

# Place Attachment in Primary Schools

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## Abstract

Psychology scholars consider school design as an effective educational parameter in students' learning ability. As a live and dynamic factor, it may significantly influence the quality of students' educational performance. Although educational spaces are very influential in learning, this is not enough singly considering the qualitative dimensions of educational spaces. Yet, educational spaces and especially schools are among the most influential environments regarding human personality development. Having sense of belonging to a place is a significant qualitative criterion which guarantees durability of that place. In practical design, places which can create sense of attachment in students make them pleased and help them to stay at the place satisfactorily. In this article the main focus is 'place attachment'. It was an effort to find solutions for creating and increasing this emotional bond between school children and the educational space through design. Since the context of this research was Shiraz city in Iran, it is necessary to consider that in this country male and female students are segregated in schools from early years of education. Therefore, it was necessary to pay attention to specific conditions of Persian culture and Islamic traditions and attitudes. According to observations I had in a number of well-known primary schools of the city, most of these schools suffer from lack of architectural quality and educational equipment. Another problem is failure to meet design standards and principles. Duo to such problems, we may ask; how can place attachment be created in such environments? How can students become interested in school and learning under these conditions? And, what is required to make school more attractive and interesting? Therefore, we need to have a responsive space. But what features should this 'responsive space' have? As a result, focusing on place attachment as a potential way is one of the most significant solutions.

**Keywords:** Architecture, Primary school, Place attachment

## 1. Introduction

Human is one kind of creature who feels fear if loses his perception of himself and his communication with the world around him. This fear may make him lose tranquility while he needs it. Thus, he always looks for this tranquility. As Shamai (1991) has argued, place attachment is subset of the term 'sense of place'. 'Place attachment' is like a shelter which not only keeps human away from indeterminacy, but also connects him to other parts of existence. The more our habits and patterns of behavior respond to our desires, memories and expectations, the more these aspects create permanency. On the other hand, according to discussions in the realm of environmental psychology which comply with Maslow's hierarchy of needs, environmental qualities can be classified regarding how they satisfy different kinds of human needs. 'Belonging' is placed at the third level of Maslow's pyramid as a basic human need (Maslow, 1954). With this background, this paper focuses mainly on place attachment as a need and looks for its nature in order to find solutions for creating this bond through architecture. The importance of Maslow's theory in education and training is hidden in the relationship between shortages and growth. Obviously, students who suffer from lack of physiological needs have less mental energy to spend for learning. Educators, managers and teachers know that if students' basic needs are not met, learning may process insufficiently. For students who do not feel satisfied, it is very unlikely to be motivated to meet growth needs such as creativity and new ideas. Such needs are characteristics of self-actualization. On the other hand, if students are physically in proper condition, they have sense of comfort, security, belonging and respect. They will be more susceptible and motivated in satisfying the need of knowing and understanding.

## 2. Place Attachment and Interaction

Before discussing the way place attachment can be created in a school, it is crucial to know this sense or bond. Place attachment is mainly described as an emotional attachment or bond between persons and places (Kyle et al., 2004; Florek, 2011). In educational spaces, evidently there are many factors effective in creation of sense of belonging (Scannell and Gifford, 2010) including the relationship between human with human, and the relationship between human and place (Relph, 1976; Altman and Low, 1992). In this research, an environmental design approach is considered in addition to the subject. Consequently, we point out the aspects of place attachment which are directly affected by space. However, what we will focus on is to know how space influences human's sense of place. According to the article 'Identity and Identification' written by Jahanshah Pakzad (1996), human tries to know his identity. He tries to achieve relative cognition of himself through finding similarities and differences between himself and the outside world. To obtain this goal, he tries to become closer to himself by finding pieces of his entity in the outside world. He also tries to find entities which are quite different from him to compare with others and know himself better. These existence factors address one in the

outside world, for instance within an object, human, space or any other factor. By viewing himself and his characteristics within an object, one feels that object close to him and part of his entity. Through interacting with one or more factors of his identity, he feels ‘Identification’ and through further contact finds it as part of himself. Confidence and dominance resulted from this process leads to creation of sense of belonging and permanency. Thus, it can be assumed that sense of identification with regard to any object is in fact the origin of sense of attachment to that object, as Kestenbergs and Kestenbergs (1988) have mentioned, belonging implies object relationships and identity. This is true about place either. The more space addresses human and his behavioral patterns and responses to his desires and expectations, the much fixation is created. Clearly, identification occurs when communication continues frequently between human and place. Since school is one of the social places which influence human life significantly and sense of attachment to that forms the basis of human identity, we look for characteristics of place to create place attachment in school children. Undoubtedly, educational spaces have important effects on adolescents’ behavior and emotions. Since one of the basic needs of children is to have sense of attachment, it is important to find solutions for promoting this sense in students in order to meet their needs. Furthermore, sense of belonging to friends, peer groups or special places can form human identity. Considering this issue can be helpful in establishing more interaction between students and school. This interaction can influence children’s life during educational periods and after that by leaving memories.



Figure 1. At a primary school

### 3. Definition of ‘Responsive Space’ Criteria

In educational spaces, special qualities are required to help students meet their needs. Therefore, in architectural design it is significant to create responsive spaces through providing proper opportunities and maximizing options for users. Consequently we should consider some criteria for space to make it responsive practically.

**Accessibility** - I propose accessibility as a number of possible ways to a space, person, or thing. It is needed to have confidentiality and privacy according to Iran’s Islamic rules. For instance, there should be walled courts in schools which are dedicated to female students. At the border of public area we may enhance the activity level and place public areas such as amphitheater, gallery, cultural and administrative area, etc. (Fig. 2).

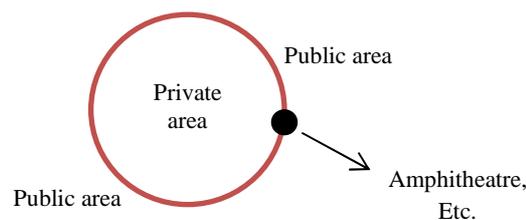


Figure 2. Accessibility; at the border of public area

This is basically the main factor to achieve favorable environment and should be considered during the first stages of design. Fig. 3 shows the levels of accessibility.

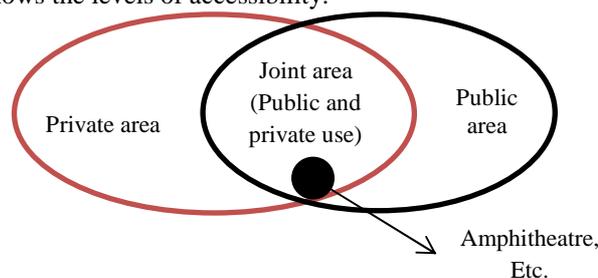


Figure 3. Levels of accessibility

In joint area we can have lobbies and salons. Students' families can have access to joint area. But only students have access to private area in this model. Accessibility may also be physical or visual. Having view to outdoors through windows is also a kind of accessibility. Thus, windows' dimensions are also significant, although there should be no direct sight line from outside to inside the school according to Islamic criteria. There are other kinds of access we should consider in design, such as controlling outside view in interior spaces, considering proper dimensions for furniture such as shelves in library, using transparent partitions to increase the accessibility, spatial openness in paths (lobby, corridor, etc.). Private areas such as yards, studios, classes, etc. should have higher level of privacy as indicated in Fig. 4.

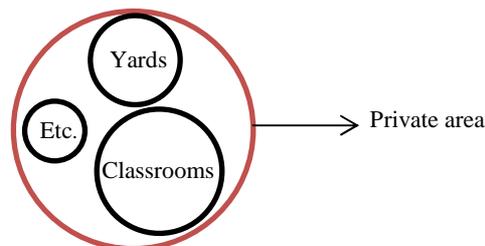


Figure 4. Accessibility in private area

**Diversity** - Diversity is the second key quality in reaching responsive environment and beyond that, building place attachment. To reach diversity, it is necessary to know the importance of each function. Since the subject of this research is primary school, interpretation of functions can be searched in a variety of activities. Solutions which can help the environment be as responsive and functional as possible through diversity is introduced here briefly:

- Diversity of activities requires a variety of equipment.
- Mixing activities and functions in one unit causes reduction in diversity.
- Demand for diversity in spaces and activities can be responded by placing them properly.
- Landscape expansion and categorizing activities are also effective in increasing diversity.

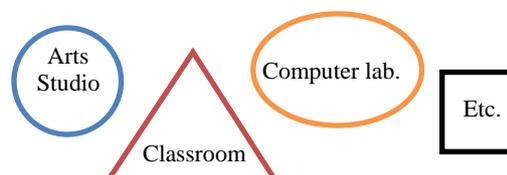


Figure 5. Diversity

**Legibility** - This quality gives us a better perception of the place, as we sometimes use the sentence "I belong to it" when we deeply feel attachment or belongingness (Layder, 1993). Walker and Avant (1988) have also proposed that sense of attachment occurs when the defining characteristics of the concept are evident. I propose legibility as the potential of a place for being comprehended. Its importance is in two factors; form, and activity pattern. Form of school building has this potential to make it easily recognizable even as a landmark (sign) in context. A recognizable and comprehensible architectural form increases the potential to attract children more effectively (Fig. 6).

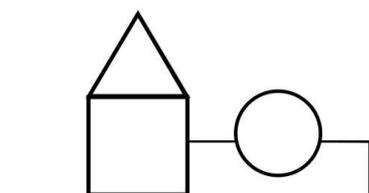


Figure 6. Recognizable forms in building design

Physical Characteristics of Environment	<ul style="list-style-type: none"> <li>• Paths: Inside the building: corridors, aisles</li> <li>• Outside the building: Routes, roads, waterways</li> <li>• Edge: Separation of different spaces through defining borders using colors, materials, etc.</li> <li>• Point of interest: Inside the building through accessibility, transparency, visibility and etc.</li> <li>• Outside the building through form as a point of interest, using variety of textures, variety of materials and etc.</li> <li>• Node: inside the building: void, spatial openness and etc.</li> <li>• Outside of building: symbolic structures, intersections, accessible paths and etc.</li> <li>• District: concentration of common characteristics as recognizable visual identity in order to address the whole environment as a school while having diversity.</li> </ul>
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Table 1. Although Lynch proposed these elements as city’s characteristics, they can be considered in design in order to create place attachment.

It is possible to create other qualities in the building’s exterior using different materials, textures, colors, lights, and proportion. As another factor we can categorize activity patterns in schools. There is usually a relation between activity pattern and space’s function. In public area we can have administrative, cultural areas, etc. while in private area we have classrooms, yard, and etc. Furthermore, there are qualitative characteristics for different spaces. Public spaces are formal and inviting, while private areas are intimate, warm, and attractive. In micro scale, we can design special details for windows. Making a curved direction or border on the edges of openings causes a smooth light contrast in indoors for example. In order to gain legibility, we also have Kevin Lynch’s (1960) mapping method which proposes physical characteristics of environment in five key elements; path, border, sign, node and area (Table 1).

**Flexibility** - The more effective the person is in creating the space, the more interesting he finds it. Human can be interested in the space by which he is surrounded because of his own effectiveness. Thus, the more participation users have in arrangement of furniture and space, the more place attachment they will feel. On the other hand, today, change has become a principle of life. Thus, flexibility has an important role with this regard. Schools should also have maximum potential of flexibility to demonstrate the most adaptation for future needs. In urban scale, in order to activate the building’s borders, it is crucial to predict new capacities for school. Inside the building the effective factors in flexibility are; height, depth, and horizontal/vertical access. To have more flexibility in classrooms these items are suggested:

- (L) shape layout in classrooms: Flexible space
- Providing different conditions for learning
- Studio’s location next to the classroom
- Capacity for transforming corridors into gallery
- Proper window’s height to reach better view

We can also have flexible furniture including adjustable desks and removable partitions. It makes the place potential for change.

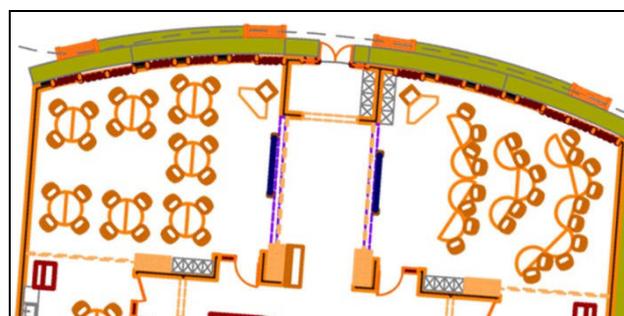


Figure 7. Adjustable desks and removable partitions

It is possible to use edges as sitting place for instance, including Column bases, Shallow dents of walls, projections of the walls, etc.

**Visual proportion** - It is significant to emphasize details in this part. Visual proportion is a feature which implies concepts to people. To reach visual proportion it is necessary to achieve other qualities such as; legibility, flexibility and diversity. Table 5 shows how to reach this qualitative criterion (Table 2).

**Sensuous enrichment** - It is described as a group of requirements that increase occupants' sensuous experience and their ability in making choice.

<p><u>Effective factors in visual appropriateness</u></p> <p>Legibility                  Diversity                  Flexibility</p> <p><u>Visual Proportion</u></p> <p>Creating sense of order between components of a visual combination</p> <ul style="list-style-type: none"> <li>• Golden ratio: There are some outstanding geometric and algebraic features which can be used it in architecture.</li> <li>• Systematic lines: It can be proposed in the structure of building.</li> <li>• Human scale: The proper scale for occupants which affects the size of space for movement and activity as well as objects.</li> </ul>	<p><u>Need for places which create visual proportion in educational spaces</u></p> <ul style="list-style-type: none"> <li>• Spatial arrangement of classrooms</li> <li>• Enough space for doing routines</li> </ul> <p><u>spatial arrangement of classrooms</u></p> <ul style="list-style-type: none"> <li>• Linear-group arrangement</li> <li>• Linear arrangement</li> <li>• Central arrangement</li> <li>• Central courtyard arrangement</li> <li>• Focal arrangement (a group of classes form a big classroom)</li> <li>• Free arrangement (In this system, the arrangement of class can transform to different modes)</li> </ul>	<p><u>Daily routines</u></p> <p>Considering a proper area for doing daily works or ceremonies. A lectern can have an important role.</p> <p>Separating area of daily tasks from adjacent zones via design in order to define the quality of this area.</p>
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Table 2. Visual proportion

Sensuous enrichment does not only contain sight, but also affected by another sense of ours; sense of touch. For instance, our sense of sight helps us with recognizing wall's texture, diversity of colors and materials, forms, lights and shadows. Through sense of touch we can recognize comfortable chairs and sofas or hardness of wooden bench. We can feel lawn when sitting on it. It helps us feel all textures and materials, even warmth and coldness. Thus, the educational spaces should have sensuous enrichment because it is influential in instilling place attachment in children.

**Color of attachment** - I propose 'color of attachment' as applying personal interests on environment and making clear activity patterns. There are mainly two effective factors in creating this attachment including kind of ownership and type of building. This factor significantly makes the place not to cause exhaustion as long as proper solutions are considered about details of materials and forms, for instance, designing symbolic structures in courtyard right next to the sitting area, or providing a gathering place (Fig. 8). To provide a gathering place, we can contrive sits next to the windows or provide private space for students, or, design free ateliers for group activities. In micro scale, we can contrive horizontal rails on the walls to ease putting and hanging objects, or use upright rims for hanging maps, boards and panels usable for students. Another way is to choose Proper color according to users' sex and age for walls and furniture (Fig. 9). It is required to use every opportunity in order to be successful in creating sense of attachment. Several focal points can be considered inside the space. As an instance, finding proper space for placing lockers can be a good opportunity. Thus, when thinking about designing a school, ownership factor should be considered through creating separate areas for different educational levels to reach this color of attachment.



Figure 8. Gathering place



Figure 9. Interior design according to students' age

#### 4. Conclusion

As Shamai (1991) has argued, place attachment is subset of the term 'sense of place'. The more and better the place responds to children's desires and expectations, the more sense of fixity is created within them. Consequently, they find the place more interesting (Seamon, 1993). This is significant to note that the more compatible these spaces are with children's behavior at school, the more successful they will be to feel place attachment. Among the criteria of responsive space, the qualities 'flexibility', 'sensuous enrichment' and 'attachment' can be more effective than other criteria in providing belonging sense in children since they provide more opportunities for them to get involved with space. Therefore, these qualities have a significant role in school design. The presented criteria and generalization of them to human behaviors can provide a proper mechanism for analyzing the interaction and communication between human and built environment. These criteria help architects design livable complexes and spaces according to human needs. Several factors can create sense of attachment in an environment which consists of educational programs, teachers, students, teaching methods, etc.

The existence of place attachment is one of the important qualitative criteria in architectural design. It also guarantees the durability of space. In school design, providing spaces in which students can feel attachment is crucial. If students feel sense of attachment to a special place, they will be pleased with it consequently. With regard to this fact that school is one of the social places which play an important role in people's life, and on the other hand, school children are in a significant stage of their life which forms their personality, providing appropriate conditions to create sense of attachment in them can shape some parts of their identity. To provide this sense in schools, some necessary qualities should be compiled so as to achieve the main goal. Factors considered to achieve this goal are therefore; accessibility, diversity, legibility, flexibility, visual proportion, sensuous enrichment and color of attachment.

Because of the grandness of the subject, this research can be continued and developed to find out how the exterior of school building can affect students' interest in the educational space. It is also possible to do the research in other educational spaces such as high schools and universities.

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