Review Article

OVERVIEW OF FEATURES OF ENVIRONMENTAL DESIGN TO IMPROVE CHILDREN'S CREATIVITY

*Shaghayegh Ghaemifar and Abdullah Jabalameli
Department of Art, Isfahan (Khorasgan) Branch, Islamic Azad University, Isfahan, Iran
*Author for Correspondence

ABSTRACT
Since childhood is one of the most important periods of life to anyone, and the personality in next periods of life starts developing in childhood, and as children develop a large group of the community, paying attention to children's needs and taking step to increase children's creativity will play a major role in their development and growth. In this regard, play spaces can play a major role in raising children's thinking and creativity. The present study aims to examine standards of play spaces to raise children's thinking and creativity. A descriptive-analytic research method has been used in this study, and library-documentary sources have been used to collect data. In this study, firstly psychological characteristics of children have been recognized, then the standards for design of play spaces have been evaluated, and ultimately using analysis of related studies, characteristics of design such as Children's Adventure play Gardens, use of natural resources, Involving children in play spaces, Peaceful use of memory space and design multipurpose spaces.

Keywords: Child, Creativity, Environmental Design

INTRODUCTION
At any community, a special place has been considered for the children, that a particular attention has been paid to improvement of academic, cultural and social level of this group of the community who develop a huge population of the country, concerning the important role of children in future of country. Children, as the young, small and vulnerable group of the community than adults are less likely influenced of their surrounding environment, and they are not able to change any space as they like, yet they are more interested in understanding of the space, i.e. the space not to confuse them, but stimulate their curiosity (Pahlavan, 2004). Children play a major role in visualizing the Future at any community. Indeed, children involve in social activities as soon as possible at the next stages of their life, and engage in social affairs as the citizens living in the community. Further, children as the agent for the tie between past and future generations play a major role in transfer of traditions, cultures and identity of the community (Azmoode, 2012).
Human destiny has been intertwined with the surrounding space and environment from the childhood. A majority of education and tutoring experts believe that the personality of the man develops at the early size years of his life. Hence, attention to the children's needs at this period of life and rise of an infrastructure to emerge their needs on one hand and mother's employment and the need for the spaces to take care of children on the other hand specify the necessity to develop some spaces to provide suitable conditions for children's social, emotional, subjective and physical growth and prosperity of their interests and abilities as well as a space to prepare the child to enter into the primary school. Hence, the present research aims to find some criteria to design a space to encompass the child's needs in various dimensions concerning the child's development. In this study, an effort has been made to give a response to the questions as follows:
1-what is the role of space in the child's intellectual research?
2-what are the characteristics of play spaces to improve children's power of creativity?
In this study, firstly an overview of the child's recognition from psychological perspective has been considered, and then analysis of spatial criteria concerning design has been fulfilled for the children, and ultimately the suitable environments for raising children's creativity have been recognized using the rational reasoning for design criteria.

Review Article

Recognition of *Children from the Psychological Perspective*

Full recognition of children is the most fundamental precondition for success in raising children. The important aim in this context at the kindergarten lies on a fact that the educational, social and natural issues which are selected for the intellectual and physical development of children must be firstly simple and then observable and ultimately included of accurate scientific information and relations. The characteristics such as Imagination, fantasy and emotional properties at the childhood indicate increasing proportion of art language with the nature language and trends in this age group. Some of these characteristics include:

Curiosity

Tendency to recognition of the phenomena in surrounding areas at the early childhood is tangible in human. This sense causes the child continuously asks questions, and causes emergence of necessary motivations for accuracy in seeing and hearing new contents, causing the child to welcome scientific and adventurous stories and events.

Play

Play is proposed as one of the most tangible characteristic in children. Games for children are fulfilled in a different way, found with new forms and characteristics in harmony with development of the child influenced of his needs and tendencies at any stage of his life. The most important conditions for children's play include wide space and sufficient and suitable time to use them based on their ability, taste and interest. Children choose those activities which are more consistent with their needs. The most important means in children's creativity and thinking include sand, colored pencil, the means for painting and puzzles.

Imagination

Children live in their own imaginary world, that most of them at the age under 7 years old visualize the world as they want rather than what exists, and this causes the design environment not to be a space for the children that the architect designs without recognition from it. Role of imagination at the child's world can be observed in their plays, mentioned that this starts from the early 1.5 years old to later.

Painting

Some imagine that the painting is just an entertainment for the children, yet if we look into painting with a deep and psychological looking, we will perceive that paining is not just a means for entertainment, but also a means for creativity. Indeed, the child's internal emotions appear at the wall of home or at the book's cover, for which they use different colors concerning their interests.

Poem and Song

Children accordingly learn rhythmic songs and poems more rapidly. Indeed, music is an agent for raising the child. In this regard, applying children's memory is not important, but what proposed here is elaboration of words, music, poem and songs. Movements together with concepts help training the child.

Story

Storytelling is a program through which comfort comes to realize for both story teller and the listeners. The art of storytelling is not what we witness today or witnessed previously likewise other arts. Stories are well suited to increase the children's creativity.

Sports Movements

In training the children, sports movements will be followed by play, that the instructor will strive to pay attention to children's physical power considering the children's movements during their play.

General Factors in Studying the Children's Development

The child's body develops the basis for raising his deed and behavior, thereby it must draw a particular attention to the child's natural development to understand how he has raised up (Ceru, 1967).

Stages for Raising the Child

Characteristics of a 3 Years Old Child

Physical Development

At this age, weight and height of the child develop rapidly, so that rapid physical development paves the way for more accurate learning of sensory-motor skills, and for this the child's physical activity and

---

Review Article

movement increase. The child's activities take last for about 20-30 minutes, for this it must not oblige them to engage in watching film and listening to the story for long hours. At this age, the child's sleep hours get more regulated, and his dependence to the parents reduces, mentioned that the child must be kept in the kindergarten for 3-4 hours in maximum (Azimi, 2003).

Subjective Development

By subjective development, the children's interests to the people, objects and environment in surrounding them increase. The child gradually uses his previous experiences in new activities, to him the transfer of learning gets stronger. The child expresses interest to hearing story and understands the messages out of the story provided that the story telling to him has been selected concerning his intellectual level. He recognizes the colors by the 3 years old, and knows the concept of the numbers 1 to 20 with their differences (Azimi, 2003).

Social Development

The child expresses his desire to have a peer to play together, yet the child cannot tolerate crowded games. For this, the classes in kindergarten must be developed with few populations. The child can learn observing his rights and others' rights in playing, eating and using facilities (Azimi, 2003).

Emotional Development

To children, being confirmed by the adults at their tasks is important, for which persuasion and reward are required. The criterion to select a friend to children can be adjustment, lovely behavior, obedience from each other, and harmony in interests. The child's reaction against limitation reveals as silence, maladjustment, destruction of objects and smacking (Azimi, 2003).

Characteristics of 4-5 Years Old Child

Physical Development

He jumps, goes upward and downward from stairs, learns to ride a bike, throws the ball easily, takes the pencil in his hands easily, enables to use the pencil and hops easily (Dorouti, 2004).

Subjective Development

By subjective development, the child likes to play in a group, mentioned that group play is a function of simple rules and regulations, in which the child is much more curious and has a huge power for mimicry, and his recognition from the environment is tangible concerning his experiences, where there is no difference between imagination and reality to him (Dorouti, 2004).

Social Development

By social development, the child expresses more interest to his friends. He likes playing in group with his peer friends or his parents. The child uses his play instruments in playing with other children, and selects special friends for him (Dorouti, 2004).

Social Development

In sake of emotional development, the child still relies on his parent, for this the early days of arrival to kindergarten will be difficult to him. Indirect experiences are suitable to familiarize the child with morale behaviors in form of relationship with behavioral patterns (Dorouti, 2004).

Characteristics of a 6 Years Old Child

Physical Development

At this age, the child's physical development proliferates. He loses his Primary teeth, in this way it requires to give him information on loss of primary teeth in order not to consider it a bad thing. He loses weight and seems more slim (Behrouzfar, 2007).

Subjective Development

The child's interests get wider, for this his expectations and demands are focused on the problems that he had not asked them previously. The child can recognize the objectives from their images and further recognizes their application. The child asks questions about more complicated problems, including difference between the man and animal, and existence of God and so forth (Behrouzfar, 2007).

Review Article

Social Development

Interest to play with a peer increases in the child at this age. To the child, being confirmed or rejected by his friends affects him. If the adults engage in playing with children and control them, the children will stop playing and making tumult (Behrouzfar, 2007).

Emotional Development

The state of invasion increases in the child, which he is more likely susceptible to his demands and parents' and instructors' expectations. Anyhow, the early days at kindergarten or new conditions get tougher to the child. Totally diverse conditions at kindergarten and instructors' behavior will attract the child as much as possible (Behrouzfar, 2007).

The Child and Play

Starting the play can be attributed to the long pasts even from the early emergence of the man. Indeed, play is conveyed as a segment of human life from the early cradle to the death, and in all the history of humanity. The man needs movement in physiological perspective, that play develops an important segment of this movement. Playing in group in form of dancing, hunting, fighting and worshiping met the individuals' physical and subjective needs (Mahjour, 1998). With regard to Webster dictionary, play has been defined as follows:

-movement and activity like movement of body

-freedom to movement

-activity or exercise for entertainment or sports (Mahjour, 1997)

In this definition, play and sports have been defined as two words which can be assumed one word, mentioned that there is no similarity between them.

Amis dictionary defines play as follow: play implies have entertainment such as sports, gambling and etc. (Amid, 1960). William Estern has said in the book "psychology at the childhood" that play has been an instinct for development of abilities or it can be a preliminary exercise for actions in future.

Pestalozzi believed that play helps the person to live by his involvements, entertainments, efforts and activities, whereby a strong cohesion sets between soul and body (Mahjour, 1997). Advocates of Froebel have considered the play as the simplest way to express the child's constructive force. Based on a series of psychological definitions, Dr Mahjour defines play in this way: play implies any physical or subjective activity at leisure time or at work to gain joy even by playing in a group or lonely.

Children's Play

Play or entertainment at any form meets the person's desire to freedom of actions, which lets the person engage in entertainment activities from the early childhood to maturity in various forms or in different plays (Ceru, 1967).

Characteristics of play

Accordingly, play implies an activity in which the person engages and enjoys it, concerning its aspect of creativity (Ceru, 1967). Characteristics of play depend on its application and the conditions. In other words, these characteristics differ at different age groups concerning the characteristics pertaining to the development of the child and adolescents. As mentioned earlier, the characteristics of play can be characterized as follows:

Movement

No activity without movement can be called a play. The child by moving his body, involving his mind, intelligence and emotions engage in play.

Joy

Joy can be the most important stimulus of the child for playing. The child reaches to job and vitality when all his needs are met. Success is joyful in playing among the members of group, where the needs such as self-prosperity, physiological needs and so forth are met.

Purposefulness

Gaining joy is the most fundamental aim at playing. At the stage when plays are appeared as rule-based plays, membership in group and social acceptance will become the most important aim. The child engaging in a play with any aim tends to achieve the final outcome.

Review Article

Playing in a Group or Individually
The plays are specified concerning the age, gender and the needs of children. The child plays among others even individually or collectively or in both states.

Time and Place for Playing
Despite other activities, play enjoys the characteristics that the children can engage in it at any place and time, mentioned that the children use any opportunity for the play which is interested to them. Play can be effective to resolve most of bottlenecks and emerge the considered space and can be considered as an alternative for the considered toys (Motalaghzade, 2010).

Concerning the Development
The children's age, intellectual and physical conditions cause selecting the play with special characteristics. For instance, the children's bone is flexible at their 5-6 years old, that they will be skilled concerning their abilities together with growth of bones and muscles of the child in their movements, so that their skills guide them to select the play. Anyhow, characteristics of the plays in the children and adolescents differ at different age groups that their effects on the person also differ.

Nature and Quality of a Suitable Settlement for the Children
Importance of the conditions for a suitable settlement for comprehensive development of children is as follow:
- Love and security, avoidance from nagging, illogical criticism, humiliation, discrimination, staying away from struggles, avoidance from parent's long absences
-set discipline
-avoidance from excessive support
The children must be given opportunity so as to evaluate the result of their carelessness and mistakes, and also they must be given opportunity in wearing clothes, eating the food and other daily affairs.
-tolerate and understand the children's behavior concerning their age
-provide suitable toys to apply children's thought and creativity and adapt the movements by eyes and hands
-persuade the children to observe precisely, stimulate sense of curiosity, and avoid being failed
-expand the child's power for tolerance of hearing about the opposite beliefs and respecting others' views
-identify the importance of education center and persuade the children to do their tasks and give a priority to his task than any other task
-being in contact with the child's instructors to be informed of the child's progress
Role of architecture in raising the children's thoughts
It seems that the humankind has been enclosed by three types of education:
-internal growth of senses and body organs
-natural education
-how to use this idea that education is exclusively associate to the humans
Education implies stimulating a string of physical and morale progresses in the child within the society in which he lives and gets ready for life. Hence, culture as a series of social traditions and habits is inseparable from the education. For this, the concept and methods of education change in line with the changes within the society and culture, whereby the education must be continuously monitored with progress of science and experience. In other words, currently education has gone beyond four leading areas including age, education environment, subjective faculties and emotional relations, and has got close to the culture of conceptualization. Now, one of the indicators for development in developed countries include extent of development and growth in these countries relying on various aspects of education including teaching methods, increasing children's scientific and practical skills, founding spaces in accordance with their perception and feeling. There are a variety of samples about increasing role of architecture concerning the children's body and soul, and there are also some samples concerning this idea that how lack of allocation of suitable spaces to educating children has led to the crime among them.

Review Article

The Child, Architecture and Space

Education is called to a process which provides a series of conditions and states for the students so as to learn experiencing new behaviors through having practice. In this process, the learner who is in an active interaction with education environment changes it and goes under influenced from this change. In this regard, conquest of space by children can be observed at various areas. This conquest might be fulfilled in line with access to an experience or through simple movement of body resulting in the child's creativity. Spaces include emotions, whereby spaces find psychological value (Jean-Jacques, 2003). The space is considered as a protective area or an open land for the child to play in it. The child must live with this open and closed spiritual duality. Now, the ideas by architect in relation to educational space concerning the quality of education center are a function of success relying on two axes;

-it meets the educational spaces in the best possible way

-the architect's ideas must be in accordance with the need of the leading users who are the children, yet in this context the instructors' needs to increase quality of teaching adapt with the children's needs.

Some Spatial Rules about the Design for Children

The problems which have been taken into account are divided into two leading groups: 1-one group associates to functional qualities of an environment, and 2-another group associates to qualities of design.

Functional Qualities

Features of an environment play a major role in the children's communication needs.

Spaces with Diverse Places

Children need special rooms to do their desired activities which encompass the possibility for much movement, including following, jumping, running (Jean-Jacques, 2003).

Collective Rooms

Central spaces including entrance space, hall, age and so forth are the places in which people meet each other, where the possibility for collective activities is provided. Collective activities imply the activities in which children and adults tend to participate in them.

Small Rooms with Door

This is a segment of the child's daily life to be in contact with other children and to be alone sometime. Hence, children need the rooms to have rest there and sleep and also for concentration.

Corners of Room

Children life corners of room. Children like a magnet are induced to the corners of room. Security, intimacy and events mostly occur in corners of room. The children can hide in the corners of room and whisper there or decide upon their plot and so many other things (Jean-Jacques, 2003).

Furniture of Children

Furniture including tables, chairs, benches, wardrobes are not only functional means for the children, but also are toys for them. Children seek to play with them and move and push them.

Special Plays

the big slide near the railing of the stairs, nets for Acrobat and blue mat and bed and mirror walls and painted walls are all attractive, which are assumed in the plays with special design. The toys considered for children with high value help for improving power, skill and feeling of adventurousness in them. Special plays are complicated, through which it can fulfill the tasks properly (Jean-Jacques, 2003).

External Place inside the Space

The children tend to act inside the room likewise what they do out of the room and in open space. If the quality of interior spaces of rooms are considered likewise what is in out, the children can play inside the room. Children feel that many events occur at their home (Jean-Jacques, 2003).

Nature

Children like the nature, sun, water, fire, plant and animals. They seek to explore about the rules governing the nature, swimming pool, small environment, fruits, vegetables, flowers, sheep, birds, fishes, rabbits.

Review Article

CONCLUSION

With regard to what said above, role of architecture and design of space for the children sets a mutual relation between architecture and design of space. It should be noted that attention to designing the architectural spaces plays a major role in increasing the children's creativity. Hence, with regard to the spaces that the child needs in a day and the plays that he engage in them, considering the criteria such as development of collective rooms to increase the children's social interactions, development of various spaces to increase the children's creativity and imagination, development of cozy places to increase security and intimacy, design a suitable furniture for children' s use, development of open spaces for children's play, recognition of natural elements are required in designing a space for children.

REFERENCES

Azimi S (2003). *Child* (Saffar Press).

Amid H (1985). Persian Culture

Azmoode M (2012). *Architecture and Design for Children* (Tehran, knowledge and science).

Behrozfar F (2007). *The Principles for Design of Open Spaces in Proportional to Children's Mental and Physical Conditions* (Publications of Building and Housing Research Center, Tehran University Press).

Crowe Leicester (1967). *Child Psychology*, translated by Hamedani (Tehran, Amir Kabir).

Dorothy Rogers (2004). *Child's Psychology*, translated by Sarmad Gh (Tehran University Press).

Jean-Jacques Rousseau, Emile, 2003, trans- Zirak zade, G. Nahid Azimi publication.

Motalegh Zade D (2010). Children's play equipment, deputy of municipal utilities, Tehran Beautification Organization

Mahjour Siamak (2007). *The Psychology of the Game* (Tehran University Press).

Pahlavanzade, Leila, 2004, children's menu.