RESEARCH PROPOSAL

AFFORDANCES OF HOME-SCHOOL JOURNEY IN RURAL ENVIRONMENT ON ACTIVE FREE-PLAY AND ENVIRONMENTAL LEARNING FOR MIDDLE CHILDHOOD CHILDREN

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1.0 RESEARCH TOPIC

Affordances of Home-School Journey on Active Free-play Toward Environmental Learning for Middle Childhood Children

2.0 RESEARCH AIM

The aim of the study is to investigate the affordances along the home-school journey for middle childhood children in rural area and how it is relate on children's active free play toward environmental learning.

3.0 RESEARCH OBJECTIVES

To achieve the aim of the research, the following objectives are formulated:

- To identify how children perceive the outdoor environment from home to school in rural environment as play and learning spaces.
- To study children's performance in term of physical, social and cognitive along home-school way.

4.0 ASSUMPTION

Children's experience in home-school journey is able to shape their physical, social and cognitive performances, which consequently shaped their learning behavior. Children perceive the environment more on function than form and color. It means they see a feature on what afford them to play (Fjortoft, 2004, 2001, 2000).

Natural environment enhance children's physical and mental development. Numerous studies had stated that children perceive natural elements as a place for play (Fjortoft,2004), transact with peers (Kytta,2002), set their own boundaries to play (Olds, 1989), understand the outer world (Taylor et al.,1998) and fields of free

action (Maudsley,2007). Thus, home to school journey in the context of rural environment offer limitless affordances for children's active free play toward environmental learning.

5.0 RESEARCH QUESTIONS

The research questions are:

- Does home-school journey in rural environment afford place for middle childhood children for active free play towards environmental learning?
- How children perceive home-school journey as play and outdoor learning spaces?
- What are the most useful elements of home-school journey that influence children's active free play toward environmental learning?
- How children engage with the outdoor elements along the school way affecting their behavior and action?

6.0 RESEARCH BACKGROUND

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 in the village area, which making up by a different spaces such as river, orchard, home and natural area (Figure 1). The village area constitute rich source of stimulation and affordances for children's active free play toward environmental learning.

Figure 1: Scenario of Home-School Journey at Village

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). The element and environment of home-school journey plays an important role to promote children's active free play toward their environmental learning. Previous study suggest that most of affordances in environment involve with living thing such as mud, bushes, trees and leaves features (Groves et al., 2008). Most children love to play in nature environment, besides they are the heaviest user of outdoor place (Sobel, D., 1993; Chawla, 2002; Malone, 2003; Charterjee, 2005; Veitch et al.,2007). Thus, children in rural area are noticed to have big opportunity to have nature element in their play. However, Matthews 2002, found that children in rural area in UK are most preferred social place rather than natural places. Particularly, children will play around their school, home and the surrounding (Charterjee, 2005). Moreover, home-school journey is a part of their everyday routine.

Today, children's journey to and from school are bound up with other activities which influence the nature of the journey and children's mobility (Pooley et al., 2005). The mobility of children is connected to their ability to perceived affordances. Children with independent mobility have opportunity to explore environment and have experience with environment independently. Children who live in rural area enjoy more freedom to move around than children in urban area(Pooley et al., 2005). However, increasing development of Malaysia encourage increasing trend toward vehicular modes for home to school travelling. It is happen because of parent and children's concern over traffic, danger and strangers (Ahmadi et al., 2007). Thus, it causes the number of children independent mobility to school is decreasing. Therefore, children now a day are disconnected from having a direct contact with the natural environment independently. Children nowadays spent limited time outdoors in a day (Tai et al. 2006) and experience a sedentary lifestyle (Said, 2010). They are more exposed to technological entertainment such as video games, television and computer (Tai et al., 2006; Spencer et al., 2005). Moreover, children are just being taught at school and had limited hands-on experience on natural environment. As a result, children unable to manipulate plant into play tools, and did not know the names of plants and bird (Said, 2010). Thus, direct interaction with a place, play important role in children's development. Hands on experience will give opportunity for children have direct contact with nature (Kellert, 2002). Children contact with nature is divided into three categories which is direct, indirect and vicarious or symbolic experience. Direct contact with nature is important to childhood development (Kellert,2002).

Children have a particular attraction to natural environments due to the complexity of habitat, dynamic, flexible, abundant of natural elements (Prescot,

1987), diversity and their feeling of timelessness (Malone, 2003). Children perceived environment as their play and learning space. Environmental learning is a learning process which involves direct and indirect experiences of nature (Malone, 2003). Direct experiences involve of observations, sensory stimulation and movement in the space. While, indirect experiences include education, interpersonal communication and popular media. Therefore, home-school journey is a potential ground for middle childhood children having a good opportunity for having active free play toward environmental learning.

Experiencing home-school journey in rural setting stimulates three aspects of children functioning which are cognitive, physical and social (Figure2)(Chawla and Heft, 2002; Kellert 2002). All of the three aspects of children's development are interrelated.

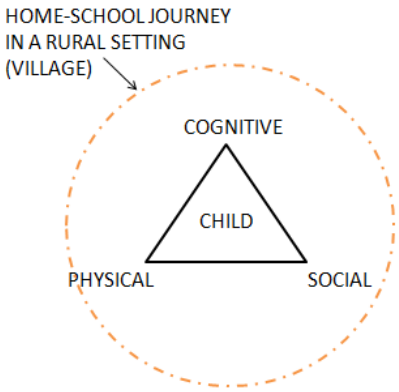


Figure 2: The correlation between three aspects of children's development.

Children's cognitive development is a mental process including remembering, attention, understanding language, solving problem and making decision. According to Piaget's Theory of Cognitive Development, cognitive development is a comprehensive theory about the nature and development of human intelligence (Piaget et al., 1969). It deals with the nature of knowledge itself and how human come gradually to get it, construct it and use it. While, physical development is related to children's motor skill development such as running, skipping and riding. Identifying the level of social participation in play activity can be representative of a child's maturity in social, physical and cognitive development. However, availability of children to explore the environment is depends on their mobility. Independent mobility is a territorial range from home to other places which allowed by parents for children playing and socializing (Kytta, 2002). In other words, independent mobility is a license given by parents for children move independently in their environment. Thus, independent mobility of children is depends on parents and peers (Kytta, 2002). Figure 3 shows the range of mobility

Figure 3: The Range of Mobility in Rural Area

8.0 RESEARCH GAP

There are extensive studies on the home-school journey, which mostly focused on the children's mobility and their spatial knowledge. No research explored on home-school journey towards children's active free play and environmental learning in Malaysia context. A study by Ahmadi and Taniguchi (2007), provide important perception on the significant of walking home to school to have opportunity to explore the environment. However, children's independent mobility is influenced by demographic, environmental, geographical and parental fears factors (Prezza, 2007). According to Table 1, most of the studies were conducted in urban area in western countries due to decreasing number of children's independent mobility and having direct contact with nature.). Thus, this research will take place in rural area in Malaysia due to the different culture and environmental factors.

Table 1: Previous studies on home-school journey

Studies of home-school journey	Context	Subjects	Finding (Active free play and learning)	Parameter being measured
Joshi et al. (1999)	Residential area, town	Mode of travel and reason of	-Children accompanied by	- spatial skills

		accompaniment which influence children's spatial ability, knowledge and perception of the environment on the journey to school	parent have conversational opportunities especially on safety. -Spatial skills not influenced by travel mode and children accompanied by parent have almost the same environmental knowledge.	-spatial knowledge - perception
Ahmadi and Taniguchi (2007)	City in Tehran	Factors influence children's spatial knowledge and mobility in home-school travel	-Walking to school give opportunity for children to explore environment. However, accompanied by parent provide better spatial knowledge. - Longer distance weaken the spatial knowledge	-spatial knowledge -influence factors on children's mobility -choice of travel mode
Prezza (2007)	Urban	Measuring children's independent mobility	- Children's independent mobility influence by demographic, environmental, geographical and parental fears factors.	-level of independent mobility, and -factors that constrain it
Pooley et al. (2005)	Urban and rural in Britain	Compare children's mobility on home-school journey in the past and present	-Reduction of children travelling alone over the past decade	-types of everyday mobility (continuity and change)

9.0 THEORETICAL FRAMEWORK (literature)

9.1 Children Play toward Learning

Play is not only essentially valuable as an enjoyable activity; it is also a process through which children learn. Play is a means by which children learn without being taught. It involves doing, exploring, discovering, failing and succeeding (Malone, 2003). Children perceived environment as their play and learning space. Play in nature is a valuable activity where it is also a process through which children can learn (Malone, 2003). Play with nature gives opportunity for children appreciate the natural elements while playing among the trees, hiding, and having space to kick a ball around. Those physical activities are categorized in active free play. Active free play is an unstructured play where children can freely play, unrestricted (Veitch et al., 2007), no rules and it is driven by the children itself. However, according to Veitch et al. 2010, children's active free play is influences by parental concerns about neighborhood safety, availability of friends to play with, and access to interesting play areas nearby home. While, environmental learning is about the environment supports environmental knowledge and understanding. Learning for the environment is directed toward environmental stewardship and action. Learning in the environment encourages interactions and experiences in the environment (Disinger, 1990 and Murdoch, 1993). Children's environmental learning can afford children's development of motor skill, social interactions and cognitive activities.

9.2 Children and Environment

The environments of children are not always can be environments for children (Spencer et al., 2005; Rasmussen, 2004). Children perceived environment as interesting and challenging place for exploration which inspire them to discover more affordances (Tai et al., 2006). The type, quality and diversity of environments directly affect the type, quality and diversity of children's play and learning. The best environments for children, which 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. Home-school journey which include of natural elements may help children in environmental learning.

Since home-school journey being children's daily routine, children be able to experience the journey every day. The repeated use of the environment creates a meaningful bonding and makes them engaged and familiar with the environment. Thereby, the environment will become 'my place' and children recognize it as their

special place. The study discovered a variety term that is referred to children's special place such as favorite place, children's place preference and secret place. Special place has specific attributes and special meaning to children. For example, Kernan (2010) found that a group of children named the yard as 'Action Man Power Ranger Yard' as their place for play involving chasing, battle, attack and retreat. Rasmussen (2004) found children in rural area have a special place named Bumbley. The Bumbley is symbolizing as a town, which has roads, fields and house made by mud apparently shows their creativity. Both study explained that children give a special name for their special place shows their sense of place**.** Based on Korpela et.al (2002), special place is use for cognitive restoration and emotion regulation. Reason for having a special place is to have a private place for children being alone or with friends, developing self identity (Kellert et al., 2002; Spencer et.al 2005), and escape from adult supervision (Tai et al., 2006; Rasmussen, 2004; Abbot-Chapman and Robertson, 2009). Factors that contributed to children's place preference are the value of place that allow them to engage in activities (Andel, 1990; Simmons, 1994; Castonguay & Jutras,2010) , available material for play (Rasmussen, 2004), have opportunity to meet friends (Sobel, 1993; Korpela et al., 2002), close to home (Nerlove et al. ,1974; Rasmussen, 2004; Said & Shamsuddin, 2009; Costanguay & Jutras, 2009), Lee & Abbort, 2009) and the presence of natural elements (Sobel, 1993; Tandy, 1999; Korpela et al., 2002; Rasmussen, 2004; Veitch et al.,2005; Said & Shamsuddin,2009).

10.0 UNDERPINNINGS

This research concentrates on the interaction between children and element of home-school journey environment which based on the (1) theory of affordances, (2) theory on James J. Gibson’s ecological perceptual psychology, and (3) Bronfenbrenner’s ecological developmental psychology.

10.1 THEORY OF AFFORDANCES

Affordances of an environment are associated with the elements which offer or provides for the user (Gibson, 1979). Affordances in environment perceived through direct action connected with indirect learning process. Affordances are categorized into (1) levels of affordances, (2) taxonomy of affordances, and (3) negative and positive affordances. There are three level of affordances: perceived, utilized and shaped (Kytta, 2003). The level of affordances is different based on the place that affords different functional properties. Perceived affordances are associated with the senses, especially sight or hearing. Utilized affordances are an ability to use something, especially to find a profitable or practical use for a certain element. While, shaped affordances is an ability to give a particular form or to create

thing. Those levels of affordances are normally interrelated with each other. For example, children will perceived, used and transformed the environment and the features in different ways at different stages of the child's development (Malone, 2003). Taxonomy of affordances is categorized based on children's action in various environments. Thus, children determined the place based on its potential value of affording different activities but not by its appearance or aesthetic qualities (van Andel, 1990).

10.2 JAMES J. GIBSON ECOLOGICAL PERCEPTUAL PSYCHOLOGY

The research is based on ecological perceptual psychology which particularly looks into the concept of affordances. Gibson has developed his theory of perceptual psychology which concentrates on the interaction between organism and environment. According to the view of ecological perceptual psychology, the person-environment relationship is immediate and particularly based on practical activity. For example, a person will recognizes a chair based on his ability to perceive the object that allows him to sit down instead of perceive the shape, size and color of the object.

Gibson's perceptual psychology is based on a description of stimulus information through human sense. The sensory information is made by multisensory perceptions: see, hear, touch and taste. Perception is cannot be separated from the intentional activity which it is connected. Besides, mobility is believed can reveals lots of information about the environment. "We must perceive to be able to move around, and we must move around to be able to perceive" (Gibson, 1979, p.223). Hence, it is clearly shows that perception and mobility is closely connected. Perception is focused on finding the affordances of an environment. Perception and action are inter-related which through action, a person can reveals new affordances and vice versa (Kytta, 2003).

10.3 BRONFENBRENNER ECOLOGICAL DEVELOPMENTAL PSYCHOLOGY

Bronfenbrenner believe that person's development cannot be studied out of the multileveled social, material and cultural context. Developmental studies should concentrate on the process of development which focus on individual and the context. Bronfenbrenner defines four types of individual, which are: (1) individual that are promote or restrict the reactions of the environment, (2) individual that are selective sensitivity to the physical and social characteristics of the environment, (3) individual with tendency to shape, change, and re-create (social, physical and symbolic) characteristic of environment, (4) person's guiding beliefs regarding to the relationship between himself and environment.

Bronfenbrenner (1979,1993) stated that there are various level of studying the characteristic of an environment: (1) microsysytems (home, school, day-care center), (2) mesosystems refers to collections of more than one microsystem(child's daily environment: day-care center and home, school and after school activities), (3) exosystems refers to system of individual is not necessarily a part, but which affect someone life regardless (parent's work place), (4) macrosystems are refer to the prevalent models that in each culture affect the micro, meso and exosystems (the prevalent beliefs, custom of a culture shape a child's life).

11.0 SCOPE OF STUDY AND VARIABLE

The study investigate the relationship between children's level of affordances and the elements of home-school journey which afford utilized, perceived, and shaped affordances. The study focus on middle childhood children, aged 7-12 years, in rural setting as respondent. Primary schools in remote area have rich of natural elements and viewed as potential spaces for children to discovery, explore and socialize with peers.

11.1 Unit of analysis: Middle Childhood Children

The study focus on middle childhood children, aged between 7-12 years old, in rural setting as respondents. Middle childhood is the age where children begin to travel unaccompanied on the school journey (Joshi et al.,1999) and engaged with active free play (Veitch, et al.,2010). This age group is a important period for children get engaged with nature which known as 'child earth period' (Tai et al. 2006). Most children like to spend time outdoors (Chawla, 2002) where homes become unimportant and they begin to explore woods, ditches and other interesting places (Sobel, 1993). Children begin to see nature as attractive and interesting place, a place that helps them to develop independence and self-esteem, ability to solve problem and meets challenges.

11.2 Parameters to measure: Element and Quality of Rural Environment: what to measure?

Element and quality of environment can influence children's active free play. The study focus on rural area because of the richness affordances of natural elements. Rural afford a variety elements which allows children to engage with children's physical, social and cognitive performance (Said, 2010). The natural elements include vegetation, animal, topography, and microclimate. According to

Prescott (1987) natural environment has unique characteristic that is fit to children's play and learning. The unique characteristics include the complexity of habitat, dynamic, flexible and abundant of natural elements. The complexity of habitat offered a diversity of topography, texture, hide ways and hole to be explore and inhabit. The dynamic of natural environment encourage children to have new discovery due to its constantly changing (Tai et al., 2006) of shape, texture, color and smell. While, the flexible of environment allow children to fulfill their various instinctive play behavior such as climbing, breaking, balancing and others. Natural environment also have plentiful of natural elements that can be manipulated such as bendy, breakable, sticky and edible material for children's play and learning. Therefore, children play in natural elements provide good opportunity to experience with nature (Hart,1993).

11.3 Affordances of Home-School Environment as Play and Learning Spaces

The study investigates the affordances of home-school journey in rural environment based on the theory of affordances. In children's play, affordance is relates to what play possibilities are afforded by the physical environment.

Children will perceive outdoor environment as interesting and challenging place to explore, which inspire them to move around and find more affordances (Tai et al, 2006). Children basically seek for independence and opportunities for play and socialize while having their journey to and from school. The ability of children perceive affordances in their everyday home-school journey in the rainy day, make them realize when they can play with the rain, seeing the rainbow after rain, walk on the puddle, is connected to their experiences of activity in rainy day. Thus, it shows that home-school journey afford children to play and learning.

12.0 SIGNIFICANCES OF STUDY

The study exposed the offered affordances along the home-school way for the middle childhood children in rural area and how it is relate on children's active free play toward environmental learning. Thus, the study is significant to:

- expose the element and attributes of home-school journey that can support children’s environmental learning from the children’s perspective.

- expose the importance of active free play toward environmental learning among middle childhood children in Malaysia

- be a guideline and planning requirement which emphasized in the children's development in Malaysia especially toward the environmental learning.

Thus home-school journey is one of the most important to for children's development.

13.0 RESEARCH DESIGN

The study aims to investigate the offered affordances along the home-school way for the middle childhood children in rural area and how it is relate on children's active free play toward environmental learning. Therefore, the study will investigate the elements and setting, and level of affordances in the home-school journey. Apart of that, children's mobility on home-school journey also needs to be considered in this study.

Research with children is associated with qualitative data. The use of qualitative data collection techniques provides the opportunity to generate a lot of information from the child's perspective about the affordances of home-school journey for active free-play toward learning activities.

The affordances of home-school journey will be investigated through the participatory method. The researcher will investigate children in their home to school range. Home-school range is refer to territory surround their home to school which provide a context for independent mobility, play and exploration (Spencer et al. 2005). The methods are divided into two which is researcher-centered and children-centered methods. Observation is a researcher-centered method which observes on children's plays due to their movement, elements that they encountered around the neighborhood (vegetation, animal, topography), and also natural environmental variations (weather condition or times of day). Observation participant is a long-term process, in which the researcher needs to follow the children to share children's daily activities in home-school journey. Digital camera is used to documented children's actions and voice recorder is used to elicit children's word.

Children-centered method includes open-ended interview, children's drawing and photo taking. Perception of children will be elicited to perceive affordances of home-school journey environment. Children's perceptions of the environment are assess by individual interview based on the drawing and photo taken. The method allows children to play an active role in the research to express their view through

the selection of the photo. The interview, drawings and photos will be analyzed using nVivo for content analysis. The result will be categorized into: (1) levels of affordances, (2) taxonomy of affordances and (3) type of affordances (negative and positive).

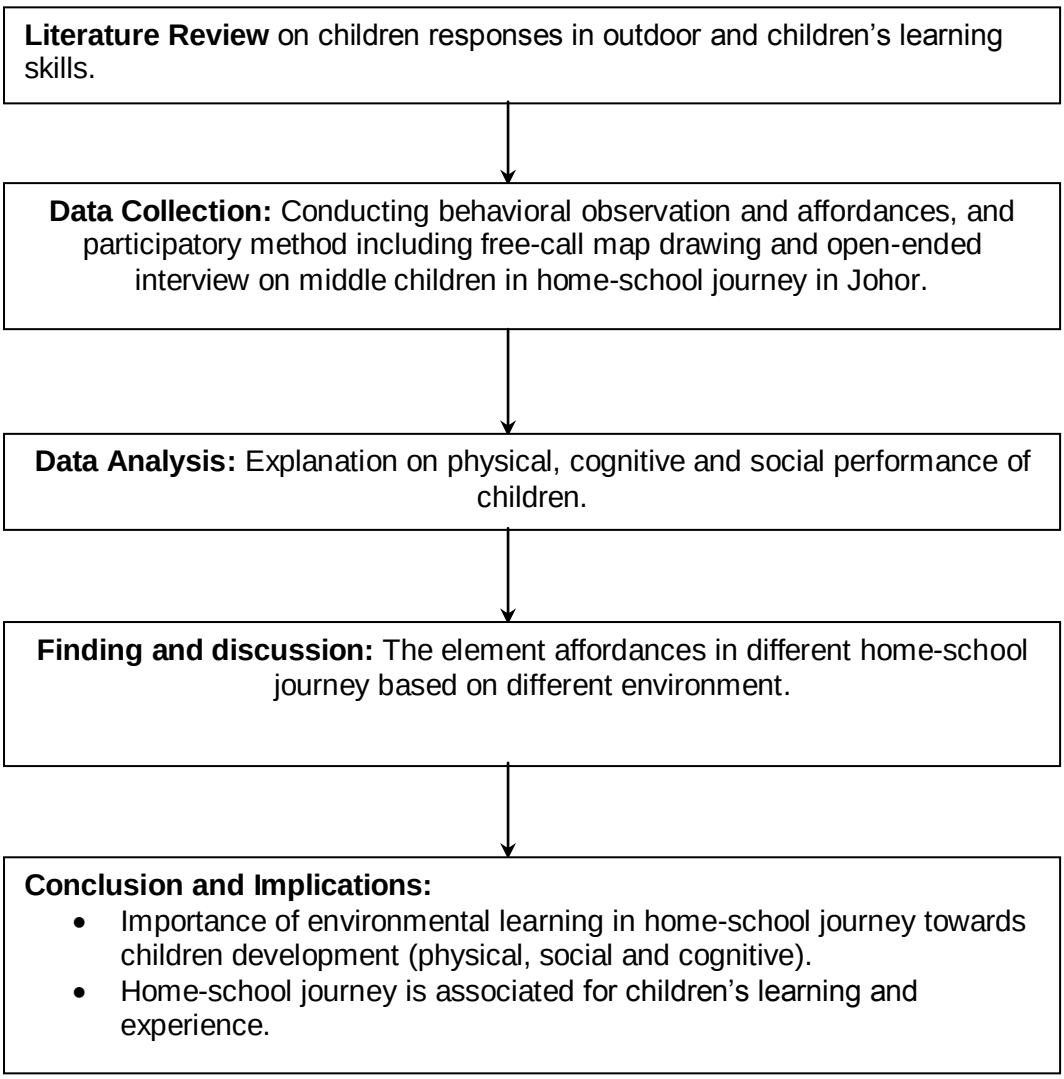
14.0 ANTICIPATED FINDINGS (expected finding)- find a new one (single line pun boleh)

Utilized affordances has a greater number compared to perceived and shaped affordances. Quantity of affordances are highly in utilized and perceived because utilized affordances are normally associated with perceived affordances.

15.0 RESEARCH SCHEDULE

Semester	**1**						**2**						**3**					
Month	**1**	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**	**4**	**5**	**6**	**1**	**2**	**3**	**4**	**5**	**6**
Research Proposal																		
Literature Review																		
Data collection & Experimentation																		
Data analysis																		
Findings																		
Draft writing																		
Dissertation writing (Final)																		
Submission and Viva																		

Affordances of Home-School Way for Children's Active Free-Play Toward Environmental Learning in Rural Environment



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