



ماهنامه علمی تخصصی پایا شهر



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Green Space and Outdoor Space in Educational Environment: A Brief Review

Sara jowkar¹

¹ Master's student, Department of Architecture, Eram Higher Education Institute, Shiraz, Iran
Email address: sara_jowkar@yahoo.com

ABSTRACT

The educational environment is the place where human beings follow the environment, which in the past formed a learning environment in nature and related to the surrounding nature. The school yard and green space in schools and educational environments have lost their importance. This has lessened the sense of belonging to the place in children and made the school environment a dull environment and reduced the level of children's performance which has led to a low level of education in schools. The purpose of this research is to investigate the relationship between internal space and external space (green space) and its effect on creating a sense of place and its impact on mental and intellectual development in the educational environment. The use of outdoor and green spaces by students can improve their mental status and improve their academic performance. It seems that by increasing the access of students to open space and green space, psychological status and, as a result, academic performance will be improved.

Keywords: Educational environment, green space, open space, sense of belonging to the place

1. INTRODUCTION

Among the important buildings in cities are educational spaces, green spaces in schools and educational spaces, in addition to saving energy and reducing environmental impacts, promote student education. In educational environments, students are not limited to indoor spaces in classrooms. Connecting with the natural environment and the green space and outdoor space is possible with a conscious design consistent with the school environment.[1] The growing spread of human knowledge in various fields, the recognition of environmental phenomena, human dependence on each of the quantitative and qualitative biological elements has produced many theories. Which sets up different issues in identifying and understanding the



ماهنامه علمی تخصصی پایا شهر



environmental integrity that actually represents the existence of a life chain. In general, the beauty of the educational area creates relaxation in the learners of science and adds to the mental health of the students, and makes the readers more attractive[2]. The learning environment is a place where students spend a lot of time throughout their lives, with a strong, quantitative and qualitative relationship with people. Which converts to a specific place and environment with different features from other places that make sense of belonging to the place. The sense of belonging to the place has two purposes: one creates a sense of return to the educational places for the desire to go to school and classroom, and the inner role of space and space in influencing the formation of the identity of their childhood and adulthood[3]. Research has shown that traditional Iranian schools have developed a model for open-ended and semi-open educational activities and have emerged as an educational tool for open and semi-open spaces. And have become the focal point for social communication with the neighborhood. If most of today's schools are learning in an environment that is completely dependent on the class name By reducing the importance and eliminating the semi-open spaces, the arm's space without any educational role is solely for the purpose of spending leisure time and ordering the movement of students in the yard[4]. Asphalt-covered courtyards, as well as limited equipment and equipment for playing and physical activities, are visual. Which is seen in most schools in the country and What is left out of educational space and not paid attention to it. The issue is the open space of schools, the green space, and the creation of interconnected space inside and outside[5]. The diminution of natural spaces and lively green spaces in life and township and apartment buildings today could be a valid reason for examining the issue of green space and its effects on the development of children. In the urban life of children in urban environments have been removed from the natural environment. This lack of nature and green space has caused problems in the process of mental and physical growth. For this reason, there are several reasons why the physical environment and the architecture of the educational environments are important in strengthening or weakening the sense of belonging to educational places, which plays an essential role in the formation of a sense of belonging to the educational environment in the green space[3]. Individuals who succeed in universities and higher education institutions spend about one fifth of their lives from the beginning to the end of their university education in educational settings. As a result, appropriate design of closed and open spaces for schools, and qualitative indicators and standards are considered as factors influencing the quality of the educational environment. Utilizing performance indicators and aesthetics in designing educational spaces, in addition to meeting the students' physical and mental needs, they cultivate talents and boost creativity and promote the level of education[6]. The importance of green space as a multifunctional entity for linking recreation, spending leisure time, teaching and research, and intellectual development and awareness of environmental thoughts, is a mimic of small-scale, tactile nature in which major ecosystems The world is rebuilt and used together. Recreational and educational aspects of the green environment are interconnected and the content of these fields is intended to motivate students to think, explore nature and culture as two pillars of human evolution, human unity, and the nature of being a vagabond, and leisure is beyond leisure[2]. With the studies conducted in this study, we can conclude that environmental factors and the sense of belonging to the place can cause people's interest in the environment or hate them. The quality of schools and its influential factors are



ماهنامه علمی تخصصی پایا شهر



important, including important factors such as green space, vegetation, open space, light, color and vegetation. The importance and design of these factors can help students learn more.[7]

2. Environment

What is understood at the beginning of human communication with the environment

The result is a sensory perception that is through one of the five senses or a combination of them[3]. Outdoor and green spaces are among the most sought after environments for people to see. In schools, 75% of sensory perception, 13% of hearing senses, 6% of tactile sensation, 3% of taste sensation and 3% of sense of smell are effective in learning students.[8]

2.1. School

The school is a learning environment that takes place in all areas of learning. This training often involves the education of the school, as well as the participation of the individual in space[1]. School Definition According to Louis Ken: All places that human beings use to obtain their desires in learning.

The school is not only for the study of beliefs and ideas, but also for the reason for the existence of bilateral occasions and the relationship between man and nature[9]. The school is an educational space that includes classrooms, laboratories, libraries, etc., which enters the human being after the living environment (home), which is the first social environment, the student's personality forms in it.

The different plans, green school plan, compact plan, gorgeous plan, radial plan, linear plan, organic plan are based on the characteristics of location, design, sustainability approach and orientation. (Edward Brian)

The following factors are important green school design principles

- Understanding the context of the design and attention to the climatic conditions
- Organize appropriate spaces to make things easier for facilities
- Appropriate arrangement of spaces, taking into account the principles of setting environmental conditions
- Minimum utilization of the mechanical facilities and supply of renewable energy sources
- Consider the characteristics of students in design
- Creating a proper context for learning the principles of sustainability and emphasizing the importance of sustainable principles for students
- Maximum use of natural light
- Creating the possibility of school and student interaction with nature[10]

The space for training is of desirable physical quality. It is said to have been designed in such a way as to design standards of indicators such as proper temperature, adequate humidity, light, sound, proper vision and landscape, green space, healthy air, energy efficiency, access and communications. Interior space and outer space are observed.[6]

3. Green space



ماهنامه علمی تخصصی پایا شهر



The green area of the training area, whose natural or artificial arenas are based on the establishment of trees, shrubs, flowers, grasses and other plants, based on human monitoring and management, taking into account the rules, rules and specialties associated with it to improve the conditions. Environmental protection, maintenance, maintenance or construction.[2] The major benefits of green outdoor space in schools are:

- Fight against air pollution
- Oxygen production and carbon dioxide absorption
- Absorption of airborne particles
- Avoid noise pollution and noise control
- Control and detect disturbing lights
- Beauty makeup
- Wind control
- Recreation
- psychological effect
- energy saving
- Reducing temperature and increasing relative humidity
- Climate control[2]

An educational green space design consists of a variety of units. For the correct combination of all elements, the function of the specific planting units and the purpose of planting and forming the set must first be clarified. Each unit will carry out its specific tasks. Because of the separate and different functions of the units (the place of the morning rituals, the queue of the students, the space of the sport, ...) (in one set, the size, shape and visual significance of each unit varies with other units) Each space in the area should be designed and enclosed in such a way as to make students feel at a certain place.[2]

For the educational spaces that are neither very large nor too small, it is best to choose trees of medium size (10 to 15 meters). Long-tailed trees can create many problems and do not give the necessary beauty to the environment, they are suitable for small areas of small trees between 6 and 10 meters. In some places, long trees can also be used as wind turbines.[2]

In a large training space, the sports fields are marked with grass-like foaming plants. They can also, like small plants, make the groups of larger plants as unified compounds.

4. Outdoor space

Our goal in schools is not to divide space into two categories, so open space is considered as part of the architecture, which can be the dominant part of our preferred architecture. [1][Afhami]Parkash writes about the importance of the relationship inside and outside the educational spaces: "Human beings are naturally created so that they need to communicate with the outside, and this need is evident in the younger ages. As a result, every opportunity should be used to connect the spaces inside and outside. It also highlights the importance of internal and external perspectives in the educational environment. Because most learning in schools is limited in closed spaces, it is imperative that students' vision horizons be developed by creating visible lines to the extent that they can expand into classroom space. 15-meter



ماهنامه علمی تخصصی پایا شهر



landscapes and more give students the opportunity to change their eyes, which is also important for the health of the eye for comfort.[9][kamel nia]

According to Boston Educational Development Center in 2001, the qualities of a high school educational courtyard are:

- Multi-Functional
- Comprehensive design process
- Collaboration with local organizations
- Integrated with the school curriculum
- Continued use
- Sustainability[5]

Natural environment plays a very effective role in the process of increasing and improving mental clarity (Kaplan 1977), and mental clarity is one of the most effective factors in creating self-esteem and individual autonomy.

The use and exploitation of green space in the landscape and the perspective of it allows students to feel attended in a safe and sensual place to school.

5. Relation of training space with green space and open space

In this theory, the student does not have to distance himself from the classroom point of view, but only needs a mental distance[1](Festen2009)



Figure 1: Relationship inside the classroom with an exterior view[Afhami.113]

In opening and spacing the landscape is not just the size of our standard size, but the number, types and dimensions of the elements of the landscape and how they are arranged, plant species such as lawns, shrubs, shrubs and trees, the status of the earth in terms of texture and slope, in This theme is involved.[1][Sharghi]



ماهنامه علمی تخصصی پایا شهر



Figure 2: Opening and landscape space in space[Afhami,1130]

The component of adaptation and adaptation to environmental conditions is the characteristics of convenient and usable locations that fully meet the demands and needs of its users.[1](Festen2009)



Figure 3: Landscape compatibility with environmental conditions(Afhami,1130)

An example of schools located in Shiraz with green space in the courtyard is Imam Reza School, and the relationship between the interior and exterior is well established and in addition to the green space in the open air area, which places the sense of belonging to Students have created.[3]



Fig.4- Exterior and interior of Emamreza school in Shiraz[Siyavash poor.B,et al]



ماهنامه علمی تخصصی پایا شهر



6. Conclusion

By studying the impact of outdoor and outdoor space on educational environment, we found that with regard to modern machine life and apartment life , students must be fit into space with a standard definition of learning environment .Another factor Influencing the process of learning to have a sense of return and belonging to the place is for students .

The result of this study shows that :

- In the educational environment creating green space, as well as connecting open and open spaces, will enhance the level of education , further learning , and the creation of high – energy spaces for students .
- Green space creates a sense of belonging to the place in the students' towards the place of education . green coverage is a factor in preventing environmental pollution and protecting students health.
- Green space and vegetation reduce noise pollution and make children focus more on the educational environment .
- Correct space communication between internal and external spaces creates visual visibility and improves the level of instruction in students .
- Correct connection between internal space and outer space in educational environment provides lighting and ventilation at the educational site.

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ماهنامه علمی تخصصی پایا شهر



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