

Children's Drawings and Descriptions of their Ideal Schools: A Case Study from Turkey

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Abstract

The aim of this study is to examine 4-7 year old children's drawings of the school of their dreams and to compare them with today's schools. In a total of 45 children who attend private institutions in Ankara participated in the research. The method of the research is qualitative and data collection tools consisting of picture drawing and interview forms directed at children after drawing are also prepared with a qualitative approach. Children's drawings were examined according to their developmental stages and children's dream schools were compared with today's schools by performing descriptive statistics on drawings and responses to interviews. According to the findings, drawings of younger age range were more unusual than drawings of older age range and physical structures, materials; and education programs of existing schools exhibit a remote image of the dream schools of a large portion of the children who were involved in the survey.

Keywords: Children's school drawing, School dreams, Materials and education programs, Creativity.

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Introduction

By 18 months, a child starts to use symbols in a logical way to represent reality (Piaget and Inhelder 1963). The points they use in their drawings may sometimes represent the precipitation of rain or sometimes show the movements of animals (Berk 1994). By using gestures in their drawings, children may want to give movement to the characters they have drawn (Cox 1992). The basic scribbles that children use in their drawings may be considered as first steps in the development of drawing (Kellogg 1970) and in the later periods, these scribbles can give clues about the character of a child and the development of their individual style (Gardner 1990). Children's pictures do not only reveal the development of an individual but can also be a powerful tool in illuminating the relationship of children with the culture they inhabit (Müller and Isbell 2010). Alland (1983) indicated that there is a relationship between many cultures and the pictures that are drawn and that idea is supported by children's drawings, reflecting the characteristics of the cultures to which they belong. Furthermore, Wales (1990) showed that culture plays a fundamental role in the development of symbolic representations. Children focus on behaviors or tasks which are accepted by society (Erikson 1950) and this focus is reflected in the pictures they draw. In one of the studies supporting this concept, it is revealed that older children try to draw more realistic pictures (Winner 1986) and another work reveals that children whose pictures are considered to be unsuccessful in a class or similar environment tend to give up drawing pictures after 9-10 years of age (Gardner 1980). Drawing pictures can be considered an activity that shows children's neurological maturity and the working of their cognitive functions (Pascual-Leone 1984) as well as supporting their motor developments (Cratty 1986).

Artists, psychologists and psychiatrists have found children's drawing to be remarkable. Artists find children drawings natural, innovative and creative whereas psychologists perceive deep meanings, and educators use drawings as tools to evaluate children's cognitive activities (Di Leo 1996). Furthermore, drawings are also cultural and social assessment tools which play a role in topic and figure selection (Yavuzer 2013). Thus, a child's drawing can include important clues to explain the individual's complicated world and indicate their mental development. Examining children's drawings can provide important data to help understand their physical, emotional and mental development (Crosser 2014). Even ambiguous lines in the scribble period of a child's development can represent some basic emotions. Many therapists encourage children to draw since this helps them explain the situations that they cannot explain through the spoken word. Since pictures drawn by children reveal aspects of their personalities and characteristics (Yavuzer 2013), these pictures have been used in psychology, psychiatry, education and art therapy fields as a tool to reach children (Lowenfeld & Brittain 1987; Malchiodi 1998). Some researchers see drawings of children with developmental problems as therapeutic interventions (Lowenfeld & Brittain 1987). Other examples are the use of drawing to explore the child's reaction to gender differences, social interactions of family members, sociocultural differences and behavior problems (Okyay 2008).

As well as being a diagnostic tool, children drawings are a good record of their development, thinking process and perception of art (Fox & Thomas 1999). Artistic development in children is defined in the following 6 stages, scribble (ages 2-4), pre-schematic (ages 4-7), schematic (ages 7-9), realism (ages 9-12), pseudo-naturalistic (ages 12-14) and reasoning (ages 14-16). The scribble stage starts at about 2 years of age when children start to enjoy drawing ambiguous lines. Conscious drawing begins at about 3 years of age (Lowenfeld & Brittain 1987). The first scribbles are an important stage in the child's development, since it makes the start of their expression of themselves (Yavuzer 2013). In the pre-schematic stage, the child begins to talk about their drawing (Lowenfeld & Brittain 1987). At about five years of age, there are recognizable people, houses or trees in a child's drawing. When they reach six years of age, forms and shapes begin to appear (Yavuzer 2013) and are slowly differentiated (Malchiodi 1998). In the schematic stage (age 7-9), the child will use symbols to make objects distinct and identify relations and places in their drawing (Lowenfeld & Brittain 1987). At this stage, children draw human figures, including various objects and the environment in their pictures (Malchiodi 1998). The children also have their own perspective, and ratios and relations are adjusted according to this perspective. Luquet refers to this aspect as visual realism (Yavuzer 2013).

In the schematic stage, children can also reflect emotions in their pictures; for example, when asked to draw happy, angry or sad expressions, children are immediately able to respond (Malchiodi 1998). When they enter the realism (gang) stage (ages 9-11), children are capable of drawing very detailed and realistic pictures (Malchiodi 1998) using realistic colors (Lowenfeld & Brittain 1987; Yavuzer 2013). In this stage, differences appear between pictures drawn by boys and girls; boys tend to draw boats, airplanes, trains, war and sports scenes; girls mostly draw faces, clothes, houses, flowers and animals with their young (Yavuzer 2013). The pseudo-naturalistic stage (ages 11-13) makes the period in which natural childlike drawings end and drawings similar to adult pictures begin to appear (Lowenfeld & Brittain 1987). In this stage, the child or adolescent begins to include in their picture the ratios, dimensions and depths of objects around them. In this stage, children are aware of color differences and use color optimally (Yavuzer 2013). It is in the reasoning stage that the teenagers decide whether to continue drawing pictures because now they are able to verbalize their thoughts clearly and as they mature they can make the transition to the artistic stage (Lowenfeld & Brittain 1987).

Kramer described the following five ways of using art materials, which help shape both the artist and the art product; precursory activities, chaotic discharge, art in the service of defense, pictographs, and formed expression (1971/1974, p. 54). In paintings, children express more than they draw (Okuyay 2008) and more information can be gleaned concerning their stage of development, and special talents can be discovered and it can be determined whether there is a need for special support. In this manner, children paintings can be accepted as tools that reflect children's characters, inner worlds helping teachers and others to get to know children. As Lewis & Greene (1983) state, various reasons for using drawings as a data acquisition tool in research are that children do not like answering questions but find responding through drawing more enjoyable; the obstacles of spoken communication disappear (Chamber 1983) and lastly, children can broadly express their inner world emotions and thoughts (Crook 1985).

Importance, aim and problems of the research

The importance of the research is that it evaluates schools through the drawings of children aged 4-7, in which they picture an ideal school where they enjoy themselves and are happy. These research findings can be useful in evaluating and updating the architecture and design of existing schools. In this context, the aim of the research is to examine the drawings of these children based on the following questions:

- a. What properties and characteristics do the children's drawings of their ideal school contain in relation to their developmental stage?
- b. Is there a resemblance between the children's drawings/descriptions of their ideal schools and the real world schools they attend?

Method

Research model

Descriptive and survey methods were used in this research. A survey method is defined as a research model aiming to identify the perceptions or characteristics of a sample group of participants (Büyüköztürk, Çakmak, Akgün, Karadeniz, Demirel 2010).

Research group

The research group consisted of children aged 4 to 7, who attended a private elementary school in Ankara/Turkey. The research was conducted with a total of 45 children from the age ranges of 48-60 months (15 children), 60-72 months (15 children) and 72-84 months (15 children).

Data acquisition tool

Data was collected in two stages. First, children were given white papers, pencils, and crayons and asked to draw their ideal school. In the second stage, when children completed their drawings, they were asked to describe their drawings and answer certain questions about their ideal schools. The responses of children were noted by the researcher.

Procedure

The two stages of data collection were performed in the same environment with all participants. Children were seated at a distance from each other to prevent them from seeing each other's drawings or hearing the interview with other children. The researcher directed the following questions to children who completed their drawings:

- a. Can you describe what you have drawn and your ideal school?
- b. Where is this school and what is around this school?
- c. What is inside this school?
- d. What kinds of activities are available in this school? What kinds of lessons are given in this school?

Findings and Discussion

What properties and characteristics do the children's drawings of their ideal school contain in relation to their developmental stage?

Figure 1 presents examples of children's drawings on their ideal schools.



Figure 1. Examples of children's ideal school drawings by age range

As seen in Figure 1, from children's drawings, their age range can be predicted. In the younger age group (48-60 months), the drawings mostly consist of scribbles and there is a lack of

detail whereas in the age range of 60 to 72 months, imaginary components (such as princesses and castles) begin to have an influence on children's drawings. In the oldest age group (72-84 months), the influence of objects and nature as well as the green color are easily noticed. As described by Lowenfeld & Brittain (1987), the drawings of children in the current study are an indication of their developmental stage; showing the characteristics of pre-schematic stage in the 48-60 month group, schematic stage in the 60-72 month group and realistic components in the 72-84 month group. As proposed by Furth (2002), the relation between green, nature and vitality is also generally used in the oldest group. Figure 2 presents the distribution of children's ideal school drawings according to their age.

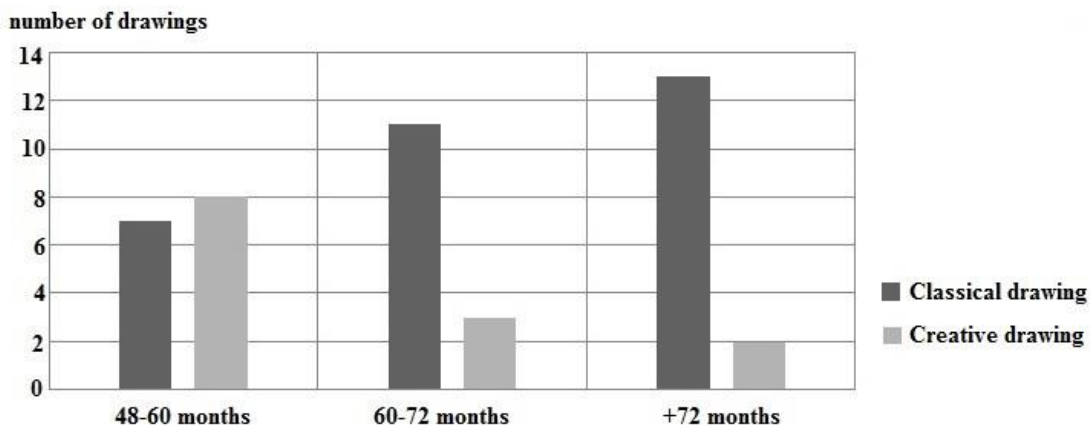


Figure 2. Distribution of children's school building drawings according to age

The drawings of children aged 4 to 7 years show that some of the school buildings are typically represented with a rectangular door, small square windows and a triangular roof whereas some others have unusual characteristics including sock or caterpillar shapes, wheels, colored windows and wings. When examined by age, most unusual representations belong to children aged 48-60 months whereas most of the typical buildings were drawn by those in the 72-84 month group. This indicates that as the age increases, the unusual characteristics of the drawings decrease and children switch to classical drawings. This is also in accordance with the results reported by Rawlinson (1995) that every child has creative potentials but as children grow older, these potentials may be less expressed due to certain factors such as efforts to obey authority or become a member of a group and worries about being accepted by others.

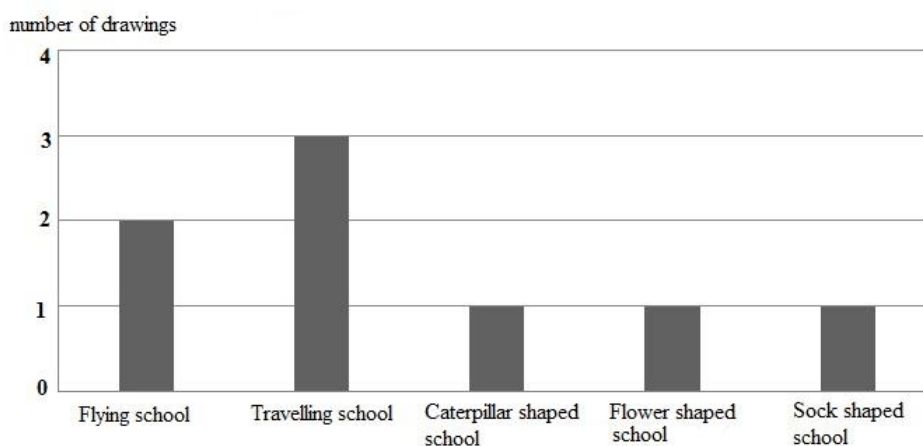


Figure 3. Unusual school drawings of 48-60 month-old children

Figure 3 presents the types of unusual schools drawn by 48-60-month-old children. Unusual and imaginary components are observed in the form of a flying school (2 children), a travelling school (3 children), a caterpillar-shaped school, a flower-shaped school (1 child) and a sock-shaped school (1

child). The interviews with children revealed that the main reason for drawing flying and travelling schools was that children wished to play and perform activities in different environments. The child who drew a sock-shaped school stated that the school in his/her drawing was under the sea and children could only go there by swimming.

Table 1. *Characteristics of the External Environment of an Ideal School Drawn and/or Described by Children Aged 48 to 60 Months*

Elements mentioned	Number children	of %
Garden	4	19.04
Sea	5	23.90
Animals	4	19.04
Buses	1	4.75
Forest	2	9.51
Everyday in a different place	2	9.51
Brick-wood	1	4.75
Mountain	1	4.75
Playground Slide	1	4.75
Total	21	100.00

Table 1 shows the elements of the external environment of the ideal schools drawn and/or described by children aged 48 to 60 months. Approximately 70% of these children imagined a natural environment in which there was a garden, sea, animals and forest. The remaining 30% commented on having bricks and woods, mountains, playground slides and different places outside the school.

Table 2. *Characteristics of the Internal Environment of an Ideal School Drawn and/or Described by Children Aged 48 to 60 Months*

Elements mentioned	Number children	of %
Area for drinking colored water	1	9.09
Play garden	5	45.46
Cafeteria	1	9.09
Animals	1	9.09
Studios	1	9.09
People in costume	1	9.09
Stairs	1	9.09
Total	11	100.00

The characteristics of the internal environment of the ideal schools described by children aged 48 to 60 months are given in Table 2. Approximately 50% of these children imagined a play garden and the remaining 50% commented on a colored area where there were cafeterias, animals, studios, people in costumes and staircases. The child who suggested that there should be people in costume explained that he/she was referring to teachers and school staff wearing costume. Another suggestion regarding the internal environment was to have colored windows and roofs. Children also described their ideal classrooms having large windows and transparent walls that would allow them to see the inside of the school from outside. During the interviews, one child did not give much information about the internal environment since his/her ideal school was a bus. All these internal elements show that, as suggested by Alkan (1983), children experience problems in adapting to places designed by adults and therefore their ideal design differs from the architecture of their present schools.

Table 3. *Lessons and Activities Provided by an Ideal School Described by Children Aged 48 to 60 Months*

Lessons and activities mentioned	Number of children	%
Swimming in the sea	4	11.77
Literature (books and letters)	4	11.77
Mathematics	1	2.94
Games	12	35.29
Painting	4	11.77
Plant growing	1	2.94
Sports	2	5.88
Travelling	2	5.88
Playing in the mud	1	2.94
Animal care	1	2.94
Building pyramids	1	2.94
Playing in the snow	1	2.94
Total	34	100.00

Table 3 presents the educational characteristics of the ideal schools of children aged 48 to 60 months. Approximately 35% of the children stated that they would prefer a game-based school program, four children (12%) wished to study literature, four wanted to have swimming lessons and another four wished to have painting lessons. Other less popular suggestions for lessons and activities included mathematics, plant growing, sports, travelling, playing in the mud, animal care, pyramid-building and playing in the snow.

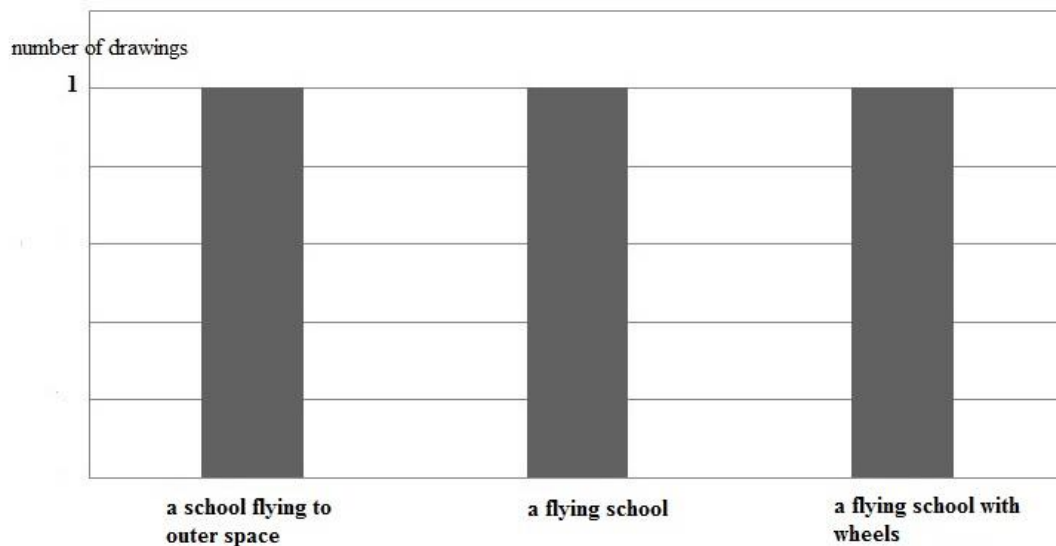


Figure 4. *Unusual school buildings drawn by children aged 60 to 72 months*

Figure 4 shows the types of unusual school buildings drawn by 60-72-month-old children. These included a school flying into outer space, a school on wheels and a flying school.

Table 4. *Characteristics of the External Environment of an Ideal School Drawn and/or Described by Children Aged 60 to 72 Months*

Elements mentioned	Number of children	%
Garden	3	8.10
Kites	1	2.70
Play yard	2	5.40
Zoo	7	18.90
Sea	3	8.10
Plants (flowers, trees)	14	37.90
Rocks	1	2.70
Pool	2	5.40
Forest	4	10.80
Total	37	100

Examining the responses given by 60-72-month-old children about the external environment of the school, it was found that nearly 68% referred to elements from the nature including a zoo, sea, forest and plants. The remaining children commented on a garden, kites, a play yard, rocks and a pool for the surrounding area of the school.

Table 5. *Characteristics of the Internal Environment of an Ideal School Drawn and/or Described by Children Aged 60 to 72 Months*

Elements mentioned	Number of children	%
Dormitory	1	4.17
Plants (trees, flowers, leaves)	3	12.49
Ornaments	4	16.65
Kitchen	1	4.17
Library	1	4.17
Large classrooms	2	8.34
Workshop	2	8.34
Speakers	1	4.17
Play Slide	1	4.17
Animals	1	4.17
Television-Radio	4	16.65
Teachers' Lounge	1	4.17
Hopscotch playing area	1	4.17
Cabinets made from leaves	1	4.17
Total	24	100.00

Table 5 shows the internal characteristics of the ideal schools of 60-72-month-old children. When asked to describe the elements in their ideal school, most children commented on having a television or radio, ornaments and plants. In addition, some children suggested having a dormitory, a kitchen, a library, large classrooms, workshops, speakers, a slide, animals, teachers' lounge, hopscotch playing area and cabinets made from leaves. When asked why they needed a television and a radio in schools, the children responded, "so that the students wouldn't get bored". In the interviews, children often talked about schools with large and colorful windows, and included these windows in their drawings. The colored windows, as explained by children, were to see the outside colorful.

Table 6. *Lessons and Activities Provided by an Ideal School Described by Children Aged 60 to 72 Months*

Education	Number of children that suggested	%
Games/Toys	4	20
Various activities	3	15
Planting (trees and flowers)	5	20
Animal care	1	5
Swimming	1	5
Sand games	1	5
Exploring the sea and sand	1	5
Painting on large papers	1	5
Having lessons in a different environment everyday	2	10
Lessons on numbers	1	5
Total	20	100.00

When asked to describe education in their ideal schools (Table 6), a considerable number of children aged 60 to 72 months (20%) stated that they wished to play games and be involved in activities in the nature such as growing plants. Children also suggested that each child should have a private garden in their school where they can grow plants. Other suggestions included activities about animal care, swimming, sand games, exploring the sea and sand, painting on large papers having lessons in a different environment everyday and lessons on numbers. Children stated that they enjoyed activities outside the classroom and in different settings. Similar to 48-60-month-old children, most 60-72-month-old children were inclined to integrate natural environment into education suggesting that schools should be located near the sea and a forest area.

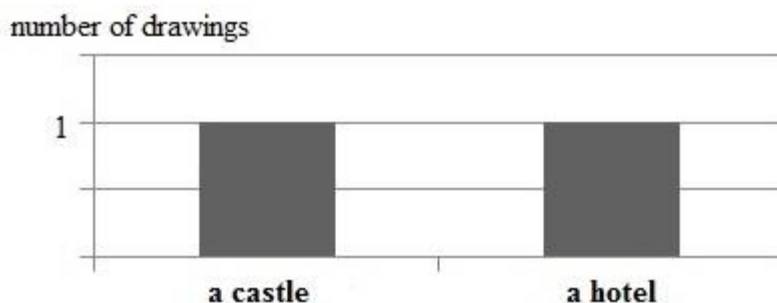


Figure 5. *Types of school buildings drawn by 72-84-month-old children*

Figure 5 presents the types of school buildings drawn by children aged 72 to 84 months. These drawings were more usual compared to the other age groups. For example, a child drew a school in the form of a castle and another drew a hotel. These children also tended to name their schools as the flower school, summer school, nature school, pine school, princess school, sun school, castle school and hotel school.

Table 7. *Characteristics of the External Environment of an Ideal School Drawn and/or Described by Children Aged 72 to 84 Months*

Elements mentioned	Number of children	%
Swimming pool	3	6.67
Garden	4	8.79
Plants (flowers, grass and trees)	11	24.33
Animals	8	17.77
Flag, statute of Atatürk	3	6.67
Forest	6	13.34
River	2	4.45
Sea	2	4.45
Playground	2	4.45
Snow	1	2.27
Helicopter (to go on trips)	1	2.27
School buses	1	2.27
Decorations	1	2.27
Total	45	100.00

When asked to describe the surrounding area of their ideal school, several children aged 72 to 84 months (24.33%) mentioned having grass and plants such as trees and flowers, followed by animals (17.77%) and a forest area (13.34%). Other suggestions for the external environment of the school included a swimming pool, garden, flag, and statute of Atatürk, river, sea, playground, helicopter, school buses, decorations and snow. Most of the children's responses and drawings contained elements from the nature.

Table 8. *Characteristics of the Internal Environment of an Ideal School Drawn and/or Described by Children Aged 72 to 84 Months*

Elements mentioned	Number of Children	%
Television	1	5
Classrooms (with colorful desks)	3	15
Animals	3	15
In-class toilets	2	10
Cafeteria	1	5
Teachers' room	2	10
Swimming pool	3	15
Principal's room	2	10
Shopping mall	1	5
Dormitory	1	5
Materials made of leaves	1	5
Total	20	100.00

Table 8 presents the elements included in the ideal schools of children aged 72 to 84 months. The results show that 15% of these children wished to have colorful desks, 15% wanted animals and 15% swimming pools. Children referred to using materials made of leaves and wished to have other school facilities such as in-class toilets, cafeteria, teachers' room, principal's room and dormitory. In addition, one child drew a shopping mall in the school explaining, "Children can go home if they want to; if they don't want to go, they can do their shopping in the school".

Table 9. *Lessons and Activities Provided in an Ideal School Described by Children Aged 72 to 84 Months*

Lessons and activities mentioned	Number of children	%
Play	7	25.92
Nature trip	5	11.11
Cultivation	3	18.52
Mural painting	3	11.11
Mathematics and logic	3	7.41
Swimming	2	7.41
Out-of-school education	2	11.11
Animal care	2	3.70
Total	27	100.00

When asked to describe the education in their ideal school, 25.92% of 72-84 month-old children included playing activities and games in the education programs (Table 9). This was followed by activities in the nature (18.52%). These children stated that they wished to study insects in schools, go on field trips and explore the Sun, and emphasized the importance of being close to a forest area. Other suggestions for lessons and activities included drawing on large walls, swimming, mental mathematics, Turkish and animal care. Children in this age group considered that the Turkish and Mathematics courses in their present schools were based on textbooks and thus boring; therefore, they wished to be taught through games. Only one child mentioned that he/she was happy to learn mathematics and Turkish through the textbook.

Is there a resemblance between the children's drawings/descriptions of their ideal schools and their present schools?

Studies on the relationship between people and their environment resulted in the formation of an interdisciplinary field, environmental psychology and have gained more momentum since the 1950s (Stokols & Altman 1987). Based on the relationship between each localized physical environment and the person, several concepts have been formed such as behavior scopes/sets, activity limits, sensorial area, personal area, spatial climate, subjective/spatial perception and environment/science (Karaküçük 2010). In this context, children's relation with their environment is a factor that can be used to support their learning. To this end, the design and architecture of schools; can be modified, for example by having big windows in classrooms to allow children to see outside, including elements from the nature in the school area, using wood in the construction of schools and altering school times. This is also in agreement with the idea of Heitor (2005), who suggested that the education environment should be constituted in accordance with the specific characteristics and needs of children. Kuuskorpi & Gonzalez (2011) reported that learning should be supported by modifying physical structures according to the demands of the learners and providing a flexible learning space. In the current study, what children represented in their drawings and described during the interviews in relation to their ideal school was very different from their present school in terms of architectural structure, educational programs and materials used. Therefore, it can be inferred that their present school is far from meeting the needs and demands of these children.

Conclusion and Implications

One of the important findings of this study is that children aged 48 to 60 months were more creative than the other age groups in their drawings of their ideal school. The interviews with these children also showed that they described their ideal school in great detail and their imagination was even broader and more diverse than represented in their drawings. In addition, children's love and need for the nature was observed in their drawings and descriptions of their ideal school. Children wished to attend schools where they would be more comfortable, could explore the nature and have fun being educated. Therefore, in their drawings, children placed an emphasis on elements from the nature and thought of nature and education together. Another striking result is that children suggested

having animal care as part of educational activities and included animals in their drawings. However, children's present school was found to be far from what they imagined, being located on the side of the road away from the nature and having a yard mostly made of concrete. It can be understood from children's pictures children want to go schools with creativities elements and also fantastic environment. Creativity elements help to development of children's creativity skills. Besides these, school environment and schools materials should be natural and coming in nature.

Considering the results of the study, the following suggestions can be made with regards to schools for children aged 4 to 7 years. As the children suggested in this study, classrooms can have larger and colored windows to allow children to see outside. Also, to let more light into the classroom and have a view of the sky, the roofs of the schools can be made of glass. In addition, in schools, there can be designated areas for contact with animals, where children are taught about animal care and welfare. In Turkey, although it is rare, there are schools that have areas for poultry animals such as chicken, ducks and geese. It is also possible to keep donkeys, lamb and horses in schools. However, for a healthy and safe learning environment, teachers and students should follow certain guidelines for safe exposure to these animals. Another suggestion of this study is that education should not only be offered in classrooms. As stated by the children in this study, activities in different environments, mostly outside the school, should be organized. In addition, in the lessons and activities, the use of books should be reduced and children should be actively engaged in learning. To this end, learning games and activities for exploring the nature should be incorporated into the education program.

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