

THE VALUE OF DESIGN RESEARCH

INTEGRATING A CHILD'S AND A DESIGNER'S PERSPECTIVE WITHIN OUTDOOR PLAYGROUND DESIGN

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ABSTRACT

Play is a natural and simple joy which is an important part of the childhood. It is a right from a birth for every child. Creativity, problem-solving, social interaction, motor development, physical fitness and enhanced parent-child relationships of children can be developed through play. In addition to play, access to the natural world is also an indispensable part of childhood because of its positive contributions to well-being. An outdoor playground is a place which allows children play in nature. Children are the users of playgrounds and usually do not have an opportunity to give their view about them because adults are the ones who design them. Although, generally children are not consulted until the end of the design process, as our design partners, children can offer totally honest views of their world, and therefore children's input into the design and development process is critical. The aim of this study is to understand the differences in the perspectives of the children and the designers about the outdoor playground design and how considering both adult and child perspectives can contribute to design more effective spaces for children. A case study was conducted with the 20 designers and 20 children in Turkey. The children were asked to draw their imaginary playgrounds, and designers were asked to answer multiple-choice questions about outdoor playground design. Eventually, according to the results of the case study, differences between the perspectives of children and designers were analyzed, and compared, and a set of design guidelines on outdoor playground design was created accordingly.

Keywords: Play, playground, child's perspective, designer's perspective, children and design

1 WHAT IS THE IMPORTANCE OF PLAY FOR CHILDREN?

Play is a pleasurable event which has no specific aim and occurs spontaneously, and is shaped by rules of children themselves (Vygotsky, 1966). According to Day (2007, p.16), 'Play is no luxurious indulgence'. Play is a natural and a simple joy (Huizinga, 1955), which is an important part of the childhood (Louv, 2005). It is so important for optimal child development that it has been recognized by the United Nations High Commission for Human Rights as the right of every child (Ginsburg, 2007), which comes from the birth (Vygotsky, 1966). Through play, children can explore the world, interact and engage with peers and adults, practice mastery and gain skills that will help them to face future uncertainty. It also offers many things for the holistic development of a child. Creativity, problem-solving, social interaction, motor development, physical fitness and enhanced parent-child relationships can be developed through child-directed play. In addition, play is important for the healthy development of the brain (Chia, 2007).

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Because of its many contributions to the cognitive, physical, social and emotional well-being, play is an essential element for the development of children and young people (Louv, 2005). Play allows children to create and explore a world that they can master (Hurwitz, 2002 and Tsao, 2002 as cited in Ginsburg, 2007, p.183). As they master their world, they can develop new powers which promote increased confidence and the quick recovery needed to face future challenges (Erikson, 1985; Band and Weisz, 1988 and Hurwitz, 2002; as cited in Ginsburg, 2007, p.183). Interestingly, play is also used to foster academic and social-emotional learning. Play can help children to adjust to the school environment, heightens children's readiness to learn, enhances positive learning behaviours and fine-tunes problem-solving skills (Fisher, 1992 as cited in Chia, 2007, p.376).

According to Huizinga (1955, pp:8-10), there are 5 characteristics of play. These are: '1) Play is free, is in fact freedom. 2) Play is not ordinary or real life. 3) Play is distinct from ordinary life both as to locality and duration. 4) Play creates order, is order. Play demands order absolute and supreme. 5) Play is connected with no material interest, and no profit can be gained from it'. Toys are the basic tools that allow children to play, anything can be used for play. In addition to toys, playgrounds which are designed with specific elements to allow children play (Sobel, 2008) are also essential environments for children.

2 WHY DO CHILDREN NEED OUTDOOR PLAY EXPERIENCES?

Just as play and playground are essential elements in child development, the nature connection is also essential for raising healthy children due to its restorative effect on human beings (Parsons, 2011). In the past, children preferred to play outside when they had free time. They spent the most of their recreation time outdoors, using the sidewalks, streets, playgrounds, parks, greenways, vacant lots and other spaces untouched by the urbanization process, or the fields, forests, streams and yards of suburbia. Children had the freedom to play, explore and interact with the nature. According to White, today children have few opportunities to play freely outdoors because children's everyday life has shifted to indoors and the culture of childhood that played outside is disappearing. As a result, their spontaneous and direct contact with nature, which is an important childhood experience is about to vanish (White, 2004).

In contrast to screen based playing activities in indoors, nature provides many natural based activities for children in outdoors. By just walking along a green path or spending some time in a natural place, children can discover and find out many new things, which increase their enthusiasm by learning. They can also use their creativity to discover new play activities by themselves or with their friends and families (Chia, 2007). According to Kahn and Kellert, nature has an evolutionary significance in childhood, and it offers evidence that children's mental and physical development is depends on their experiences in nature (Kahn and Kellert, 2002). By creating stronger connections to natural environments, children's cognitive development, observational and reasoning skills can be improved (Pyle, 2002 as cited in White, 2004). Children's socialization can also be increased in natural environments because they find themselves in a world with many new things to discover (White, 2004).

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In an international study 'Growing up in Cities' by Lynch (1977), it was found that children universally appreciated vegetation. According to Cheung and Wells, a growing body of literature shows that the natural environment has profound beneficial effects on well-being, including psychological mood, cognitive functioning, physical illness and recovery time (Cheung and Wells, 2004). Playgrounds which have connection with outdoors provide an opportunity for children both to connect to nature and to play at the same time. According to Parsons, children's outdoor play and interaction with natural elements influences learning, development, and overall health. In addition, outdoor play has a positive effect on children's social development, motor skill development, and activity level (Parsons, 2011).

3 CAN CHILDREN BE OUR DESIGN PARTNERS?

There is increasing interest in exploring children's views on design environments (Coyne and Kirwan, 2012). Therefore, in recent years, research by Theng e al., (2000), Farbel et al., (2002), Druin (2002a), Guha et al., (2004), Warden (2010), Söderback et al., (2011), has focused on understanding the role of children in the design process (See Figure 1) as users, testers, informants and design partners. The first and oldest role of children in the literature is as users. While the child is in this role, the adult uses various methods to understand the child's activities. Child as a tester is a more recent role for children in the development process. In this role, the child can test prototypes. As an informant role, child plays an important part in informing the design process. Before a design is developed, a child may be observed with existing ones and once the new design is developed, child may again be asked to offer feedback or input. In this role, child plays a role in various stages of the design process. The role of child as design partner involves children in the research and design process during the experience. Children should have equal opportunity to contribute to the design process, in any way possible, acknowledges that a child cannot do everything that an adult can do (Druin 2002b).

The Child as...

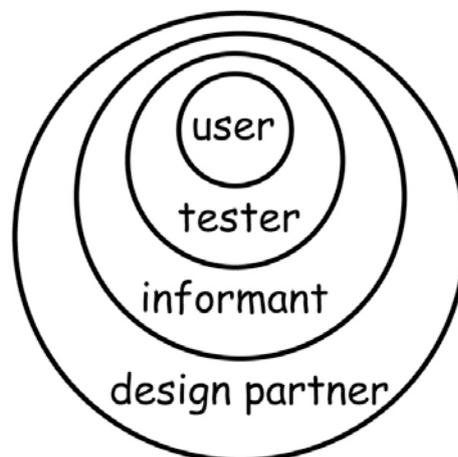


Figure 1 –The four roles that child may have in the design process.

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According to The United Nation Convention on the Rights of the Child, it is the right of every child to self-determination, dignity, respect, non-interference, and the right to make informed decisions. United Nations Children's Fund's belief that children need to be encouraged and enabled to make their views known on issues that affect them (The United Nations Children's Fund, UNICEF, 2003 as cited in Söderback et al., 2011, p.100). Children have their own likes, dislikes, curiosities and needs, which are different from adults (Theng et al., 2000). Their use of space is also different from adults use and as users of the spaces, adults are the ones who generally design them (Warden, 2010). Indeed as our design partners, children can offer bluntly honest views of their world (Farber et al., 2002) and when given the chance to express their ideas about design, they give valuable insights (Druin et al., 1998). According to Bishop, children and young people are competent to talk about, and document their environment and experiences within it, in a capacity that is useful to designers, planners and policy makers (Bishop, 2008).

According to Söderback and Coyne (2011, p.100) design should not consider "a child perspective which is characterized by the adults' outside perspective on children's conditions, experiences, perceptions and actions, with the individual child and his/her best interests in mind, but rather it should consider "a child's perspective which is characterized by the child's insider perspective on the conditions, experiences, perceptions and actions, based on what he or she find as important". Although, generally children are not consulted until the end of the design process, there are many roles that children may play in the design; they should be design partners throughout the design process (Druin, 2002a; Druin, 2002b and Guha et al., 2004) and their input into the design and development process is critical (Druin et al., 1998). According to Chawla (2002, p.14), "It is important not only to give children special consideration in planning and managing human settlements but also to incorporate children themselves into many decision processes. In this way, adults can be sensitized to children's needs that they often overlook, and children can learn how to take an active and responsible role in caring for the local environment".

4 CASE STUDY

A case study was done with 20 children and 20 designers in Turkey. Children participants were chosen from İzmir Villa Çocuk Kulübü Kindergarten's 5-6 years old students, who were asked to draw imaginary playgrounds (See Figures 2, 3, 4, 5, 6, 7 and 8). The reason choosing the drawing method is because young children may have challenges expressing ideas in words only. According to a study done by Guha et al., it was found that while some of youngest design partners can write, ideas from children's drawings can be much more creative than writing because drawing is a crucial method of expression for young children (Guha et al., 2004). In a study done by Karmiloff-Smith (1990), it was found that children between 5-11 years old are already successful at producing drawings and also have an adequate conceptual knowledge about the object being drawn. In addition, these children are able to understand the abstract idea of designing something on paper, and are sufficiently self-reflective and verbal to discuss their thoughts (Druin et al., 1998). That's why, children were therefore also asked to explain their drawings verbally in order to understand their ideas in depth. Designer participants were chosen from İzmir University of Economics' Faculty of Fine Arts and Design and were asked to answer a multiple-

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choice questionnaire about outdoor playground design (See Figure 9). Eventually, according to the results of the case study, differences between perspectives of children and designers were analyzed, compared, and a set of design guidelines on outdoor playground design was created accordingly.



Figure 2 – A playground which has phosphoric play items that light up at night.



Figure 3 – A playground which has a big play trail.

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Figure 4 – A playground which has a toy shop.



Figure 5 – A playground which has major green areas.

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Figure 6 – A playground which has bicycle ways for children.



Figure 7 – A playground which has underground tunnels.

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Figure 8 – A playground which has play items for babies.

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Age / Gender:
Academic Title:

QUESTIONNAIRES

1. If you were a child what would you expect from outdoor playgrounds?
(Please put an x below the most important 5 of them)

Wayfing Freedom Safety Accessibility Green Areas Cleanliness

Fun Diversity of Play Things Meeting with New Friends Flexibility Discovery

Extra Notes:

2. What are the elements that should be included into outdoor playground design?
(Please put an x below the most important 5 of them)

Lighting Fixtures Play Item Materials-Natural Play Item Materials-Artificial Toilets

Landscaping Sitting Units Free Drinking Water Eating-Drinking Area

Soft Ground Materials Shading Units

Extra Notes:

3. What are the contributions of outdoor play for children?
(Please put an x below the most important 5 of them)

Socialization Self Confidence Creativity Increased Learning Skills Well-Being

Physical Activeness Healthy Development Freedom Discovery Self Defense

Extra Notes:

Figure 9 – Multiple-choice questionnaires for designers.

Above, there can be seen seven outstanding examples of drawing by the child participants. Figure 2 shows, a playground with phosphoric play items, which has never been seen in real life. This child wants phosphoric play items because his parents do not bring him to playground when it is dark. By using this system, playgrounds will be illuminated; therefore his parents will bring him there to play at night. Figure 3 shows, playgrounds with a big play trail and a tent. Child wants a big play trail because the playground in which she usually plays in her neighborhood is a small scale one, without any interesting play items for play. In addition, she wants a closed space in the playground to shelter in when it rains, therefore she drew a tent. Figure 4 portrays a playground with a toy shop. The child thinks that with a toy shop in a playground, children can both play and buy toys at the same time.

Figure 5 depicts, a playground which a major green areas. In this drawing, the dominant color is green and the child believes that a playground should be

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surrounded by trees and plants because seeing these makes him happy. Figure 6 represents a playground with bicycle paths for children. This child likes to ride a bicycle but his parents do not let him because of heavy traffic and other security issues in the neighborhood. He therefore needs a private place to ride a bicycle in a playground. Figure 7 shows, a playground with underground tunnels. In contrast to typical playgrounds which serve above-ground activities, this child also wants to use the underground area of the playground because he thinks that playing in narrow and labyrinth type spaces is enjoyable. In Figure 8, a playground which has play items for babies is depicted. The child has drawn two different kinds of swings, one for babies and other for older children. Her parents do not bring her to playground because of the lack of facilities for younger children. That's why she wants to find a solution to this situation.

After analyzing the children's drawings, it was found that some play items in the drawings existed but many of them did not such as phosphoric swings and slides, bicycle paths, underground tunnels, play items for babies, and toy shops. As a result, it can be said that children desire playgrounds with features and equipments not available in the existing ones. Interestingly, although there was no reference to "outdoor" in the instruction to draw a playground, all children drew outside playgrounds. All drawings include outdoor elements, including sun, clouds, sky, fireworks and green areas. This may be an indicator that children generally desire to play outdoors. Finally, in almost all drawings there are colorful playgrounds and smiling children. This suggests that, children see playgrounds as environments which provide a positive contribution to their well-being and make them feel happy.

The designers gave different answers to the multiple-choice questions. In response to the first question 'If you were a child what would you expect from outdoor playgrounds?', the 5 most frequent answers were; fun (95%), diversity of play things (90%), discovery (85%), freedom (60%), and green areas (50%). In response to the second question 'What are the elements that should be included into outdoor playground design?', the 5 most frequent answers were; natural play item materials (90%), soft ground materials (75%), toilets (70%), free drinking water (60%), and shading units (55%). As an answer to the third question 'What are the contributions of outdoor play for children?', the 5 most given answers are; socialization (95%), physical activeness (90%), self-confidence (65%), well-being (55%), and healthy development (50%).

As a result of the designer's answers, it was found that when asked to put themselves in the place of child, their expectations from a playground is similar to children's, focusing on fun, diversity of play things, discovery, freedom and green areas. When it comes to real life, however, they necessarily move away from such perceptions because inevitably their mind reflects their adult status and they are not the users of playgrounds themselves. 95% gave fun as an answer to what they expect from playgrounds. But the playgrounds actually designed like that? Are they designed to promote fun? When compared with existing designs, it seems that many playgrounds are ready made and many are uniform in design. In addition in response to the question "which elements should be included in playground design?" natural play item materials and soft ground materials were chosen by 90% and 70 % of designer, respectively.

5 CONCLUSION

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In conclusion, this paper aimed to understand how the perspectives of the child and the designer about the playground design differ in order to design more effective spaces for children by including ideas of both children and adults. A case study conducted with 20 children and 20 designers in Turkey, children were asked to draw and verbally described their imaginary playgrounds, and designers were asked to answer a multiple choice questionnaire about outdoor playground design. Based on this data, the differences between perspectives of children and designers were analyzed and compared, and a set of guidelines for playground design was created accordingly. As a result it was found that children at the age of five and six are able to use drawing to convey abstracts concepts, and also explain them verbally. This finding is evidence that children can be design partners when appropriate methods are used to elicit information. Their ideas can help in the design of playgrounds which cater for the needs and wishes of their actual users, and therefore children's contribution to playground design is essential. As well as the views of children, those of designers are also very important in playground design because although children can contribute to the conceptual aspects through their ideas, adults are needed to apply them. In this process, adults are like bridges which transform the tangible into the intangible. A set of design recommendations for outdoor playgrounds in line with the findings are provided below:

- Diversity of play items are an important criteria for playground design because such items are basic elements which allow children to have fun. In addition, more play items mean more physical activity for children, because discovery is inherent for them.
- Landscape design should be a part in outdoor playground design because both children and designers especially desire green areas and trees which are also important elements for providing nature and children connection.
- The design criteria for these areas should take all needs into account, including those of toddlers, infants and the disabled; every child has the right to access to playgrounds.
- Illumination and shading are other important criteria for outdoor playground design because these are main elements which determine the occupancy of these environments. Outdoor playgrounds should be designed for both day use and evening use. Design features should include to protect from exposure to sun in day time and lighting fixtures to provide illumination in evening time.
- Soft ground materials and seating units are other important elements that should be included in outdoor playground design because controlled safety is indispensable in these environments. One of the major problems in outdoor playgrounds is injury caused by falling. Soft ground materials can minimize these injuries and seating units allow parents watch their children playing, and intervene when necessary.
- Toilets and free drinking water are not currently available in outdoor playgrounds. These are two basic needs for the children who use them.

In the further studies, other case studies can be conducted with children from different age groups and adults with different professions, in order to get a broader view and a wide range of feedback.

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