An investigation on the influences of legibility of educational space on children's sense of attachment in Iranian's school

Ali Akbar Heidari[1], Mostafa Hadipour[2], Siamak Ghaed Amini[3] and Nazgol Behdadfar[4]

1. Department of Architecture, College of Graduate Studies, Science and Research Branch of Kohgiluyeh and Boyer-ahmad, Islamic Azad University, Yasouj, Iran
2. Master Of Architecture, Science and Research Branch, Islamic Azad University of Shahrekord, Iran
3. Master Of Architecture, Science and Research Branch, Islamic Azad University of Shahrekord, Iran
4- Master Of Architecture, Asalooieh International Payamnoor University, Asalooieh, IRAN

Corresponding author: Ali Akbar Heidari

ABSTRACT: Today, we live in a world that people are born in clinics and die in hospitals. A world in which, undefined spaces are increasing and people are changing culturally and socially. Because of increasing in architecture and urbanism, it conveys a sense of lack of spaces to people specially children, lack of memorable and original spaces. To establish a link between children and school, ignoring simplicity principle in Iranian school motivated us to investigate the influence of legibility of places of children's sense of attachment. The present study has been conducted by questionnaire and comparative method. Statistical population under study is school of Charmahal Bakhtiari. Findings present that design of memorable spaces for children to increase attachment towards these spaces is influential. Legibility of spaces to increase children's sense of attachment is important. This topic has a major role in establishing a relationship between children and their second home (school).

Keywords: space, children, memorable spaces, sense of attachment, legibility

INTRODUCTION

Because of relationship between environment and people's behavior, designers and architectures have paid attention that children and spaces that they use, are a huge part of their studies. In their studies, the importance of children's place attachment and the places that they use, have a major concern. Nowadays architectures have used different techniques to establish this link, Such as architectural aesthetes, simplicity of spaces, performance, etc, and also legibility of designed spaces. Their aim is to use clear design in architectural work in order to increase attachment of children to space. Example of this topic is mosques have been observed, traditional schools of Iran. If we ignore philosophical subject in these design we can state that this original architecture has created buildings where great Iranian scientists have emerged. Forgetting principles of Iranian architecture leads to forgetting Iranian design among modern architectures and this is the reason for building schools without identity. Buildings with wide corridors like prisons where children are entered and are prisoned for a few hours (Saiedniam, 1999).

Today we rarely can find a school without any corridor designed or based on architecture and urbanism principles in which educational issue have been considered. The aim of present study is exact investigation of legibility of educational spaces and its influence on children's sense of attachment. Finally legibility of space in educational buildings is considered as a trick in order to reach sense of attachment in children to attach school as their second home and also do activities in these spaces to reach growth in guidelines of ministry of education. According to researches of Kowin Linch in "city's appearance", Bentli in "responsive environment", Hamed kameli Nia in "design of learning environment" Reza Shaterian in "design and architecture of educational spaces" we concluded that these investigations and presenting the ideas and doctrines have a direct relationship on legibility of

spaces in educational spaces in educational environments with increase or decrease of children's sense of attachment that in literature review is presented (Saiedniam, 1999). Defining the problem and significance of the study and research purposes

1-1- Defining the problem

Everyone has a boundary around himself. A boundary that we know and we feel intimacy and security, we can rule our boundary, and we can make decision in it and control it. Do architectures consider personal boundary in designing architectural spaces such as educational spaces or in general in every design, regarding their performance for user? Where is the position of children's personal boundary in educational spaces? Do children belong to emotional spaces in schools? Is there any link between educational environment and children? What is the reason of lack of attachment in Iranian school? Does children's sense of attachment to educational environment influence on their level of learning.

2-1 significance of the study and research purposes regarding this view and related questions in researcher's mind we can investigate their reasons in a brief comparison between modern schools and mosque-traditional school. We should pay attention to the fact that traditional architecture of Iran considers performance, form and concepts in design present then in design of traditional buildings. In these buildings never form is scarified for performance and vice versa even in tombs and never one of these elements is omitted (of course role of these elements) regarding performance can be major or in margin). Examples of these scales, boundaries and attention and hierarchies can be observed in buildings such as Emam square in Esfehan, Jame mosque in Kashan that show "unity in frequency and frequency in unity". It has been ignored in historical buildings of Iran and designers don't pay attention to these sensitive topics of architecture and created spaces without sprit and emotion. If this trend continues in designs of these spaces, Iranian cities will be affected by cultural quality, because Iranian urbanism will lack identity and faces psychological problems and consequently society. We have clearly observed that ideal created memorable and relaxing spaces and had maintained its own originality so far (Altman & Low, 1992).

Not paying attention to relationship between children and school environment as a space that influence their personality result in destroying cultural values of society and causes many problems in future (Agnew, 1987). Investigation about these spaces and presenting suitable solution increases interest of children to spaces that we live in.

2. Literature review

Examining different ideas about legibility of spaces and their influence on sense of attachment and memorability is important.

1-2 legibility of spaces

Kamelnia in fifth part of his book about learning environment has used the legibility of spaces in educational environment and changing data between environment and person and talks about schools without wall and presents his topic with words such as influence of symbolic shapes, material used in every space (Kamelnia, 2009). He then uses the word memorable in school. It can be interpreted that schools can be designed in a way that memorability can be influenced by tricks such as change of material so that it is tangible for children or the use of symbolic shaped which is understandable for children in spaces and direct children.

2.2 legibility and explicitly

One of the factors in creating a pleasant environment is explicitly and legibility. A good picture of environment gives a sense of security to person, so user can easily touch every part of space and link them together in a coherent way. In other words a king of visual organization and psychological security which is result of these two processes (explicitly and legibility) which create sense of attachment to these place (Bourdieu, 1974). The role of scale in spaces, attachment of person to environment and also identity of environment and its link to children can be finding in famous Gandi which expresses in these sentences:

" I don't want to have high walls around my houses, all doors be closed, I hope that life breeze bring all of world's civilization to my house, but I don't want a breeze takes me away from my house, one who has root in mind doesn't grow".

These sentences show that peak of one's emotion towards spaces in which lives, has attachment to it and has personality has formed in it. Kowin Linch, a theorist states in "appearance of city", "nowadays cities increasingly are without some required parts and in comparison it can be observed that traditional cities have a live form and hectic life can be completely observed in them. While designers' attempt in the present era to create new cities has been

successful, Linch tries to present guild lines to reach a suitable city and investigate 3 cities of Boston, Gerzi city and Loss Angeles to explain legibility in the city. By legibility Linch means that everyone could be able to know parts of the city and link them in his own mind. He believes that to understand this concept, idea and imagination of citizen should be considered. Images are very important for each person, because it helps person to find his direction and create general pictures about outside world. General picture of every one is result of two things(Lynch, 1981).

A) spontaneous feeling

B) memory of past experience

These two factors help person to have a new understanding of these information and his guidelines to act.

According to Linch as an architect, he is concerned about lack of dynamic spirit in modern cities and points to lack of architecture's success in design of new cities (Lynch, 1981). This issue is very evident in Iran and in modern schools s very influential. John Raskin an English architecture and theorist writes "this is a real identity of a house a place of peace, shelter not just against difficulties but also against fear, doubt, isolation and if it is not like this it is not called a house but a part of outside world that you have made ceiling for it" this English architecture how creatively describe a house and says if a person's house has only security role and there is no attachment between the person and environment in which he spents most of his life. It doesn't man a house but just a symbol of a house. Based on researcher's view this issue is true about second house (educational environment). In addition to stated examples other people like Bentli have presented ideas about concepts and in this study based on Kowin Linch's idea.

3. Research methodology

Generally a research is done completely that it can describe a collection of elements and factors part by part (Groat, 1995). So in this way aforementioned study result in improvement of technical knowledge scientific research can be classified into several major groups: fundamental, improvement and applied.

4. Research findings

4-1. conceptualization

the word legibility in this study is related to increase in children's mental imagination about spaces that they use. This word is considered with the word attachment in children.

This study is consist of several major parts such as complete identification of legibility of modern educational places, lack of attention towards arrangement of spaces in educational spaces, the role of scale in increasing legibility and over lap of these two subject we reach sense of attachment in spaces. Although legibility according to Linch has been explained in generality of city but in this study, educational environment has been investigated as a stain of elements. Increase of attachment toward legibility is presented by research result. The present study applied- developmental because it investigated cause and result in educational environment and examines the reasons of not having feeling in attachment in children. It also suggests legibility as a solution. The word attachment, dependence, link and attachment have been considered equal in this study. Increase in attachment and attachment of children toward spaces has been a solution to increase sense of attachment to educational spaces and this is important regarding learning. This topic is investigated against the word legibility or simpler design and presentation of creating corridorical spaces. The reason of legibility of school spaces are lack of attention of modern architectures to original mosque-like schools, designer's lack of attention to mental imagination of children about spaces and relationship between these mental imagination and level of child's interest to space, lack of attention to space diversity required for children is subject of discussion and investigation, we can reach convincing results about reason of decrease in level of literacy in some countries and relationship between scientific level and spaces has become clear to some extent.

4-2. the role of scale in schools and its influence on legibility of spaces

Lexically scale means dimension and size of form and this subject is one of the important subjects in designing traditional spaces. One of the influential factors on legibility of spaces which is completely ignored by architectures Nowadays is scale and proportion which is one of the key elements in traditional architecture at Iran. And also in different buildings and conducted researches attention to largeness at buildings in Akmandian and Sasani dynasty is completely evident in Islamic period. Lack of attention to this topic in minor design is one of the concerns of today's architecture which is an example of urban stain in educational spaces. Making close the scales of building to children's view in order to better comprehension of space before & while person's entrance is influential in establishing relationship between children and environment or the use of tricks in design in order to make it

pleasant to people is a solution to increase visual idea of children and establishing more attachment to environment.

4-3. an investigation of responsive environment in performance

Humanistic environments are political, social systems with specific legal right so what we understand from a building as an urban stain or even a city is a political, social subject which is man – made. By reinforcing suitable opportunities and increasing presentable area to people, a democratic environment is provided for user Called responsive places.

By investigating these responsive environments we can study educational spaces, so that level of responsively of a space is increased and space corresponds to performance.

4-4. Legibility of urban spaces

In cities before 20th century usually buildings which are distinguished from other buildings by importance have highest relationship and link with performance. According to John Raslcin these cities perform better regarding legibility but in modern cities legibility is observed just in one dimension. Buildings can't tell lie. Similarity between public and specific buildings is obstacle for visual legibility that result in chaos in pattern of activity and this subject is a clear reason for creating legibility of design.

Achieving sense of attachment in educational spaces Achieving an environment out of interest , values and his own personal signs and creating sense of attachment in user is possible by two factors of improvement of user's facilities and change in mental imagination of space & place which is legibility of space and this topic is important for school & its users (Lovesun, 2009) . Increase in attachment to space can be used by legibility trick which is not possible except by intellectual attempt a bout designing educational space and psychological areas to achieve better education of children culturally, socially and personally.

4-5. Influence of quality of spaces on memorability and sense of attachment

Spaces and interpretation of people about spaces are always different but according to researchers in the process of design of responsive school, the role of narrow corridors and increase in level of students hatred, shortage of collective and memorable spaces and their role in decrease of in tersest to learning have been pointed out.

4-6. Environmental graphic or geometrical design one kind of design presented in design and architecture of educational spaces by Reza Shaterian is the concept of environmental graphic in schools. It means educational spaces we use form to introduce our own place to establish a friendly relationship with users as if the person have been using the space for ages shatarian , 2008).

The space used is geometrical and is based on performance foundation that children easily understand space so we ruin fear of large spaces in children's minds. (In other words educational spaces are designed so that there is no need to draw colorful lines to introduce spaces).

Shaterian points out that Iran's schools are poor places that in the newest ones there is no sign of architectural principles and environmental graphic and principals and teachers just attach a few picture and posters to give spirit to the place (shatarian, 2008).

5. How to establish a relationship between place and user of the space
5-1. Definition of place in space

When order is achieved in global space, interpreters mind looks for local order. This is presented in the form of cases by reaction of cities with important places. A reaction that provides concept of place and spirit, Place doesn't have a tangible entity but in the mind of a person who understands physical boundaries visually, he understands spirit as a spirit in the limitation of boundaries.

5-2. sensual understanding of children about place child should have a feeling of comfort and relaxation in meeting buildings, things and in relationship and life within them, Darkness and unsuitable forms have the most influence in lack of relationship of children and spaces.

The reason of creating unsuitable of performance and type of user of the space:

These factors result in lack of child's relationship with environment and also suggested solution in order to increase relationship between child and place can point to use of light and happy colors and sometimes colors with unspecified forms to increase children's mental imagination and convey sense of friendliness with environment and kindness. Child should distinguish himself from the world. Around him and analyze & interpret space. This aim can't

be achieved except with complete identification of child about environment ability to establish a relationship between him and space (Bentli , 2003).

6. Investigation of case study
6-1. Pattern of school without walls in designing school
Mone High school:

This school was presented by a group of students that didn't accept situation of learning in traditional school spaces. This kind of school were named based on this idea that city is a classroom. In this school a main entrance was defined and special attention was paid to hierarchical.

Organization of availability and change of material in entrances with different lightening of this place and specific material and different arrangement:

It mention that designers with a simple design and establishing diversity in internal design, light and using memorable spaces try to make the legibility which has been successful to some extent.

6-2. Shahid Beheshti school in Shahrekord

Investigation of questionnaire and interview shows that although this school is a state school but 96 percent of users of this school regarding sense of satisfaction, link with school and establishing relationship between user and environment and higher level of learning in comparison to traditional school in the same area are satisfied this building is according to architecture principles to some extent and has average amount of legibility.

6-3. State top school in Joneghan city this building is completely the same as other school in Iran with a completely simple space. Students are accepted by entrance examination in this school but about 86 percent of these students have no relationship with school during this study and this is influential in decrease of learning level and sense of attachment to place. It is one of the poor schools architecturally and none of architectural rules have been observed in this school.

CONCLUSION

Researchers conducted in several schools in the province by method of questionnaire & correspondence of result with all schools in other provinces show that none of the schools in this province are completely bused on architectural principle and this leads to decrease in legibility of space in these buildings that this illegibility of places prevents link of child to school. Lack of link psychologically causes decrease in attachment to space and consequently decrease in learning level.

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