Interior design of Ghazvin Daneshmand high school by examining the effect of color

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Abstract
Today, giving the concepts of environmental psychology, paying attention to it is important in designing indoor educational spaces for getting an ideal atmosphere for students. Color has an undeniable effect on students' learning. Suitable colors can create a situation that is instructing, meaning that it leads to self-confidence and distances fear from the student. The purpose of the study was to examine the effect of color on designing interior design of educational centers. This study tried to prepare a list of the indices of color effect to provide and guide the designers of the educational centers to increase the satisfaction of the students and improve the quality of educational environments. With theoretical and descriptive-analytical approaches, the paper tried to collect data using library and documentary studies and analyze the components of nature in health centers. Colors have a critical role in enhancing the environmental conditions. From aesthetics point of view, the color can provide attractive and appealing conditions for the individuals, making it more attractive and uplifting that accelerates the person in the stages of education. Moreover, we can use the color features to meet the specific needs of individuals.

Keywords: interior design, color effect, learning

1. INTRODUCTION
One of the effective educating factors in education is the architecture of the educational spaces. In the new education, the physical space of the school is not merely a dull and unhealthy environment in the learning process, but as a living and dynamic factor plays a role in the education quality of activities of the students. Indeed, in communication science, education is seen as a kind of information science. In this approach, student education is not just affected by the teacher's speech, but many other factors are involved in transmitting the message to him. According to scholars of education in a systemic view, the architecture of schools and its components like color, light, and sound, equipment, and so on along with other educational and educational factors can have a great effect on the learners and students. Adolescence is one of the most important stages in every one's life as in this period the personality of people is shaped. One of the most significant factors able to affect the formation of the personality of adolescents is the school environment. As the teens spend most of their time at school and the school environment can affect their personality formation, it is better to be more focused in the interior design of the school. John Coltes is one of these researchers who strongly believe the type of the educational space is one of the effective factors in the internal efficiency of education [1] and the color of schools as a physical element, as a living and dynamic factor affects its educational level. According to the studies conducted in Karaj, Hamedan and Qazvin in the academic year 1997-1998, it was concluded that white color is one of the colors that leading to academic progress and increased adaptability of the students. It removes stress and distress and increases the efficiency of periodic examinations. The paper examines the effect of educational design areas on the learning performance of male and female students at Mamsani High School. The research method was descriptive-analytical, which is applied in terms of purpose, conducted in survey method. The population was Mamsani High School with 2581 people. A sample of 335 people was selected as the sample and multi-stage random sampling was used [2]. The reliability of the effect of designing the educational environment questionnaire was obtained using Cronbach's alpha (86%) and for Kolb's learning style questionnaire (84%). The results showed that learning space (spatial, psychological, physical, and behavioral domains) affects students' learning. In her book, Asghari [3] has mentioned the effect of color on the character and that a part of the effect of colors is related to the independent character of each color and another on the mental state of individuals facing the color. The colors usually have a direct effect on the human's feelings and mentality, sometimes pleasant and sometimes unpleasant, and we react to these effects. We are happy with the positive effects of color and avoid its negative effects [4]. In their paper... et al. stated the importance of physical space in the environment and its effect on students [5] and an important issue in designing a learning environment. People who learn science spend nearly one fifth of their lives from pre-school through university in the educational environments. Educational spaces are one of the areas of environmental architecture with a main role in a community. Inattention to and lack of awareness in designing educational spaces have given bad results in many countries. An educational place with the right and favorable conditions will end in physical, mental, emotional and social development [6-8]. In case of inappropriateness or desirability, besides delaying students' learning, it can cause disruption or mistakes in the student's desired performance by changing the learning style. Attention to physical spaces can increase the student's vitality, motivation, and morale [9 & 10]. If the physical spaces are not proper in terms of shape, volume, light, color, and so on, they turn into boring places unbearable for students. Realization of this through design and attention to space details are possible according to user behavior patterns [11-14]. Now, in the study, we try to

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understand what the relationship between the color and the interior architecture of the educational environment is.

**2. METHODOLOGY**

It is very important to create different spaces in the educational environment according to standards and all the facilities and services should be in compliance with the standard in each educational space, which can be very effective in the training process and motivation and psychology. With all the necessary spaces at hand, the ideal result can be attained.

**Physical planning:**
Different spaces of the school are divided into different sections according to the various functions, which are:

- Educational spaces (theoretical, experimental, and general classes)
- Educational assistance spaces (laboratories)
- Cultural and sports spaces (prayer room, library, sports hall, and so on)
- Administrative spaces
- Support and service spaces (buffet, toilets)

Educational spaces (theoretical, experimental, and general classes):

Educational spaces:
This refers to the areas used during the academic year for teaching and learning process with the description of the lessons under the guidance and leadership of the teacher (trainer) with proper facilities and equipment used by the students including theoretical, experimental, and general classes.

Theoretical class:
It refers to the closed spaces used by a group of peer students to learn by reading, writing and repeating the teacher's guidance and leadership, with appropriate equipment.

Experimental class:
It refers to a closed space for a group of peer students for the teaching and learning process by doing the practical work as the base of the activities, based on research and objective and empirical observation, which is under the guidance and leadership of the teacher.

General class:
It refers to a closed space where the teaching and learning processes do not need practical work and the content is taught by the teacher.

Daneshmand School:
The non-governmental Daneshmand High School of Qazvin has been operating since 1995 and has been able to become a superior educational institution in the province, and the non-governmental Daneshmand High School started building a new educational environment in 2011.
3. Physical Schedule Tables:

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Physical Education Program

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Program service and support spaces

4. Result and Discussion

Analysis and recognition of the design brings about a thorough understanding of the building, materials, walls, interior design, and so on and can also be very effective in the design process. By analysis, one can identify the strengths and weaknesses, and work on the weaknesses to make it better, so by faster analysis, one can reach the results faster.
Interior design:
In the interior design of the educational space, color is one of the most important and most effective factors in the educational spaces, which is not thought of at all, and all the spaces are of one solid color, and even a part of the materials and the texture of the floor are seen on the walls with no harmony with the wall and its color, and size is one of the important elements of the interior design not seen in this form building. There is only a square uniform shape on the ceiling and not seen on the walls. (Figure 5)
According to the figure below, instead of using design and thinking to create a better atmosphere for the students in the interior space, they have used banner on the wall, as one of the worst thoughts in designing the interior of the educational environment.

This process also goes on the ground floor facing the main entrance and the corridor of the ground floor and instead of using the irregular banner, there could be a space to create school posts and news that could be thought of in interior design, with a special place designed for it.

Stones are used in the inner walls. According to the figure below, the rocks have come up to the half of the wall, showing that no thinking and design have been done for the walls and no modern materials have been used.

Plans:
Ground Floor:
Classes/ Administrative rooms/ Prayer room/ Service and engine spaces/ Teachers' room

The school ground floor plan can be among the most important ones as the school entrance is from here. As is seen in the figure above, all the spaces on the ground floor are used - two classes and a large chapel, a teacher's room, and a manager and counselor room, toilet and engine room. (Figure 11)
However, the ground floor could have been better designed and engine rooms and classes could have been designed on other floors, say, engine rooms in the basement and classes on the first and second.

**First floor:**
Classes/ Library:

![Figure 9: The first floor plan](image)

The first floor plan includes classrooms and libraries, and the spatial division and classes are appropriate on this floor, and the spaces are arranged regularly.

**Second floor:**
Classes/ Administrative rooms/Test rooms/ Teacher’s room

![Figure 10: The second floor plan](image)

The second floor plan includes classes, assistant and counseling room, teachers' room, and exams rooms, one of the designing problems on this floor is the assistant's room and the consultant that are away from the manager's room while the manager, the deputy, and the consultant's rooms could have been designed on this floor, which is one of the wrong designing on this floor and the class instead of the assistant and consultant room could have been built because it has more use on this floor.

**Basement plan:**

This floor includes a workshop, a buffet and a wardrobe for use by students.

![Figure 11: Basement plan](image)

**Conclusion:**
To attain the desired results from any practical work, the existence of information and the full knowledge of the practical theory are essential. Basically, colors do not have age limits, and only our mental role limits its color. Color is inappropriate when an appropriate harmonic composition is not used. The colors must have a rich, artistic and scientific combination to be eye-catching and to have a positive effect on the viewer's mind. The more suitable and harmonious this coloring is the more positive effect it will have on the mindset and it will create a better environment for the individual. Thus, the best and most suitable color should be chosen and used for the environment to provide the highest required efficiency, either in the educational centers or health centers or in other places.

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**References:**


