
MEANING OF HOME-SCHOOL ROUTE AS A CHILD-FRIENDLY ENVIRONMENT FOR LESS PRIVILEGED CHILDREN IN OLD CITY ZONE OF MAKASSAR

¹Arti Manikam Asrun, ²Nurul Nadiah Sahimi, ³Nor Fadzila Aziz,
⁴Mega Suria Hashim, ⁵Janatun Naim Yusof and ⁶Ismail Said

¹*Faculty of Built Environment, University Teknologi Malaysia 80310 Skudai, Johor, Malaysia*
arti.manikam@gmail.com

²*Faculty of Early Childhood Studies, UNITAR International University, Selangor,*
nadahnsahimi@gmail.com

³*School of Housing, Building and Planning, Universiti Sains Malaysia, 11800 USM, Penang, Malaysia*
nfadzila@usm.my

⁴*Faculty of Built Environment, Universiti Teknologi Malaysia 80310 Skudai, Johor, Malaysia*
bluemuffin71@yahoo.com.sg

⁵*Faculty of Built Environment, Universiti Teknologi Malaysia 80310 Skudai, Johor, Malaysia*
janatunyusof@gmail.com

⁶*Faculty of Built Environment, Universiti Teknologi Malaysia 80310 Skudai, Johor, Malaysia*
ismailsaid@gmail.com

Abstract

Home school journey is part of the daily routine of children in many Indonesian towns and cities. The environment and its elements of the journey play an important role in promoting children's active play. In the past two decades, many urban centers have been identified as unsuitable for children's home school journey due to issues relating to high urban density and traffic congestion. As a result, many children are denied the opportunity to experience the outdoor environment while going to their school. Their everyday life is centered at two places which are their home and school for their safety and comfort. Therefore, this study examines the meaning of home-school route as a child-friendly environment from the perspectives of less privileged children in old city. The study observed 40 children, aged 9 to 11, from low income families that walked to their schools in the old city zone of Makassar, Indonesia. Data on children's activities and their perceptual responses on the street environment during their journey were elicited using two methods which were free recall drawing map and interview. The data were analyzed through content using Nvivo 11. The study found that the less privileged children not only perceived their home and school as the two predominant places along their home-school journey but the street environment as well as their third space. To them, the street environment is part of their living experience which provided them with indirect learning experience toward their spatial skills.

Keywords: Home School Journey, Child-Friendly Environment, The Street Environment

INTRODUCTION

In most major cities in developing countries, many daily school trips are undertaken by motorized transport modes. In the Makassar city, for example, population growth, the increased car ownership rate and lack of integrated public transportation system have increased the use of motorized transport modes. Furthermore, children active transportation is naturally influenced by parental decision (Kearns *et al.*, 2003). The parents are often unwilling to allow their children to go to school alone by walking; concern about traffic, road condition and lack of supervision convince them of the need to accompany their children to school (Corsi, 2002) as well as a long walking distance, traffic safety and fear of attack. Therefore, the children do not have the opportunity to experience the outdoor environment.

Furthermore, the use of active modes in school

travel has been reduced during the past decades even in some developed countries (Mehdizadeh *et al.*, 2016; Buliung *et al.*, 2009; Pooley *et al.*, 2005). The growth in accompanied travel to school has led to speculation about the cognitive and emotional impact of this change on child development. The phenomenon of accompanied travel to school has several important consequences. The journey to school is a major source to traffic at peak hours and adds to congestion, accidents and pollution. Such home school journey also cost parents time (Gershuny, 1993) and deprive children of the opportunity for regular exercise (Armstrong, 1993). A proactive idea in this area is Hilman's assertion that a prolonged period of escort to school and other destination is like to hamper development of children's spatial skill, limit their knowledge of the environment and damage their growing independence

(Joshi *et al.*, 1999; Hillman, 1993; Hillman *et al.*, 1990).

School become a dominant force in the life of children by the time of schooling. Children have their first experience in school and these experience can affect children psychology either positively or negatively. In urban areas, most of children are drive to school reducing the number of children walks to school are come from poor families where they did not own any vehicles. Active travel mode suggested as a key to promote children's physical activity. Active commuting to school has been also proposed for more children's social interaction that makes children mature and also enhance their autonomy of movement (Yeung *et al.*, 2008). In this study home-school journey is define as a place between home as first place and school as second place which is a place for children experience everyday (Romero, 2010; Pooley *et al.*, 2005; Joshi *et al.*, 1999). Moreover, Matthew (2003) identified that children used the street setting for games, play, adventure as well as socialize. Thus, does street setting as a third place for children's experience in outdoor environment?. The home school journey in urban area is seen as important place for children to engage in outdoor environment which encourage children's physical, social and cognitive. Therefore, this study examines the meaning of school route as a child-friendly environment when children experience their home school journey.

LITERATURE REVIEW

Street as Children's Journey to School

Walking to school, much like any other children behaviour, is largely influenced by cultural factors, by individual circumstances, preferences and characteristic, and by environmental factors. Urban designers are concerned with the environmental qualities that make for better place to walk – not only as a physical activity, but also for the sensorial and experiential pleasure that may be derived from such environment. While the planning and design of the environment must address various needs for walking, the aspects of the environment that impact the sensory and social qualities of the setting are particularly significant to the field of urban design.

The phenomenon of accompanied travel to school has several important consequences. The journey to school is a major source of traffic at peak hours and traffic congestion, accidents and pollution (Royal Commission on Environmental Pollution, 1994). Such journeys also cost parents time (Gershuny, 1993) and deprive children of the opportunity for regular exercise (Armstrong, 1993). A provocative idea in this area is Hillman's assertion

that a prolonged period of escort to school and other destinations is likely to hamper development of children's spatial skills, limit their knowledge of the environment and damage their growing independence (Hillman, 1993; Hillman *et al.*, 1990). Hence, home-school journey is an essential active mode behaviour for young children. This study investigates the children school journey in city of Makassar.

Play in School Journey

Play is a natural for the children to develop their resiliency as they learn to cooperate, overcome challenges and negotiate with others. It is essential to social, emotional, cognitive and physical well-being of the children as well as it also allows children to be creative. It provides time for parents to be fully engaged with their children, to bond with their children, and to see the world from the perspective of their child. However, children who live in poverty often face socioeconomic obstacles that impede their right to have play time, thus affecting their healthy social-emotional development. For children who under resourced to reach their highest potential, it is essential that parents the importance of lifelong benefit that children gain from play.

Play means the physical contact with the element of the environment and social interaction with peers (Olds, 1989; Kellert, 2002). In middle childhood, play is movement (Moore, 1986; Kellert, 2002) locomotion or mobility (Kytta, 2004). Movement is the centre of children life, and through movement, children perspective a lot of information regarding the environment (Gibson, 1979) that helps them to enhance their cognitive development (McDevitt and Ormod, 2002). Therefore, play comprises both movement and perception. Perception is defined as translation of spatial into temporal pattern (Cobb, 1977). The important role of play in children's development stems primarily from the theories of Piaget (1962) and Vygotsky (1967). In these theories, play is a mechanism that stimulate children's cognitive development (Pellegrini, 1990).

In the children view, play is free and provide freedom of choice to them. Thus, play let them to learn about environment through experimentation. It means facilitating the children to explore and manipulate the environment (Matthews, 1992; Kellert, 2002). Exploration, through manipulation, generates a sense of fulfilment because it allows children to control their own playing. Manipulation permits a child to finalize the content of a play setting (Wachs, 1989; Said, 2008). As such the child is developing a new structure from his own imagination (Khan, 2002) which eventually satisfied him and the

experience stays in his memory (Sebba, 1994; Said, 2008).

Performance of Children During Play

Children benefit from playing outdoor and moving freely (Van Vliet, 1983; Karsten, *et al.*, 2006). Children's free play, the play that usually happens in outdoor environment, presents special development benefit. Play is essential for children development and performances. Malone and Tranter (2003) identifies three main categories of play in relation to children's performances: (i) physical, (ii) social and (iii) cognitive activities.

Children physical activities are associated with motor skill development. Children's engagement in physical activities improves their coordination, bone and muscle growth, strength, agility and endurance, all of which are essential for healthy childhood life. Thus, children have to receive many opportunities to physically explore their surroundings to successfully develop their motor skills.

Play makes possible the social and emotional development of children. The activities include children spending time playing with peers, sharing, cooperating, respecting other's views and expressing their idea, feelings and need without the constant mediation of an adult (Malone and Tranter, 2003). During play, children start to learn how to negotiate and interact with their peers. The social play activities include talking with others and adult, watching others and watching others playing but with no obligation to attempt to engage in the activity, and occupied behaviour, such as a child staring blankly into space and wandering aimlessly.

Cognition is a mental process that includes remembering, attending, understanding language, problem solving and decision making. Play encourage children to discover, explore and develop an understanding of the environment around them. Through the exploration and experience of the social, physical and natural environment, children become familiar with the pattern and system of life and the interconnectedness of these features with themselves. Cognitive play activities include imaginative and creative play. Children may build or make things with loose materials, observe and interact with nature, explore the environment, and engage in role play.

Child-Friendly Environment

A child-friendly environment is the children obtain by the physical, social and mental skills through their playful interaction with the environment around them. They have right to have a positive place identity and to participate in the process that

affects their lives and futures. Children's views of the friendly environment are quite similar to the word and across time. Children value independent mobility and various opportunities for action, place to meet friends, green areas and basic services, safety and continuity. It allows the children to actualize the potentials of its feature and setting.

Horelli (2007) notice there is a lack of holistic theories on environmental children-friendliness exists in spite of the increasing research on children's environment. Furthermore, Nordstrom (2010) analyzed Swedish children's written responses to the question of what they found to a child-friendly city according to these 10 dimensions. She compared the results with those of Haikkola *et al.* (2007) study in which Finnish and Italian children were asked to write down 10 key point about an ideal child-friendly environment (Nordstrom, 2010).

The Third Place

Urban sociologist Ray Oldenburg defined a third place of refuge other than the home or workplace or school where people and young children can regularly visit and commune with friends, neighbors, coworkers and even strangers. Oldenburg (1991) treatise on third place mostly focuses on the social aspect, and is a place to meet people. Frequently, third place are small bussiness, café, coffee shop, restaurant, community centers, general stores.

RESEARCH METHOD

The identification of influential factors will lead to an understanding of the relationship between children and street environment along their home-school journey. In other words, this study attempts to investigate the children perception and perspective of particular situation along home-school journey on street environment. Additionally, the approach not only assess the interaction between children and the physical environment, but also their social interaction with others. This study was conducted in Makassar city which has a child-friendly program. The city has a population 1.5 million and 38% of them are children population (Badan Pengelola Statistik, 2016). In old city zone of Makassar, amount 7.39% of population are living in high density of just 11 km² or 5% of total area in Makassar city. Specifically, four elementary public school in Wajo district as an old city zone of Makassar.

In this research focus on middle childhood in range of aged 9-12 which is a time children going to school without accompanied by an adult (Joshi *et al.*, 1999) and free active to play (Veitch *et al.*, 2010). Based on BPS and social Department Indonesia, 2003, the children who walk to school and back

are those come from poor families in old city zone. These are family usually does not own any vehicle at home hence they have to walk.

A participatory method was used to explore the meaning of home-school route from the less privileged children's perspective. Firstly, the researcher asked children to draw a map of the route from home to school as well as school to home which they had all walked many time as one of the school's regular routines and was relatively simple. In the map, the children put a various features depend on their memory while they walked home-school journey. This method was effectively used to obtain children's spatial knowledge (Rezasoltani, 2013; Ahmad and Taniguchi, 2007; Rissotto and Tonucci, 2002; Joshi *et al.*, 1999). Secondly, the free recall drawing map are supported with semi structured interview to interpret the children's drawing. The drawing and interview methods have been used by several researcher on children's experience of place (Yatiman, 2014; Sobel, 2002; Moore, 1990; Hart, 1979). It necessary in this study to obtain better understanding on their drawing and ensure the drawing represent the child's meaning and interpretation (Barker and Weller, 2003). the researcher interviewed the children based on their drawing. The interviewed were carried out one by one with the children. The question such as children's experience, why the children go and back from school with different route, what the children see along the way to school and back, the children go and back from school with whom and what the children talking with their friends. Moreover, the questions are important for obtaining full description and in-depth understanding of their emotional attachment on their home-school journey. These data were content analyzed using excel sheet and Nvivo 10.

RESULT AND DISCUSSION

The less privileged children's drawing map is presented familiar environment on their home-school journey as features in their drawing. The familiar environment as a developmental recognition of landmarks from children's perspectives. The features as shown in drawing readily serve as landmarks to identify a place that children had memories of their action and imagination (Cornell and Heth, 2006). From drawing map, there are 323 objects were collected, then it was combined into three categories using by excel sheet.

Handphone Shop	36	
Mall	33	
Internet café	8	
Restaurant	4	
Clinic	4	
Bank Building	2	
Purple Minimarket	1	
Warung	24	Mobile amenity
Becak	13	
Gerobak	10	
Traffic Light	36	Street utilities
Tunnel	5	
Canal	2	
Total	323	

Source: Analyze by excel sheet

From the table 1, that shop houses are highly mention in the drawing. The less privileged children often go to shop house to buy snack and drinks with their peers nor alone along go to school and back to home. Usually, shop houses become a main point for a child to meet up with their peers. Despite the shop house is the most showed in drawing map, it does not mean the shop house is a place they like.

Other less privileged children likely visit to *Gerobak* which is a vendor cart. Vendor cart is selling traditional deli cake with a cheaper price. Usually, vendor cart take a place in front of market store, a line up with *becak* (see figure 1). The buyer of vendor cart are pedicap, parking workman, also the children who walking to and from school. When the children and their friends made a good conversation with the seller or pedicap or other adult, they get free delicake. By the reason, the children more spend time at *Gerobak* and *Becak* than another features.

Subsequently, the result of node clustered analysis by Nvivo using the Jaccard's coefficient, showed that building and gender is the most similarity with coefficient is 1.

Building and street utilities is similarity with coefficient is 0.9 as well as street utilities and gender. It means all boys and girls drawn buildings and street in their mapping. However, the three of node that connected with mobile amenity are low similarity with coefficient is 0.33. It means that only a few children drawn mobile amenity in their mapping.

Table 1. The object as mention in drawing map

Objects	Quantity	Categories
Shop House	40	Building
Friend's House	36	



Figure 1: Sketch of the less privileged children’s socialize with adult

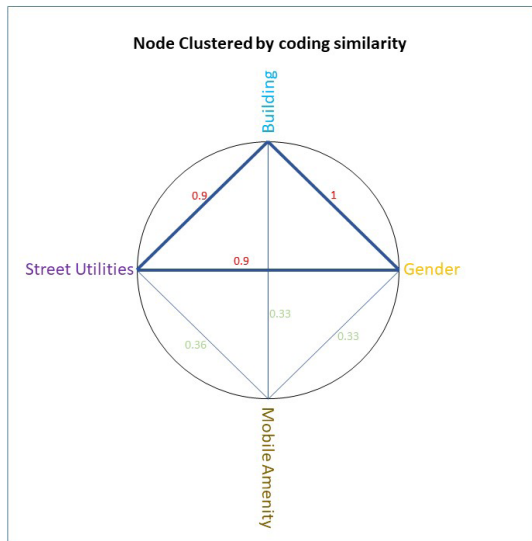


Figure 2: Node clustered analysis

Framework for analyzing cognitive map

The less privileged children’s mapping responses were recorded on the cognitive maps (see figure 3) in two stage. Firstly, it was to place representative symbols in the approximate location elements were drawn by the childrens. This was the process used for feeling such as places liked, played in and expression of happy; identification of friends’ home and the adult they know, as well as the objects that they usually playing.

For capturing environmental awarenes, a similar approach to what D.Appleyard used in Livable street was followed (Appleyard D *et al.*, 1981). Second, the children’s environmental awareness was captured and then represented in cognitive map was to scale-up line weights and type face in proportion to the frequency in which the elements were drawn.

For example, each time the same element was labeled in the same location by multiple less privileged childrens, a line was drawn and then scaled thicker in proportion to the frequency in which it was drawn. This was the same process used for recording the frequency of which road were drawn.

The resulting maps provides an effective graphic depiction of the school children’s collective ability to identify physical features in their environment journey, as well as their spatial association between activities, feelings, preference in their home-school journey.

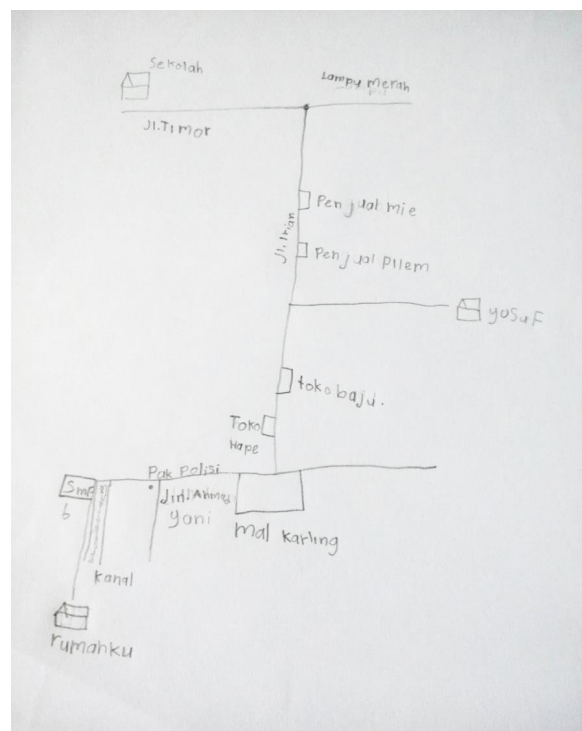


Figure 3: Children’s mapping in their school journey

CONCLUSION

The less privileged children drawn the mapping is a much richer sense of their school journey. They drew many places in the street where they liked to play. Less privileged children rely on play and education for their mentality and social development. In contrast, the less privileged children face greater threats from their environment their ability to explore independently is unlimited. In sum, threats posed by automobiles appears are not to be an obstacles to significantly improve children's ability to recall characteristics of neighborhood, suggesting an increased ability of children to develop further along Piaget's stages of cognitive spatial intelligence (Appleyard B, 2016).

CONCLUSION

Overall the findings of this research support the objective is to examines the meaning of home-school route as a child-friendly environment from the perspectives of less privileged children in old city, that traffic is not threat exposure (volume and speed), exacerbated by inadequate pedestrian and walking along school journey, limits children's progression along Piaget's developmental stages for spatial knowledge. Furthermore, this study finds that higher level of interaction with environment, through independent and active travel, may indeed improve children's spatial knowledge development.

Finally, cognitive mapping was provide useful tools for understanding how children view their school journey. The less privileged children view their home-school journey as a third place to socialize with their peers and other adults.

REFERENCES

- Armstrong, N., 1993. Independent mobility and children's physical development. *Children's transport and the quality of life*, pp.35–43.
- Buliung, R.N., Mitra, R. and Faulkner, G., 2009. Active school transportation in the Greater Toronto Area, Canada: An exploration of trends in space and time (1986-2006). *Preventive Medicine*, 48(6), pp.507–512.
- Corsi, M., 2002. The Child Friendly Cities Initiative in Italy. *Environment and Urbanization*, 160(2), pp.169–179.
- Gershuny, J., 1993. Escorting children: impact on parental lifestyle. *Children, transport and the quality of life*, pp.62–72.
- Gibson, J.J., 1979. Ecological theory.pdf. , pp.1–78.
- Hillman, M., 1993. One false move. An overview of the findings and issues they raise. *Children, Transport and the Quality of Life*, pp.7–18.
- Hillman, M., Adams, J. and Whitelegg, J., 1990. One false move: A Study of Children's Independent Mobility. *Policy Studies Unit*.
- Joshi, M.S., Maclean, M. and Carter, W., 1999. Children's journey to school: Spatial skills, knowledge and perceptions of the environment. *British Journal of Developmental Psychology*, 17, pp.125–139.
- Kearns, R.A., Collins, D.C.A. and Neuwelt, P.M., 2003. The walking school bus: Extending children's geographies? *Area*, 35(3), pp.285–292.
- Kellert, S.R., 2002. Nature and Childhood Development. In: *Building for Life Designing and Understanding the Human-Nature Connection*. pp. 63–89.
- Kyttä, M., 2004. The extent of children's independent mobility and the number of actualized affordances as criteria for child-friendly environments. *Journal of Environmental Psychology*, 24(2), pp.179–198.
- Mehdizadeh, M., Nordfjaern, T. and Mamdoohi, A.R., 2016. The role of socio-economic, built environment and psychological factors in parental mode choice for their children in an Iranian setting. *Transportation*, pp.1–21.
- Moore, R.C., 1986. *Childhood's Domain Play and place in child development*,
- Olds, A.R., 1989. Psychological and physiological harmony in child care center design. *Children's Environments Quarterly*, 6(4), pp.8–16.
- Pooley, C.G., Turnbull, J. and Adams, M., 2005. The journey to school in Britain since the 1940s: Continuity and change. *Area*, 37(1), pp.43–53.
- Romero, V., 2010. Children's View of Independent Mobility during their school travel. *Children Youth and Environments*, 20(2), p.2010.
- Yeung, J., Wearing, S. and Hills, A.P., 2008. Child transport practices and perceived barriers in active commuting to school. *Transportation Research Part A: Policy and Practice*, 42(6), pp.895–900.