World Applied Sciences Journal 35 (6): 873-879, 2017
ISSN 1818-4952

DOI: 10.5829/idosi.wasj.2017.873.879

Children's Participation in Designing the School Ground

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Abstract: The purpose of this study is to explore the role of preschool children in designing their school grounds. It will implementthe concepts of an innovative participatory multi-method known as Mosaic Approach. The Mosaic approach uses a variety of methods including observation, child interviewing, children drawing, children photograph and map-making to generate documentation. This leads to a formulation of the 'design concept' which emerged from the documentation, including some surprising design ideas, for example active spaces, personal spaces, scales, colour schemes and materials. This paper summarizes the result obtained from a case study of a group of children under the auspices of the Ministry of Education (MOE) in Malaysia. Results showed that children are capable asa research participants by helping the teachers and landscape architects to understand the environment from their perspectives including what it means, what is important and futures liked and dislike. Their views could provide additional knowledge about their outdoor play and learning experiences and significant implications for planning and designing of their existing or future school grounds. This led to creating a sustainable school grounds design that meets the needs of preschool children in Malaysia.

Key words: Landscape design · Outdoor Classroom · School Ground · Children Participation

INTRODUCTION

In many school settings, most children can be identified as auditory, visual or kinesthetic learners. Classroom are well suited to auditory and even visual learners, but those who are kinesthetic learners need more experiential environment that easily found in the school grounds. For example, studies by Wells [1] and Pyle [2] have found that exposure to nature environment improves children's cognitive development. In relation to this situation, when children play in the school grounds, their play is more diverse, with imaginative and creative way that fosters language and collaborative skills [3,4].

Understanding children views and perspectives about their school grounds is important in order to support inclusion and the needs of individuals, offering a diverse range of play-based experience. By knowing what young children think, adults especially teachers could understand their needs, interest and preferences much better and probably could offer a more meaningful play and learning experience for the children by acknowledging and providing spaces and experiences that are significant to the children's interest. Therefore, design and planning of school ground must support developmentally appropriate practice, being driven by children's interests and needs.

To create successful school grounds that optimize the learning experience and reflect the needs of the school in Malaysia, a better understanding of the user experience for school grounds is needed [5]. Therefore, this paper wishes to add to the growing of Malaysia preschool education research and literature by stressing the importance of the need for young children to be heard.

Children's participation is about children joint ownership of the decision-making process and being actively involved in the decisions that affect them. Participation in this study refers to children having the opportunity to express their views and relate their experiences to influence decision-making and the planning of their environment.

The participation project also referring as a case study in this paper is about planning and designing the outdoor classroom for children, but also with children. According to Hart, *et al*. [6], by participating in planning and designing their spaces, children will realize that the environment can be partly created and reshaped. More

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recently, Hart [6] has posited that participatory project is the one which children are directly involved in decision making relating to a project on themes relevant to their lives such as play spaces. This is a good concept for developing and designing the children's environment based on an enhanced functional understanding of their surroundings.

Recently in the United Kingdom (UK), children's participation is increasingly popular and being widely advocated throughout the UK education sector. Every Child Matters (ECM) initiative, for example, makes it imperative for schools to encourage participation. One of the five ECM outcomes for children's wellbeing says that children should 'make a positive contribution'. The first aim that given to this outcome is places schools under a statutory duty, to ensure that 'children should engage in decision making and support the community and the environment'. Additionally, the Education and Skills Act (2008) introduced a requirement that school governing bodies should invite and consider the views of children on core policy matters that are relevant for their lives. Children themselves are the experts in their own lives, in all aspects and dimensions [7].

Participation concept in Malaysia is not new, but children's participation in planning and designing their environment is relatively new, compared to the UK and European countries. There are several studies on children's participation of their environment in Malaysia, however, it is difficult to find a participatory project that involves young children actively in the design process of their outdoor environment. The opportunity to incorporate the children's participatory research approach to enhance the design and planning of school grounds in Malaysia is immense because of two reasons. Firstly, the Malaysian Ministry Of Education, has decided that learning through play is an integral part of the preschool curriculum as it recognizes the need for an informal, activity-oriented approach to preschool education either indoors or outside the classroom. Studies of outdoor play have shown that all areas of learning can be experienced outdoors [8,9,10]. School grounds, with their emphasis on active learning [11]; engaging in first-hand experiences [12] and challenging play opportunities [13,14] provide a rich context for such meaningful learning. Furthermore, by taking part in designing their school grounds, children would learn about their school environment and the nature of the environment and the behavioural relationships that occur within it.

Secondly, the need for proper design and planning of children's outdoor playgrounds has generated in the doctrine introduced by the Malaysian Urban and Rural Planning Department (JPBD) since 1997 [15]. The doctrine says that planning must take into consideration the functionality of the facilities to contribute to the well-being of the children. The outdoor play space should been designed with the aim of encouraging environmental stewardship in children through positive experiences and sustainable practice, therefore their engagement in the designing process could be beneficial to the functioning and educational purposes [16].

Mosaic Approach as a Participatory Method: Exploring children's perspectives of their school grounds requires participatory research tools that enable both child and researcher to understand their environment in more detail. These tools need to be accessible to a diverse group of individuals including different ages and with a range of skill and interests. These tools also need to be able to explore beyond the physical appearance of existing landscape elements to consider the Malaysian preschool culture that has been established there.

Clark and Moss [17,18] developed the multi-method 'mosaic approach' as a framework in a study known as Listening to Young Children, in order to interpret environment through the 'eyes of young children'. The main objectives of the study are to gain in-depth understanding of the child's perspectives on their preschool setting. The name of 'mosaic' was chosen, in order to convey the construction of an image of an individual or a group or an organization using a variety of research pieces [19].

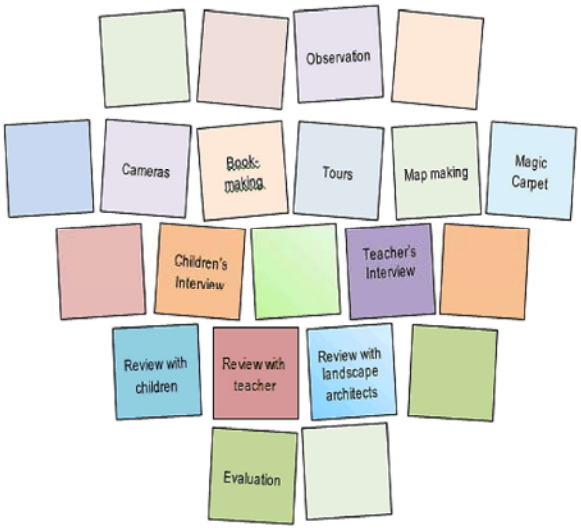

Fig. 1: Individual pieces of Mosaic Approach (Source: Clark and Moss, 2006)

In mosaic approach, traditional research methods of observation and interviews need to sit alongside with the image-based research tools, including children's photographs, children's drawings, map making, in which children play an active role in gathering and discussing the research material. This approach designed to be an active research process where meanings are constructed from a variety sources and by different individuals in order to compile a picture of a series of pictures.

Clark and Moss (2001) present both a framework for listening and suggest the Mosaic Approach to listening to younger children. The framework for listening is:

- Multi-method: recognises the different languages or voices of children
- Participatory: treats children as experts and agents in their own lives
- Reflexive: includes children, practitioners and parents in reflecting on meanings and addresses the question of interpretation
- Adaptable: can be applied to a variety of early child-hood institutions
- Focussed on children's lived experiences: looking at lives rather than knowledge gained or care

Fig. 2: A Brief Introduction to the Mosaic Approach (Source: Clark and Moss, 2005)

Data Sampling Strategy

Participants of the Study: Two preschool classrooms from one government preschool, consisting of 38 (21 female and 17 male) children, 2 teachers and 2 teaching assistants participated in the study. Children predominantly came from very low to middle family income. Children who attend the school ranged from 4 to 6 years of age came from different races (i.e. Malay, Chinese and Indian).

Nature of Data: The table below provides an overview of the tools of Mosaic approach (see table 1), some considerations of their use and nature of data gathered in this study

Data Analysis: In order to organize the material gathered, data analysis has divided into stages (see Table 2). First stage begins by detailing the process of assembling materials with participating in the preschool of what they thought about the existing school ground. This involves a range Mosaic approach participatory tool of camera, book making, tours and map making and traditional method such as observation and interview. At this stage, a key research question is 'What does it mean to be in this place? The question conveys the interest of exploring the meanings and experiences of their place [18]. It acknowledges this is not a search for correct answers, but an exploration about how a preschool environment is experiences of young children who are knowledgeable about this particular place.

Table 1: Overview of the tools of Mosaic approach

Tool	Research consideration	Questions	Nature of Data
Observation (narrative accounts of researcher)	Reveal important meeting places Understand children play pattern	Where do children like to play? What does body language/ expressions/ vocalization contribute to narrative?	Field notes Video recording
Photograph and book making	General information about the place use and preference of children	What are your favourite places or elements/ features to photographs? Why did you choose these things?	Photo booklets Field notes Printed photographs
Tours	Information about the past event and memories about places	Tell me about/ show me all about the school grounds?	Video recording Field notes
Map-making	Reveal the importance of the key play features and the wider environment	How the spaces connected to their feelings?	Children's drawings Field notes Video recording
Magic carpet	Reveal children insight about their knowledge of the wider environment	What local spaces children aware of? What is their experience of these places? What additional insights can thus give to the current and future uses of school grounds?	Video recording Field notes
Child interviews	Explore the children's experiences of the existing school grounds	What are best/worst outdoor places? What does it mean to be in this place?	Audio recording Field notes
Teacher interviews	Explore teacher idea of school grounds	Why children like this place?	Audio recording Field notes

Table 2: Stages of Data Analysis

The second stage of analysis involves the role of children, teachers and researcher in reviewing the material, interpreting meanings and reflecting on what were the important places and uses of space in their school grounds. In this stage, a dialog and discussion with the children was arranged in an informal ways using the documentation the children had produced in the first phase of the study, for example the used of photographs as a focal point for the construction of meanings (see Figure 3). Great care needed to ensure that the researcher's interpretation of the images did not overrule the meaning offered by the children. At this point, the researcher needs to focus on recording the interactions, which took place around the selected photographs.

Fig. 3: Children's involvement in discussing and reviewing their documentations in about issues and potentials of their school grounds

The materials produced by preschool children through the reviewing of Mosaic approach tools such as book making, maps making and drawing demonstrated that they had built up layer of knowledge about their immediate surroundings. The materials have categorized accordingly into four types of places in the outdoor space [18]:

- Place to maintain
- Place to expand
- Place to transform
- Place to add

The third stage has described how the documentations and materials produced by children provides one way of involving them in deciding areas of continuity and change, at the early stages of the design proses. The attention moves from the direct interaction with children to the discovering on how children's views will create a platform for establishing a dialogue with the landscape architect and designers. Reflection on the children's material (see Figure 4) led to a debate among the landscape architects about specific aspects of the design changes to the school grounds in this study.

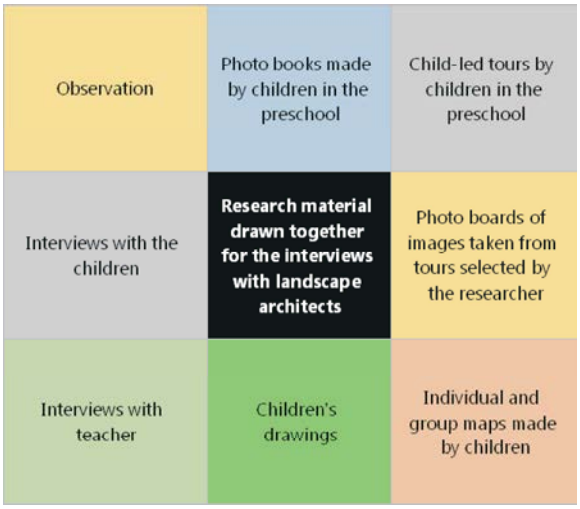

Fig. 4: Research material drawn together for the interviews with landscape architects

Findings: From the general observation, children were able to access all spaces within the fenced area of the school grounds. Easy access to the outdoors from the classroom is an opportunity for teachers and children to use more outdoor spaces.

The boys mostly focus on the physical activity such as climbing frame

Fig. 5: The boys mostly focus on the physical activity such as climbing frame

Playground equipment such as a climbing frame and swings from the 70s era, made of iron is still popular in used. Some of the play equipment did not match the age requirements, for example the climbing frame, but still be the popular play equipment especially among the boys. Closer observation showed the complex social networks, talking and role-play that the children engaged in. Observation showed this to be a physical space for children to demonstrate their climbing, balancing and other challenging physical activities.

Closer observation showed the complex social networks, including communication and interaction also engaged in their outdoor play activity. Swings for example, provides nice places to cement a friendship and could promote particular social networks with other children. There are also problem-solving activities that can take place in a swing area. With a limited number of swings, decisions must be made about who gets to swing and what determines as the complex negotiation of 'taking turns' among them.

Fig. 6: Swings provide nice places to cement a friendship and could promote particular social networks with other children

Fig. 7: Children need private space where they can play alone or in a small group

Another piece of new information related to social and intimate spaces. For children, school ground is not just about adventure and exploration but it is also about closeness and intimacy. Tight and secure relationships give children the confidence to explore and return to a trusted adult when needed. It proves that children are social beings and needs adults who will share their excitement and curiosity.

Fig. 8: Opportunities for experiencing the mystery and beauty will find in any rich environment such as school grounds

Findings from the child's interview indicates that children preferred to play with their peers. These data denotes the effect of playground equipment on children's socialization level. Design of play structure affects children's way of using the equipment. Children who cannot manipulate the equipment by themselves need the help of their friends on the playground. Children also learn to turn taking and respect to others during play periods. As the findings of this research indicated that the playground is a rich and relatively unrestricted environment directly contribute to the quality of children's social interaction with peers. The traditional type play equipment also plays an important role in children's socialization without exception.

By using an array of methods such as photographs, maps, drawings, observation, interviews and considering the literature on a child's environment, the following themes emerged as important features for their future design of school grounds. This included thinking about equipment as well as social and aesthetic spaces:

- Spaces for active play for movement and physical challenge
- Spaces for exploring and investigating
- Private spaces for the imagination and stillness
- Spaces for mystery and enchantment
- Natural spaces
- Social spaces
- Intimate spaces for adults and children
- Connected spaces

Main Play Area
Blue tube - a social place, talking, imagining for individual and group play
Swing - a social place for individual or group play, relaxing and talking
Slide - a social place for being noisy, imagining in a group play
Logs - physical space for balancing, jumping and relaxing
Chain fence – social place for talking and meeting
Exercise station- balancing object, meeting point, physical space for jumping

Paved Area
Plastic Play Equipment – private place, for individual play, imagining
Concrete Gazebo – private place, pair or group games, dramatic play
Concrete Picnic table and benches – individual activity, imagining, s social place for relaxing
Covered walkway- theme play, sitting and watching

Patio/Extended Roof
Concrete ledge- watching
Dinner table- social place for talking

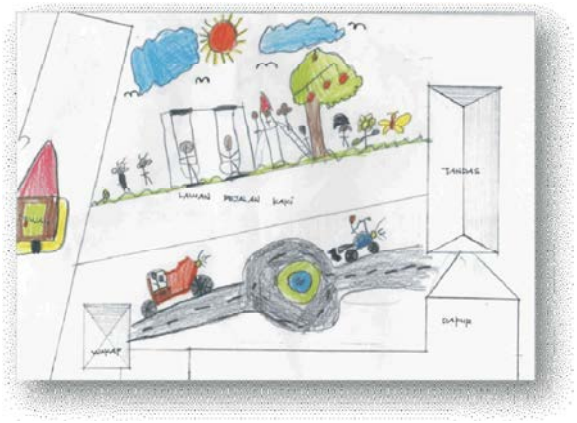

Fig. 9: Krishan's drawing added another layer of understanding about his future school ground environment. He drew bikes and car racing-track for the physical activity and a natural corner with natural feature such as fruit trees, flowers, grass and shrubs to provide habitats for small insects such as butterfly. The drawing also revealed the importance of social and intimate spaces for preschool children

CONCLUSION

Children are the primary users of the school grounds. Therefore, the design of the school grounds must take account of their ideas and perspectives, as they are competent commentators on the details of their everyday lives. This study acknowledges that children create

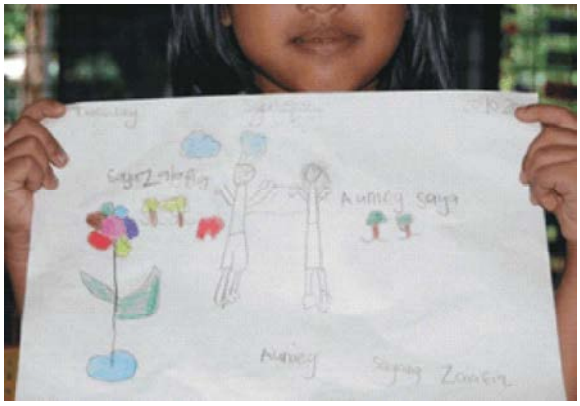

Fig. 10: Children identified places with the people they play with. Five year old, Auni proudly communicated by drawing an outdoor as a places to go to be with her best friend.

meaning out of space and these meanings may be full of ideas that are worth listening. This contrasts with the traditional way of listening to children, which places the researcher firmly in the expert's chair with the children as an object.

The data gathering and consultation processes of the Mosaic approach comprise a diverse range of visual and verbal methods, including traditional and innovative listening techniques. The data gathering process, also known as 'documentation', comprised of a range of evidence, including narrative observation, children's photographs, consultation with children, children's maps, as well as interviews with teachers or practitioners. These listening research techniques are participatory and inclusive as they offer a wide variety of triangulated evidence that can be represented as a mosaic, of evidence.

School grounds offer a dynamic environment for play and hands-on learning and thus, should be allowed to change over time as new users make refinement and additions. Moreover, since the main goal of school grounds is play and learn, children or students of all ages should be involved and participate as much as possible in planning and designing the project. In the Malaysian context, meaningful participation in designing the school grounds requires a cultural shift by the Ministry Of Education and school administration. Such a shift occurs when children's view and experiences are embedded within the principles of respect between children and adults. The children must understand that their views are not merely listened to, but also acted upon. Listening to children is simply half the project and acting upon children's ideas in the other half.

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