

AN ASSESSMENT OF CHILDREN'S IDEAL SCHOOLYARDS THROUGH THEIR DRAWINGS ¹

ÇİZİMLERİ İLE ÇOCUKLARIN İDEAL OKUL BAHÇELERİNİN DEĞERLENDİRİLMESİ

Okşan TANDOĞAN

Namık Kemal University, Fine Arts and Design Faculty, Tekirdağ / Turkey

ORCID ID: 0000-0001-8656-0727

Öz: Amaç: Bu çalışmanın amacı, çocukların hayallerindeki ideal okul bahçelerini araştırmak ve bu alandaki araştırmalara yeni bir ivme kazandırmaktır. **Yöntem:** Çalışma, çocuğun bakış açısıyla çocukların ideal okul bahçelerini belirlemek için çocukların çizimlerinin analiz edildiği nitel bir çalışmadır. Çalışmanın örneklem kümesini Tekirdağ'ın Çorlu ilçesinde yer alan bir satranç kulübüne devam eden çocuklar oluşturmaktadır. **Bulgular:** Çalışmanın sonunda çocukların görüşüne göre, ideal bir okul bahçesinde bulunması gereken unsurlar ağaçlar, hayvanlar, yüzme havuzu, su birikintisi gibi su elemanlarıdır. Çocukların mevcut okul bahçelerinde en çok hoşlanmadıkları unsur ise sert zemindir. Ayrıca çocukların çizimlerinin analizi okul bahçesini çocukların oyun alanı olarak gördüğünü açıkça ortaya koymuştur. Çocukların çizimlerinde görülen salıncak, kaydırak gibi oyun ekipmanları bunun bir göstergesidir. Çocuklar okul bahçelerinde futbol, basketbol sahası gibi spor alanlarını da istemektedirler. **Sonuç:** Çocuklar bitkiler, kum, su ve hayvanlarla birlikte doğal okul bahçeleri istemekte, doğal peyzajı insan yapımı peyzajlardan daha çekici bulmaktadırlar.

Anahtar Kelimeler: Okul Bahçesi, Çocuğun Gelişimi, Suç Korkusu, Bağımsız Hareketlilik, Doğal Çevre

Abstract: Aim: The purpose of this study was to explore what children considered the ideal schoolground to be and thus give fresh impetus to research in this area. **Method:** This was a qualitative study in which children's drawings were analysed to produce a picture of the ideal schoolyards from a child's perspective. The sample consisted of children who were members of a chess club in the Çorlu district of Tekirdağ, Turkey. **Results:** At the end of the study it has been found that in children's opinion the ideal schoolyard should have: green areas with trees, animals, water features such as swimming pool or a fishpond or something similar. The feature children most disliked in their existing schoolyards was the hard surface. Also the analysis of the children's drawings made it apparent that they saw the school grounds as their playground. This is demonstrated by the inclusion of play equipment such as swings and slides in their drawings. Also children want to have sports facilities such as football, basketball, volleyball. **Conclusion:** Children want schoolyards naturalised with plants, sand, water and animals and find naturalistic landscapes more attractive for play than more obviously manmade landscapes.

Key Words: Schoolyard, Child's development, Fear of Crime, Independent Mobility, Natural Environment

Doi: 10.17365/TMD.2017.2.2

- (1) *Responsible Author: Okşan TANDOĞAN, Namık Kemal University, Fine Arts and Design Faculty, Tekirdağ / Turkey, otandogan@nku.edu.tr, Geliş Tarihi / Received: 12.02.2017 Düzeltme Tarihi / Kabul Tarihi / Accepted: 12.06.2017 Makalenin Türü: Type of article (Araştırma – İnceleme / Research Review) Çıkar Çatışması / Conflict of Interest: Yok / None "Kurum İzni Var – Institution Permission" (Namık Kemal University Fine Arts and Design Faculty, No: 57462741-824.99-E. 36916 Date: 12.07.2017)*



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

INTRODUCTION

In today's world social and environmental factors limit children's opportunities for outdoor play (Little and Wyver, 2008:34). Children have lost access to traditional play environments in urban contexts, in particular, streets (Tandoğan, 2011:1). The main factors at work are as follows: a decrease in open-air areas as a result of dense settlement, an increase in traffic due to high rates of car ownership and parental anxiety about the safety of urban environments (Little and Wyver, 2008:34). Parents are increasingly concerned about children's safety in urban areas due to traffic and fear of crime and many parents perceive urban areas as dangerous places for children (Leden et al., 2014:406; Zubrick et al., 2010:26). As a result children in many countries are no longer independently mobile in urban areas (Gaster, 1992:23; Hillman et al., 1990:70; O'Brien et al., 2000:257; Shaw et al., 2013:178-191) and many children living in urban areas are escorted to school by their parents (Heurlin-Norinder, 1996:310; Rivkin, 1997:61) and consequently have lost access to such neighbourhood environments as streets (Tranter and Doyle, 1996:151; Valentine and McKendrick, 1997:229). This situation has limited children's opportunities to meet and interact spontaneously with other children as well as their freedom to explore their environments and to play. In summary,

children have been deprived of play opportunities in the outdoor environment.

Rapid urbanisation and industrialisation have taken nature-based habitats away from children (Rivkin, 1997:61; Derr and Rigolan, 2016:125). Contact with outdoor play habitats is a vanishing experience for the child. Urban children, in particular, are often trapped in environments that provide few opportunities for self-discovery or exploration of the natural environment (Malone and Tranter, 2003:89).

Making neighbourhoods and streets safer for children and thus reclaiming a significant part of cities as play space would be one long-term solution to the problem of urban children's loss of access to play environments (Tranter and Doyle, 1996:153), but in view of the difficulty of creating a truly child-friendly urban environment, it is much more appropriate to focus primarily on making schoolyards more suitable for children (Malone and Tranter, 2003:116).

Children spend a great deal of their time at school. In the United States primary and secondary school children spend on average 1300 hours at school per year (Brink et al., 2011:1673) compared with 935 hours in Turkey (Ayaşlıgil and Turan, 2009:280). The total time spent in the schoolyard is 1–1.5 hours per day for primary school children, 20–25% of the time children spend at school (Ches-



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

key, 1996:12). Considering that, the school and schoolyards seems to be effective in the formation and development of the character of the child (Kanat, 2014: 70).

Since schoolyards around the world are generally within walking distance of the children's homes and safe from vehicular traffic they are one of the safest places in the urban environment and are potentially available throughout the day. Moreover, unlike other urban open spaces, schoolyards are under the jurisdiction of active public institutions and so schoolyards are always protected and supervised. This makes schoolyards different from other places where children might play (Tandoğan, 2011:16-17). There is also evidence that children learn better in schoolyards than in traditional indoor learning areas (Cronin-Jones, 2000:207).

Schoolyards can be used for educational activities relating to a wide range of subjects, such as language, mathematics, science, geography, art and health education (Basile and White, 2000:57-61; Blair, 2009:16-21; Dymont, 2005:40-42; Maynard and Waters, 2007:263-264) and can have a positive impact on children's eating attitudes (Blair, 2009:15).

The research has also demonstrated that schoolyards affect children's social, physical, emotional, cognitive and motor development

(Herrington and Studtmann, 1998; Özdemir and Yılmaz, 2008; Reif and Sadi, 1997). It is known that planting is important in outdoor playgrounds such as schoolgrounds (Özburak, 2016:30). Because playing in natural environments seems to have a positive effect on children's learning and cognitive skills (Fjortoft, 2004:37-38; Fjortoft and Sageie, 2000:112,117; Raith, 2017:91) and children who play in natural environments show better academic performance (Lieberman and Hoody, 1998:7). Children playing in natural schoolyard settings become more creative in their play (Fjortoft, 2004:112; Moore and Wong, 1997:5; Raith, 2017:91), and have more positive feelings about each other (Herrington and Studtmann, 1998:204; Moore, 1996:72-82). They also show well-developed social interaction and social behaviours (Malone and Tranter, 2003:97; Titman, 1994:23-115). Natural-habitat landscaping also fosters children's environmental awareness (Bradley, 1995:245). Contact with nature has reduces symptoms of attention deficit hyperactivity disorder (ADHD) (Taylor and et al., 2001:73-75; Kuo and Taylor, 2004:1584-1585; Taylor and Kuo, 2008:5-7) and reduces stress in children (Wells and Evans, 2003:311). Additionally, access to schoolyards encourages children's physical development and reduces childhood obesity. Green schoolyards promote more vigorous activity, which has health benefits as ener-



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

getic activity reduces the risk of obesity (Özdemir and Çorakçı, 2010: 2065-2077).

The research on children's preferences shows that they would like their outdoor spaces to be naturalised with plants, trees, flowers, water, soil, sand, mud, animals and insects, and to offer play opportunities of every imaginable type; in other words, children would choose rich, developmentally appropriate learning environments (Moore, 1986:40-41; White and Stoecklin, 1998:27; Titman, 1994:23-65). This is because children find playing in natural landscapes more attractive and interesting than playing in traditional playgrounds (Tamoutseli and Polyzou, 2010:55).

A schoolyard is commonly defined as all the outdoor areas surrounding or adjacent to the school buildings that are under the school's jurisdiction. Schoolyards are mostly recognised as places where children spend time outside of classroom hours. There are no particular design guidelines for schoolyards; they are generally accorded less importance in the design and planning process than school buildings and in professional design literature they are viewed simply as open areas (Tandoğan, 2011:17). The majority of the area of most school grounds is paved with concrete or asphalt and school grounds tend to be are non-creative areas without vegetation that do not allow children to explore nature (Kelkit and Özel, 2003:245; Özdemir

and Yılmaz, 2008:296; Yılmaz, 1995:546). Most schoolyards are designed to meet boys' play needs and for competitive games such as basketball, football and so on. (Paechter and Clark, 2007:328-330).

More importantly, although children are the primary users of schoolyards their needs and wishes are not taken into account in the planning and designing of schoolyards.

This main purpose of this research was, therefore, to explore children's visions of the ideal schoolyard and thus to give a fresh impetus to research and practice in this area.

More specifically, the study addressed the following questions:

- Are children interested in natural-terrain schoolyards (including plants, animals, sand etc.) with a wide variety of play opportunities?
- Would children prefer schoolyards that are natural-habitat landscaped?
- What kind of features do children include when asked to draw their ideal schoolyard?

To answer these questions we carried out a/ this qualitative research with child participants, in a residential area that has undergone rapid urbanisation and population growth.



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

METHODOLOGY

The research took place in a chess club in the Çorlu district of Tekirdağ, Turkey which has undergone rapid urbanisation and population growth (Thrace Development Agency, 2012:17-25). The chess club was chosen because it serves as a weekend meeting point for children from different schools. The sample consisted of 27 children (12 girls; 15 boys) of preschool and primary school age (5 to 10 years) who attended the chess club. All the children lived in the Çorlu district of Tekirdağ at the time of data collection. The data were collected on Saturday, 25 November 2015, as this was a time when participation in the chess club was high; 27 of the 28 children attending that day agreed to participate in the study. The children produced drawings and these data were analysed to produce an overview of what children consider to be the ideal schoolyard.

Drawing is a natural mode of communication that children rarely resist; it allows them to express feelings and thoughts and is perceived as less threatening than verbal communication (Malchiodi, 2001:1). Many children dislike answering questions, but drawing tests can be completed quickly and easily and can be enjoyable for children (Lewis and Greene, 1983:53). It is rare that children do not to draw and this can be a sign of trauma (Farokhi and Hashemi, 2011:2221). Young

children lack the capacity for abstract linguistic expression, but can use symbolic communication methods such as drawing. Drawing is in the same field of expression as play and speech for children (Farokhi and Hashemi, 2011:2221).

Professionals in the fields of psychiatry, psychology and art therapy have been interested in children's drawings (Malchiodi, 2005:23-44). Children's drawings have been used to assess their mental development (Cherney et al., 2006:136-140), emotional condition (Burkitt et al., 2009:6; Skybo et al., 2007:311) and experiences of abuse (Aldridge et al., 2004:304). Children's drawings have also been analysed to assess their attachment security (Behrens and Kaplan, 2011:437; Goldner and Scharf, 2011:11), language (Edmonds, 2000) and physical development (Farokhi and Hashemi, 2011:2220). In addition, children's drawings can provide valuable information about their perceptions of their environment (Tamoutseli and Polyzouu, 2010:54; Barraza, 1991:51), in particular, children's drawings have been used to reveal their changing perceptions of environmental issues (for example Brown et al. 1987; King, 1995; Matthews, 1985). Children express their dreams, joys and so on through drawings and children's artworks represent a window onto their personality and provide clues to their relationship with the



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

world and environment (Farokhi and Hashemi, 2011:2221).

The data gained/obtained from children's drawings were used to evaluate children's perceptions of the ideal schoolyard. Drawings were made on A4 sheets prepared by the researcher. A wide range of coloured pencils was made available to each child and there was no time restriction on the drawing task.

In analysing pictures it is important to pay attention to the first impression a drawing makes. Rather than trying to find symbols in drawing the analyst should look at the picture as a whole; the whole is greater than the sum of the parts - this idea has been referred to as the 'pre-eminence of the whole' (Farokhi and Hashemi, 2011:2223). There is evidence that the subjects that appear largest in a child's drawing are those that have the greatest significance and emotional importance to the drawer (Clare, 1988:211). Most children omit objects they strongly dislike from their drawings (Seibert and Anooshian, 1993) and they completely omit subjects they do not know much about (Cronin-Jones, 2005:228). Each drawing has been evaluated in the light of these findings obtained and they are interpreted basing on easily observable and measurable criteria. In addition, the features in the children's drawings were divided into two groups: natural landscape elements (grass area, animals, trees, flowers and etc.) and oth-

er landscape elements (swing, pool or other water feature, football pitch, basketball court and so on and then analysed by frequency.

The research has some limitations. The data were collected in a chess club in Tekirdağ, Turkey and it is possible that different results would be obtained in other countries or cities. The research does not take into account variance in the children's socioeconomic status. Because children from several schools gather at the chess club we were able to reach students from several schools, which enriched the sample and strengthened our findings.

All the children participated as individuals and unaccompanied by a teacher or parent so their drawings and responses should reflect their own views.

This was a small study and it would be useful to replicate the study with a large sample. However, one of the strengths of the small sample size is that it allowed us to spend more time with each child and thus collect particularly rich data. We believe this small-scale, qualitative study contributes interesting results to the field and may give fresh impetus to research in this area.

THE EVALUATION of CHILDREN'S DRAWINGS

The features observed in the children's drawings were identified; in descending order of



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

frequency they were as follows: natural landscape elements or green areas; animals; trees; fruit trees; flowers; sky, sand, soil, sun, sea and strawberry garden. Other features identified in the children's drawings were swings, swimming pool or water features, football pitch, children, basketball court, slide, waste bin, seesaw, climbing area or climbing feature, running track, painting studio, the Turkish national flag, toys, reading area, sitting bench, football goal, rabbit hutch, sports equipment, volleyball court, maze, amusement park, theatre, Halloween pumpkin, jewellery store, colourful furniture, aquarium, deckchairs, snow play area, moving stairway,

picnic area, security, painting studio, library, cinema hall.

The most common natural features in the children's drawings were: grass or green area (20 instances), animals (13 instances), trees (8 instances) and fruit trees (6 instances). The other features most commonly observed in the children's drawings were: swings (15 instances), water features (15 instances), football pitch (10 instances), children (9 instances) and basketball court (8 instances).

The biggest gender differences in the drawings were that football pitches, basketball courts and water features were more frequent in boys' drawings (Table 1).



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

Table 1. Frequency of Elements in the Children's Drawings

	Girls (Frequency)	Boys (Frequency)	Total (Frequency)		Girls (Frequency)	Boys (Frequency)	Total (Frequency)
Natural landscape elements				Other landscape elements			
Grass area	11	9	20	National flag	1	1	2
Animals	7	6	13	Toy	1	1	2
Trees	4	4	8	Reading area	1	1	2
Fruit trees	4	2	6	Sitting bench	1	1	2
Flowers	3	2	5	Football goal	0	2	2
Sky	3	1	4	Rabbit hutch	1	0	1
Sand	3	1	4	Sport equipment	0	1	1
Soil	2	1	3	Volleyball court	1	0	1
Sun	2	1	3	Labyrinth	0	1	1
Sea	1	0	1	Amusement park	1	0	1
Strawberry garden	1	0	1	Heater	1	0	1
Other landscape elements				Halloween pumpkin/ Swing	0	1	1
Swings	7	8	15	Jewellery store	1	0	1
Pool / Water element	5	10	15	Colourful furniture	1	0	1
Football pitch	1	9	10	Aquarium	0	1	1
Children	5	4	9	Deckchairs	1	0	1
Basketball court	2	6	8	Snow play area	1	0	1
Slide	4	3	7	Moving stairway	0	1	1
Waste bin	2	3	5	Picnic area	1	0	1
Seesaw	2	2	4	Security	0	1	1
Climbing area/ element	3	0	3	Painting studio	1	0	1
Running track	1	1	2	Library	1	0	1
Painting studio	2	0	2	Cinema hall	1	0	1

Various and detailed elements appeared in the children's drawings of their ideal schoolyard. Some children included many features

in their ideal schoolyards (the maximum was 13) whereas others depicted only two or four; the average number of features was six.

MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

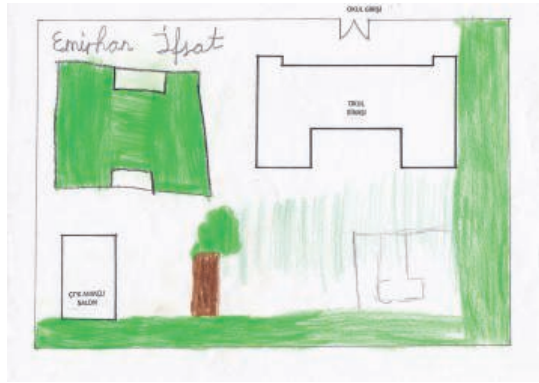


Figure 1. Drawing of an Ideal Schoolyard by Child 7 (Boy, 9 years old)

Figure 1 shows a boy's drawing with three features which were obviously important to him: a football pitch, a tree and green areas (Figure 1).

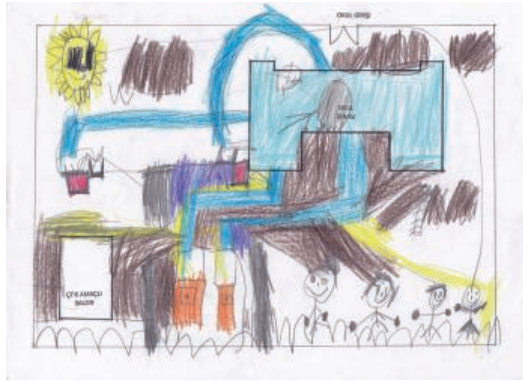


Figure 2. Drawing of an Ideal Schoolyard by Child 12 (Boy, 7 years old)

Various elements are observed in the boy's drawing shown in Figure 2 (sun, clouds, soil, sand, grass/green area, water features, flying bird, children, swings, seesaw and slide). The notable features of the drawing include

the blue-coloured areas and smiling children. The boy who drew this picture explained that the blue area was tubes of water passing through the school building and flowing onto the grass. In this drawing the sun is wearing sunglasses (Figure 2).

Grass or Green Area

Some elements were present in many children's drawings. Grass or green areas were depicted in 20 of the 27 drawings and were the commonest element. Generally, children depicted the whole of the ideal schoolyard as a green area (Fig 3). Some children coloured the lower part of their paper green and designated the upper section sky and coloured it blue; in these cases we assumed that the child intended the whole of the schoolyard to be a green area (Figures 1, 2, 8 and 9). Some of the children depicted part of the schoolyard as green in colour (Figure 4).

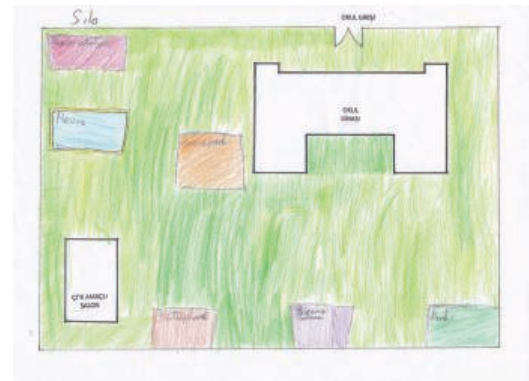


Figure 3. Drawing of an Ideal Schoolyard by Child 16 (Girl, 11 years old)

MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

The first impression one receives from the drawing in Figure 3 is that the entire schoolyard is a green area. The elements in the drawing are a pool, cinema hall, painting studio, library and amusement park. The playground is fenced off and situated in one corner of the schoolyard (Figure 3).

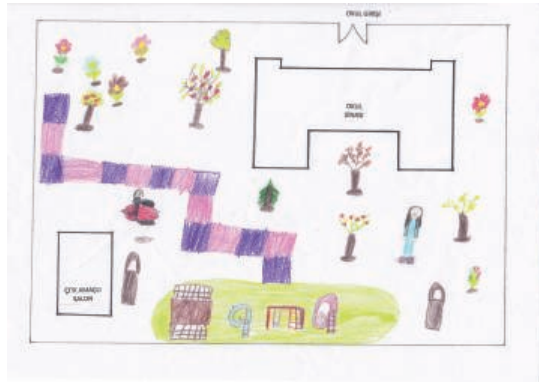


Figure 4. Drawing of an Ideal Schoolyard by Child 15 (Girl, 8 years old)

The first noticeable elements of the drawing in Figure 4 are the landscape features, such as deciduous trees, fruit trees and flowers. The child coloured the area surrounding the playground equipment green. Other elements in this drawing of the ideal schoolyard are colourful furniture to allow for street games, children and waste bins (Figure 4).

Playground Equipment: Swings and Slides

Swings (15 instances) were another feature that appeared in many of the children's drawings. Other items of playground equipment such as slides (7 instances) and seesaws (4 in-

stances) were depicted less frequently. While some children depicted all types of playground equipment in their drawings, some children presumably depicted their favourite one or two items of playground equipment. As children see the school grounds as a playground, they drew them as a playground. Some children positioned the traditional items of playground equipment randomly whereas others clustered them together in a designated area (Figures 3, 4 and 5).

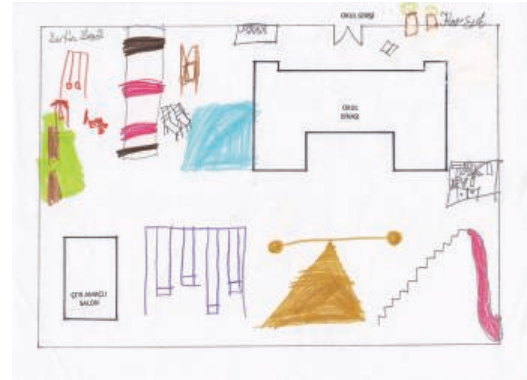


Figure 5. Drawing of an Ideal Schoolyard by Child 11 (Girl, 9 years old)

The most striking feature in Figure 5 is the playground equipment. It is also notable that these items (swings; slide; seesaw) are positioned randomly in the schoolyard and the whole of the school grounds is depicted as a traditional playground Figure 5. Other elements in this ideal schoolyard are: running track, swimming pool, deckchairs, jewellery store, snow play area and green area with trees. It seems the child does not want an en-

MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

tirely green schoolyard. The underlying reason for this is the earthworms living in the soil and hence present in all green areas (Figure 5)

Water Elements

Another of the most common features of the children's drawings was some kind of water feature: a swimming pool, ponds or other water feature such as water channels (14 instances). Some children depicted swimming pools whereas others drew pools with colourful fish. Some of the children who depicted swimming pools in their drawings also drew deck chairs near the swimming pool (Figures 6 and 7).



Figure 6. Drawing of an Ideal Schoolyard by Child 9 (Girl, 8 years old)

The most striking feature of the ideal schoolyard shown in Figure 6 is the water. Most of the schoolyard is depicted as sea and swimming pool. Other elements are a pool slide

and deck chairs, waste bin, soil and a green area for running (Figure 6).



Figure 7. Drawing of an Ideal Schoolyard by Child 10 (Boy, 8 years old)

In Figure 7 the majority of the ideal schoolyard is shown as a green area. This may be interpreted as an indication that to this child the green area was the most important feature of a schoolyard. The playground also includes a pool with colourful fish, a football pitch and basketball court, waste bin, security, moving stairway, bird, drinking fountain, trees and toilet (Figure 7).

Trees

Trees were depicted in 14 of the children's drawings and seven of them specifically illustrated fruit trees. All the fruit trees appeared to be apple trees (Figures 8 and 9).

Animals

Animals were depicted in 13 of the children's drawings. The animals that appeared in the

MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

children's drawings were: cat, chicken, fish, bird, butterfly, turtle, squirrel and elephant (Figures 8 and 9).

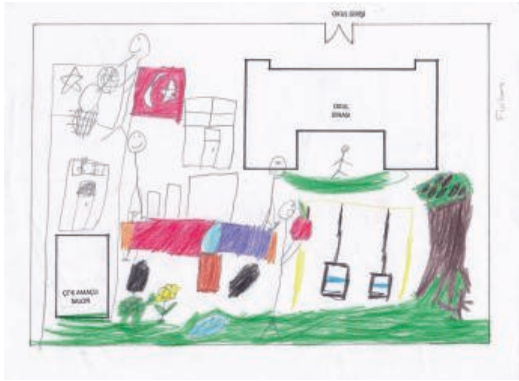


Figure 8. Drawing of an Ideal Schoolyard by Child 17 (Boy, 7 years old)

The features of the ideal schoolyard in Figure 8 are green areas, swings, a seesaw, children, the Turkish national flag, an apple tree, a child eating an apple, a pool or pond, flowers, a turtle, a squirrel and a basketball court. The seesaw is drawn extremely big and there are some children using it as well as a board underneath it. Interestingly, except for the children riding on the seesaw, all the children in the picture are in the green areas (Figure 8).



Figure 9. Drawing of an Ideal Schoolyard by Child 19 (Girl, 7 years old)

In Figure 9, the child depicts green areas, an apple tree, the sky, the sun, the Turkish national flag, swings, a pool, a climbing frame, birds, children and a cat just standing beside a child. The most striking features in the drawing are the sky and swing (Figure 9).

Sport Facilities: Football and Basketball Areas

Football pitches were one of the most common features in the children's drawings (10 instances). Basketball courts were another frequently shown sports feature in the children's drawings (8 instances). These sports features were more frequent in boys' drawings (Figures 10 and 11).

MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

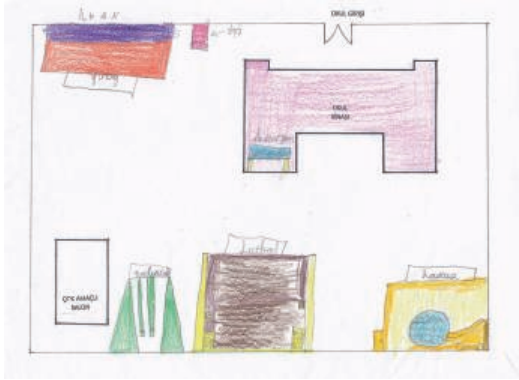


Figure 10. Drawing of an Ideal Schoolyard by Child 3 (Boy, 7 years old)

In the boy's drawing shown in Figure 10 the ideal schoolyard includes swings, a swimming pool, a waste bin, a football pitch and a bench for sitting on. The bench has a roof that provides shelter and shade (Figure 10).

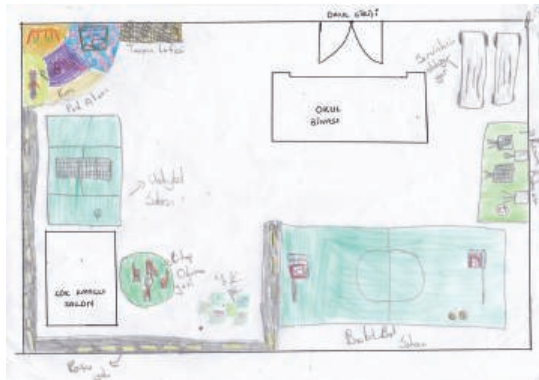


Figure 11. Drawing of an Ideal Schoolyard by Child 25 (Girl, 10 years old)

In the girl's drawing in Figure 11 the most prominent feature of the ideal playground is the basketball court. Other features are an open-air painting studio, an open-air reading

area, markings for hopscotch on the ground, a running track and a traditional children's playground without clear boundaries situated in one corner of the schoolyard. Play equipment, sand and an area for playing chess are shown in the traditional playground area; there is a rabbit hutch adjacent to it for the rabbits shown in the schoolyard. The drawing also includes a transport zone for school bus services features (Figure 11).

Waste Bin

Surprisingly, waste bins appeared in five of the children's drawings (Figures 3, 4, 6, 7 and 10). This suggests that the children were aware of the need to keep the environment clean and tidy.

CONCLUSION

These results suggest that in children's opinion the ideal schoolyard should have: green areas with trees, animals, water features such as swimming pool or a fishpond or something similar. The feature children most disliked in their existing schoolyards was the hard surface. These results are consistent with some previous studies. Children find naturalistic landscapes more attractive for play than more obviously manmade landscapes, however the children of the Çorlu district in Tekirdağ, Turkey also wanted to have the traditional playground equipment (e.g. swings, slide, and seesaw) and sports facilities (e.g. football,



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

basketball, volleyball). The results suggest that swings and slides are the favourite playground equipment of children in the Çorlu district of Turkey.

Based on children's drawing it may be concluded that children want to have replaceable equipment in their schoolyards which allows them to create their own playing space. The children did not draw subjects they did not know much about.

Having sports facilities such as football and basketball areas in schoolyards appears to be particularly important to boys. The children's responses also indicated that they would like places for climbing and running and these would meet their physical needs.

The analysis of the children's drawings made it apparent that they saw the school grounds as their playground. This is demonstrated by the inclusion of play equipment such as swings and slides in their drawings. Play is regarded as children's primary activity and our results corroborate this. Children regard play as their primary activity and this was reflected in their drawings of their ideal schoolyard.

This small-scale qualitative study indicates that the features children want in their schoolyard are: animals, green areas with trees and flowers, water elements, play equipment (e.g. swing, slide and so on.), sport facilities (e.g. football, basketball grounds and so on.)

and cleaning equipment including sufficient waste bins. Children want schoolyards naturalised with plants, sand and animals which offer a wide variety of opportunities for play and activities such as running, climbing and swinging.

REFERENCES

- ALDRIDGE, J., LAMB, M.E., STERNBERG, K.J., ORBACH, Y., ESPLIN, P.W., BOWLER, L., (2004).** Using a Human Figure Drawing to Elicit Information from Alleged Victims of Child Sexual Abuse, *Journal of Consulting and Clinical Psychology*, 72(2):304-316. Doi: 10.1037/0022-006X.72.2.304
- TANDOĞAN, O., (2011).** İstanbul'da "Çocuk Dostu Kent" için Açık Alanların Planlama, Tasarım ve Yönetim İlkelerinin Oluşturulması (Unpublished doctoral thesis), İstanbul Technical University, İstanbul
- AYAŞLIGİL, T., TURAN, Ş., (2009).** Okul Yeşil Alanlarının Kent Yaşam Kalitesinde Önemi, 21st International Building and Life Congress, Bursa, pp.278-282
- BARRAZA, L., (1999).** Children's Drawings about the Environment. *Environmental Education Research*, 5(1):49-66. Doi: 10.1080/1350462990050103



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

- BASILE, C., WHITE, C., (2000).** Respecting Living Things: Environmental Literacy for Young Children, Early Childhood Education Journal, 28(1): 57-61. Doi: 10.1023/A:1009551705001
- BEHRENS, K.Y., KAPLAN, N., (2011).** Japanese Children's Family Drawings and Their Link to Attachment, Attachment and Human Development, 13(5): 437-450. Doi: 10.1080/14616734.2011.602252
- BLAIR, D., (2009).** The Child in the Garden: An Evaluative Review of the Benefits of School Gardening, Journal of Environmental Education, 40(2):15-38. Doi: 10.3200/JOEE.40.2.15-38
- BRADLEY, L.K., (1995).** Tierra Buena: The Creation of Urban Wildlife Habitat in an Elementary School in The Inner City, Children's Environments, 12(2):102-110
- BRINK, L.A., NIGG, C.R., LAMPE, S.M.R., DINGSTON, B.A., MOOTZ, A.L., VLIET, W.V., (2011).** Insurance of Schoolyard Renovations on Children's Physical Activity: The Learning Landscapes Program, American Journal of Public Health, 100(9):1672- 1678
- BROWN, J.M., HENDERSON, J., ARMSTRONG, M.P., (1987).** Children's Perceptions of Nuclear Power Stations as Revealed through Their Drawings, Environmental Psychology, 7(3):189-199. Doi:10.1016/S0272-4944(87)80029-4
- BURKITT, E., BARRETT, M., DAVIS, A., (2009).** Effects of Different Emotion Terms on the Size and Colour of Children's Drawings, International Journal of Art Therapy, 14(2):74-84. Doi: 10.1080/17454830701529567
- CHERNEY, I.D., SEIWERT, C.S., DICKEY, T.M., FLICHTBEIL, J.D., (2006).** Children's Drawings: A Mirror to Their Minds, Educational Psychology, 26(1):127-142. Doi: 10.1080/01443410500344167
- CHESKEY, E., (1996).** How Schoolyards Influence Behaviour, Green Teacher, pp.11-14
- CLARE, S.M., (1988).** The Drawings of Pre-school Children: A Longitudinal Case Study and Four Experiments, Studies in Art Education, 29(4): 211-221. Doi: 10.2307/1320923
- CRONIN-JONES, L., (2000).** The Effectiveness of Schoolyards as Sites for Elementary Science Instruction, School Science and Mathematics, 100(4):203-211. Doi: 10.1111/j.1949-8594.2000.tb17257.x
- CRONIN-JONES, L., (2005).** Using Drawings to Assess Student Perceptions of Schoolyard Habitats: A Case Study of Reform-Based Research in the United



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

States, Canadian Journal of Environmental Education, 10(1): 225-240

DERR, L.V., RİGOLAN, A., (2016). Participatory Schoolyard Design for Health and Well-Being: Policies that Support Play in Urban Green Spaces, Risk, Protection, Provision and Policy, Geographies of Children and Young People, 12: 125-148. Doi: 10.1007/978-981-4585-99-6_21-1

DYMENT, J. E., (2005). Green School Grounds as Sites for Outdoor Learning: Barriers and Opportunities, International Research in Geographical and Environmental Education, 14(1):28-45. Doi: 10.1080/09500790508668328

EDMONDS, S., (2002). Every Story Tells a Picture: The Co-construction of Meaning with Words and Pictures in the Drawings of Young Children (Unpublished doctoral thesis), Columbia University, Teachers College. New York, United States

FAROKHI, M., HASHEMI, M., (2011). The Analysis of Children's Drawings: Social, Emotional, Physical, and Psychological Aspects, Procedia - Social and Behavioral Sciences, 30: 2219-2224. Doi:10.1016/j.sbspro.2011.10.433

FJORTOFT, I., SAGEIE, J., (2000). The Natural Environment as a Playground

for Children: Landscape Description and Analysis of a Natural Landscape, Landscape and Urban Planning, 48(1/2): 83-97. Doi: 10.1016/S0169-2046(00)00045-1

FJORTOFT, I., (2004). Landscape as Playscape: The Effects of Natural Environments on Children's Play and Motor Development, Children, Youth and Environments, 14(2): 21-44

GASTER, S., (1992). Historical Changes in Children's Access to Us Cities: A Critical Review, Children's Environments. 9(2):23-36

GOLDNER, L., SCHARF, M., (2011). Children's Family Drawings: A Study of Attachment, Personality, and Adjustment, Art Therapy, 28(1): 11-18. Doi:10.1080/07421656.2011.557350

HERRINGTON, S., STUDEMANN, K., (1998). Landscape Interventions: New Directions for the Design of Children's Play Environments, Landscape and Urban Planning, 42(2-4). Doi: 10.1016/S0169-2046(98)00087-5

HEURLIN-NORINDER, M., (1996). Children, Environment and Independent Mobility, Paper presented at the meeting of IAPS 14 Conference, Stockholm, pp: 314-323



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

HILLMAN, M., ADAMS, J., WHITELEGG, J., (1990). One False Move: A Study of Children's Independent Mobility, PSI, London

KANAT, S., (2004). Sanat Eğitimi Alan Üniversite Birinci Sınıf Öğrencilerinin Değer Eğilimlerinin Belirlenmesi, Atatürk Üniversitesi, Erzincan Üniversitesi, İnönü Üniversitesi Örneği, Uluslararası Hakemli Tasarım ve Mimarlık Dergisi, 1(1), 67-86

KELKİT, A., ÖZEL, E., (2003). A Research on the Determination of Physical Planning of School Gardens in Çanakkale City, Pakistan Journal of Applied Science, 3(4): 240-246. Doi: 10.3923/jas.2003.240.246

KING, L. D., (1995). Doing Their Share to Save the Planet: Children and Environmental Crisis. New Jersey: Rutgers University Press

KUO, F.E., TAYLOR, A.F., (2004). A Potential Natural Treatment for Attention-Deficit / Hyperactivity Disorder: Evidence from a National Study, American Journal of Public Health, 94(9):1580-1586

LEDEN, L., GÅRDER, P., SCHIROKOFF, A., MONTERDE-I-BORT, H., JOHANSSON, C., BASBAS, S., (2014). A Sustainable City Environment through Child Safety and Mobility - A Challenge Based on its? Accident Analysis & Pre-

vention, 62: 406-414. Doi: 10.1016/j.aap.2013.06.013

LEWIS, D., GREENE, J., (1983). Your Child's Drawings... Their Hidden Meaning. London: Hutchinson and Co

LIEBERMAN, G.A., HOODY, L.L., (1998). Closing the Achievement Gap: Using the Environment as an Integrated Context for Learning. Ponway, CA: Science Wizards

LITTLE, H., WYVER, S., (2008). Outdoor Play: Does Avoiding the Risks Reduce the Benefits? Australian Journal of Early Childhood, 33(2):33-40

MALCHIODI, C.A., (2005). Çocukların Resimlerini Anlamak. İstanbul: Epsilon

MALCHIODI, C.A., (2001). Using Drawing as Intervention with Traumatized Children. Trauma and Loss, Research and Interventions, 1(1):21-27

MALONE, K., TRANTER, P., (2003). Children's Environmental Learning and the Use, Design and Management of Schoolgrounds, Children, Youth and Environments, 13(2): 87-137

MAYNARD, T., WATERS, J., (2007). Learning in the Outdoor Environment: A Missed Opportunity? Early Years, 27(3):255-265. Doi: 10.1080/09575140701594400



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

MOORE, R.C. (1986). Childhood's Domain: Play and Place in Child Development. London: Croom Helm

MOORE, R.C., (1996). Compact Nature: The Role of Playing and Learning Gardens on Children's Lives, Journal of Therapeutic Horticulture, 8:72-82

MOORE, R.C., WONG, H.H., (1997). Natural Learning: Creating Environments for Rediscovering Nature's Way Of Teaching. Berkley: MIG Communications

O'BRIEN, M., JONES, D., SLOAN, D., (2000). Children's Independent Spatial Mobility in the Urban Public Realm, Childhood, 7(3):257-277. Doi: 10.1177/0907568200007003002

ÖZBURAK, Ç., (2016). Ekolojik Yapı Kriterlerinin Okul Öncesi Eğitim Merkezleri Bağlamında İncelenmesi ve Yerel Kriterler Listesi Oluşturulması, Uluslararası Hakemli Tasarım ve Mimarlık Dergisi, 8:23-42. Doi: 10.17365/TMD.2016819756

ÖZDEMİR, A., ÇORAKÇI, M., (2010). Participation in the Greening of Schoolyards in the Ankara Public School System, Scientific Research and Essays, 5(15):2065-2077

ÖZDEMİR, A., YILMAZ, O., (2008). Assessment of Outdoor School Environ-

ments and Physical Activity in Ankara's Primary Schools, Journal of Environmental Psychology, 28(3):287-300. Doi: 10.1016/j.jenvp.2008.02.004

PAECHTER, C., CLARK, S., (2007). Learning Gender in Primary Playgrounds: Findings from the Tom-boy Identities Study, Pedagogy, Culture and Society, 15(3):317-31. Doi: 10.1080/14681360701602224

RAITH, A., (2017). Children on Green Schoolyards: Nature Experience, Preferences, and Behavior, Children, Youth and Environments, 27(1):91-111. Doi: 10.7721/chilyoutenvi.27.1.0091

REIF, I., SADI, I., (1997). Jordanian and British Primary School Children's Attitudes towards the Environment, Educational Studies, 23(3):473-480. Doi: 10.1080/0305569970230311

RIVKIN, M., (1997). The Schoolyard Habitat Movement: What it is and why Children need it, Early Childhood Education Journal, 25(1):61-66. Doi: 10.1023/A:1025694100870

SEIBERT, P. S., ANOOSHIAN, L. J., (1993). Indirect Expression of Preference in Sketch Maps, Environment and Behavior, 25(5), 607-624. Doi: 10.1177/0013916593254004



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

SHAW, B., WATSON, B., FRAUENDI-ENST, B., ANDREAS REDECKER, A., TIM, J., HILLMAN, M., (2013). Children's Independent Mobility: A Comparative Study in England and Germany (1971-2010), Policy Studies Institute, London

SKYBO, T., RYAN-WENGER, N., SU, Y.H., (2007). Human Figure Drawings as a Measure of Children's Emotional Status: Critical Review for Practice, Journal of Pediatric Nursing, 22(1): 15-28. Doi: 10.1016/j.pedn.2006.05.006

TAMOUTSELI, N., POLYZOU, E., (2010). Using Drawings to Assess Children's Perceptions of Schoolyard Environment: A Case Study of a Primary School in Drama, Greece. Paper presented at the meeting of The 7th WSEAS International Conference on Engineering Education, Greece, pp.54-57

TAYLOR, A.F., KUO, F.E., SULLIVAN, W.C., (2001). Coping with ADD: The Surprising Connection to Green Play Settings, Environment & Behavior, 33(1):54-77. Doi: 10.1177/00139160121972864

TAYLOR, A.F., KUO, F.E., (2008). Children with Attention Deficits Concentrate Better After Walk in the Park, Journal of Attention Disorders, 12(5):402-409. Doi: 10.1177/1087054708323000

TITMAN, W., (1994). Special Places, Special People: The Hidden Curriculum of Schoolgrounds, World Wide Fund for Nature, UK, Surrey (England)

THRACE DEVELOPMENT AGENCY, (2012). Trakya Social Structure Analysis, Retrieved from http://www.trakya2023.com/uploads/docs/trakya_sosyal_analiz.pdf (Accessed: 04.01.2017)

TRANTER, P., DOYLE, J., (1996). Reclaiming the Residential Street as Playspace, International Play Journal, 4: 91-97

TURGUT, H., ERDOĞAN, A., (2012). Çocuk Gözüyle Okul Bahçeleri. Paper presented at the Meeting of Eğitim Odağında Artvin Sempozyumu, Artvin, pp.683-697

VALENTINE, G., MCKENDRICK, J., (1997). Children's Outdoor Play: Exploring Parental Concerns about Children's Safety and the Changing Nature of Childhood, Geoforum, 28(2): 219-235. Doi: 10.1016/S0016-7185(97)00010-9

WELLS, N.M., EVANS, G.W., (2003). Nearby Nature: A Buffer of Life Stress Among Rural Children, Environment and Behavior, 35(3):311-330. Doi: 10.1177/0013916503251445

WHITE, R., STOECKLIN, V., (1998). Children's Outdoor Play and Learning En-



MTD

www.mtddergisi.com

ULUSLARARASI HAKEMLİ TASARIM VE MİMARLIK DERGİSİ

Mayıs / Haziran / Temmuz / Ağustos 2017 Sayı: 11 Yaz Dönemi

INTERNATIONAL REFEREED JOURNAL OF DESIGN AND ARCHITECTURE

May / June / July / August 2017 Issue: 11 Summer Time

ID:193 K:305

ISSN Print: 2148-8142 Online: 2148-4880

(ISO 18001-OH-0090-13001706 / ISO 14001-EM-0090-13001706 / ISO 9001-QM-0090-13001706 / ISO 10002-CM-0090-13001706)

(Marka Patent No / Trademark)

(2015/04018 – 2015/GE/17595)

vironments: Returning to Nature, Early
Childhood News, 10(2):24-30

YILMAZ, H., (1995). Erzurum Kenti Okul
Bahçelerinin Peyzaj Mimarlığı İlkeleri
Yönünden İncelenmesi, Atatürk Üniver-
sitesi Ziraat Fakültesi Dergisi, 26(4):537-
547

**ZUBRICK, S.R., WOOD, L., VILLANUE-
VA, K., WOOD, G., GILES-CORTI, B.,
CHRISTIAN, H., (2010).** Nothing but
Fear Itself: Parental Fear as a Determi-
nant Impacting On Child Physical Activ-
ity and Independent Mobility, Australia:
Victorian Health Promotion Foundation