al., 2006).

The best environments for children are developed on the basis of children's natural play needs, taking into account the play behavior engaged in at different developmental periods, including the social, physical and cognitive forms of play.
PLAY AND CHILDREN PERFORMANCE

Most children love to play in natural environment, besides they are the heaviest user of outdoor place (Sobel, 1993; Chawla, 2002; Malone, 2003; Charterjee, 2005; Veitch et al., 2007).

INTRODUCTION

**PERFORMANCE**

- **PHYSICAL/MOTOR SKILL**
  Process which involves physical performance including walking, running, balancing, crawling

- **MENTAL/COGNITIVE SKILL**
  Mental process including remembering, attention, understanding language, solving problem and making decision.

- **SOCIAL SKILL**
  Social participation including chatting, interact with peers, and playing together.
Home-school is a part of the everyday routine journey for most children, including children in rural area (Pooley et al., 2005). Children's journey to and from school in rural area allows children to have different experience.

Affordances of home-school journey are measured by its ability to support children's development: physical, social and cognitive (Malone, 2003; Tai et al., 2006).
According to Gibson (1979), affordances of an environment are associated with the elements which offered or provided to the users. Gibson (1979) also stated that:

*We must perceived to be able to move around, and we must move around to be able to perceive.*

Movement means play to children which involve perceiving the environment through the children's senses including sight, audio, touch, smell and taste (Gibson, 1979). Affordances are categorized into (1) levels of affordances, (2) taxonomy of affordances, and (3) types of affordances.
There are three levels of affordances: perceived, utilized and shaped (Kytta, 2003).

Affordances can be categorized into 10 categories of environment quality.

- Flat, relatively smooth surface
- Relatively smooth slopes
- Graspable/detached objects
- Attached objects
- Shelter
- Non-rigid attached objects
- Climbable features
- Aperture
- Microclimate
- Moldable material and
The children’s mode of travel is connected to their ability to perceived affordances.

MODE OF TRAVEL TO SCHOOL

INDEPENDENT

Benefits
have opportunity to explore environment and have experience with the environment independently

Modes of travel
involves walking and cycling to school, either alone or with peers without adult supervision

DEPENDENT

less opportunity to explore environment and limits experience with the environment

deferred mobility includes carting to school by parents with cars or motorcycles.
AIM

To investigate children’s experiences during homeschool journey in rural environment in order to identify the actualized affordances which stimulate their performances.

The aspects taken into consideration included the children’s types of mobility during their homeschool journey and the elements they encountered along the homeschool journey.

OBJECTIVES

(1) to investigate children's experience during homeschool journey
(2) to identify children physical, social and cognitive performance during the journey.
METHOD

SUBJECT
MIDDLE CHILDHOOD CHILDREN (9-11 year-old, n=54)

SITE SURVEY
ELEMENTARY SCHOOL, SK SRI GUNUNG PULAI JOHOR, MALAYSIA

METHOD
DRAWING AND INTERVIEW
Children were asked to draw their routine homeschool journey on A3 size paper. The children have to recall and draw their journey and experience, and draw any important elements (including home, elements that they have encountered, and school). Then, a semi-structured interview based on their drawing were conducted individually.

PARTICIPANT OBSERVATION
To assess more data on children's activities along the journey, children were observed in three days and their journey were recorded using a video camera.

ANALYSIS
CONTENT ANALYSIS
The finding shows children's homeschool journey in rural area was highly engaged with passively actualized affordances. This suggests that children demonstrated less performance in their journey that results to lower level of actively actualized affordances.

The result suggests that the opportunity for children to play during their homeschool journey was related to the limited duration of time they spent during the journey and types of children’s mobility to school.
Within the process of actualization, affordances are first perceived, then possibly utilized or shaped (Kytta, 2004).

Therefore, children were commonly engaged with **perceived** affordances, examples included seeing hornbill, searching for fruits, sniffing durian to select the best fruits, recognizing the types of trees, chatting with peers and hearing the bird's song.
Utilized activities were associated with perceived such as feeling hurt while cycling in the rain, and feeling hurt when cycling over a speed bump.

Shaped activities were the least, where children only manage to manipulate oil palm leaves as pointer for reading Quran, rubbing oil palm fruit to produce oil, and plucking leaves as money for pretend play.
LEVEL OF AFFORDANCES: MOBILITY

The result shows that the number of affordance by children with independent mobility (n=203) is higher than children with dependent mobility (n=106). This is because children with independent mobility have opportunity to explore and move around independently. Hence, the result shows that children with independent mobility is more actively involved with the environment compared to children with dependent mobility.

Possibility for independent mobility reveal many affordances.
Manmade elements provide the highest number of affordances (n=36), followed by vegetation (n=31) and graspable object (n=24). However, when the number of affordances for vegetation and animal were combined as natural elements, a total of 55 affordances represented this category.

This indicates that children have greater engagement with natural elements than man-made elements due to the unique characteristic of natural elements that is fit to children's play and learning activities.
TAXONOMY OF AFFORDANCES

MANMADE

The engagement with man-made elements includes seeing friends, neighbor and relatives, and recognizing the types of house, relaxing, playing around, waiting for peers, and buying snacks. The finding shows children were familiar with the neighborhood area. Therefore, the homeschool journey encourages the development of children's spatial knowledge.

VEGETATION

The children were familiar with the vegetation around the village through their ability of recognizing different trees. Most of the fruit trees are recognized by its fruits, and the palm tree was recognized by its shaped. Vegetation afforded multiple activities for children including climbing, searching and eating fruits, and seeing small creatures. For example, for durian tree, they experienced seeing its flowers dropping onto the ground suggesting that the tree will soon bear fruits. The children even mentioned that they can identify a quality of durian fruit by smelling it.
TAXONOMY OF AFFORDANCES

GRASPABLE OBJECTS

The elements that demonstrated children's engagement with graspable objects included flat pebbles, fruits, leaves, twigs, as well as man-made element such as an umbrella.

For examples, they threw pebbles into the river, collecting pebbles for slingshot monkey and wild boar, plucking fruits, and breaking twigs.

It shows that graspable objects afforded active affordances for children's activities because they can be moved and were easily found along the journey permitted children to manipulate them.

In summary, the homeschool journey in rural area is perceived as a play area by the children which can stimulate children's play, development and learning. The homeschool journey afforded many opportunities for children to interact more with natural rather than man-made elements which can expand their physical, social and cognitive skills.
The homeschool journey afforded six times more positive affordances (n=187) than negative ones (n=81) to the children.

The positive affordances include swimming and bathing in river, recognizing fishes in the river, cycling over puddles and feeling the water splash, and cycling over speed bumps and feeling like flying. The examples of negative affordances included feeling fear of monkey and ghost, hearing the noisy sound of machine, running away from dog and feeling tired of cycling uphill.

The positive affordances were more than negative affordances suggesting that the functional properties of homeschool journey were positively perceived, utilized and shaped by the children. Thus, the result suggests that children perceived the homeschool journey in the rural area as their playscape and learning spaces.
In summary, homeschool journey at rural area is a suitable place for children to develop children's performances. Most of their activities involved performatory and exploratory performance such as seeking, searching, climbing, sliding, plucking, collecting, and throwing activities.

However, less activities that involved productivity performance which are creating new things from natural elements due to the time constraints for the children to play. The journey inspired the children feeling of excitement, wonder, joy, challenge and even fear. Apart from that, experiencing the homeschool journey make the children become familiar with the place by recognizing the landmarks, friend's home and developing independence. It means that the homeschool journey in a rural area affording variety elements allowing children to express their skills of physical, social and cognitive.

We suggest that the methods applied to this study should be tested in the urban environment in order to make a comparison of children’s performances of homeschool journey.