ENVIRONMENTAL PSYCHOLOGY AND SCHOOL SPACE DESIGNING

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Abstract: - For many years Iranian high educations has needed change, improvement and officials of Iranian high educations have tried to use today’s developed methods in this way to affect entire improvement of ethical characteristics, training, … etc. Apprehension of this study is specifications of educational space based on school designing that how can affect the quality of training by using environmental psychology positively. And which space is qualified for these specifications. The purpose of this paper is designing a creative and dynamic space alone with better training and designing a desired and optimized space for student by creating a new approach of training and performing modern training systems in schools. Regarding to extent of this subject it seems that only one method is not enough for this research, thus other areas of compound methods for illustration of unknown aspects are more efficient.

Key-words: school designing; environment; psychology; training; space.

1 Introduction

Everyone knows that effect of architecture on training has been known long time ago and behavior of students that has been viewed as a concept of training and growth of future generation and forever especially in contemporary era has been a considerable subject for designers.

Training spaces are one of environmental architecture area that plays a major role in society. That role of training in development of society is undeniable. Being careless and in experienced in training space designing in many countries have undesired results. Hertz Berger believes as a school belongs to many people and individuals with different social roles are share with it, its designing is very important [1]. Environment and architectural space is as training structure and transmitter of cultural concepts from descendants to future generations and also as fundamental base of conducting training and educations of a society as the most power full and important training space of civilized societies.

The research had been done across new objectives of training for achieving the desired and modern training structure. Surveys about today school shows that all current training spaces regardless to technical standards and architectural identity have been apply in low levels. School architecture always is affected by interaction of constitution and content of training. In today school the modern teaching methods (the student axis system) have not been matched with old education methods, and this matter caused decreasing in application of space and caused weakness of students and decreased the eagerness of students for learning. Today school's space has never been able to encourage students for exploration innovation and group activities.

Importance of doing this research is reaching to desired training structure that can be very effective in innovation, style of mental improvement and new view point of school.
designing. Thus after a review, four areas of designing training environment included:

- Space
- Psychological
- Physical
- Behavioral

These areas caused attention to different aspects of training spaces designing a different pattern of training designing.

In contemporary century scopes of designing training environment were focused on insides of spaces and quality of components. In these years many of schools and classrooms changed from state of entire training toward individual training and small groups of students, so needing of school with new approach is more tangible.

In recent years especial social needs and relation between school and social environment had been considered matter. In this direction, at first it is defined modern training and education and their importance and also emergence of modern schools by psychological approach and its effects on increasing quality of learning.

2 Modern Training and Education – Modern School

One of the most important subjects that has affected the base of training in recent decades, had been realization of developed goals of learning and in this direction, contrasting of traditional training and modern training, have caused indiscrimination of ultra-growth from purposes and content of training. Also modern viewpoint of training and education configured for releasing from these limited training orders and was seeking for a way to release students from clamps of being long time useless it was against the training order based on hegemony and priority of teachers. As a common definition, modern training and education is something that one of it’s the most principal subject is clarifying the role of training by scientific cognition of child and even trends (though as a dream) to establish training based on children psychology [2]. It means the same training as established by Rousseau effective notions. Rousseau is who famous on clarifying era, deals with a lot of contrasting with his notions even becomes a wanted person, as he liked to go against the streamline of limited society, he stated his contrasting with any current social orders.

Rousseau believes that every things that is made by God is beautiful, and every things that human intervals it will be damaged and corrupted [3]. When Rousseau speaks about instructor, he says: ((it is better don’t call him (or her) teacher, because he (or she) should guide more than train and he (or she) should not tech guidelines but should do something that the child himself (or herself) explore them.)).

In accordance with his viewpoint, training is not the same as uniform that could wear all students [4]. We can say that severe reactions against traditional school had been the main cause and provider of consideration to modern patterns of schools. Sommer had defined the situation of traditional space due to philosophy of memorizing and statement of what have been memorized [5]. He believed that spaces of traditional classes are suitable for philosophy of sitting and learning. Thus denial of traditional school became hypotethical of forming modern schools by psychological approach and step by step, scientific research shows that we cannot say certainly that modern school is prior to traditional school. While we have training method compatible with training spaces in otherwise, these kinds of school could not be useful, but certainly the idea of modern schools with psychological approach have obtained successful experience about developing and learning. So as a common definition :(( psychology of environment, considers to human feeling and comprehension of physical environment, his (or her) behavior about an especial base, effect of human’s behavior on environment and overall relations of physical and social growth conditions of human being.

![Fig.1. Traditional School](image-url)
Thus training factors in modern training and education are quality of school architectural space, teacher, book, student, method of teaching, training management, behavior and family are factors that seems to be effective on learning procedure and is being surveyed.

3 Without Wall School

Drastic reactions against traditional order is results of less attention to theme of learning and requirements of students and less attention to their characters have attracted a lot of attentions to provide a base for change in current training systems. Thus in decade of 60 in twenty centuries Without Wall School was the dream of student who were wishing to go out of traditional frame of classroom toward out of school to be able to achieve learning skill from out of school world.

In 1968 the plan of Without Wall School presented by a group of students from Monor High School who thought that conditions of traditional schools are not suitable. After one year some of teacher considered to this plan too and after other surveys, finally in 1970 it started. This plan indicates to some programs that students can develop the base of their learning to out of classroom. This plan in some cases is also called ((a city the same as classroom)), but however the main purpose of the plan was providing small learning environment to be compatible with requirement of students who could adjust themselves with conditions of conventional school. Also in next decade (1970-1980) humanistic approaches in this plan were seeking for situation that more ever than conventional training methods, to adjust parts of training bases with individual requirements of students and these changes to be applied in classrooms [6].

4 Ideal Class

For achieving the goals of ideal learning, we should have proper working spaces certainty and as many of activities is being done in the classrooms traditionally, therefore paying attention to classroom and it’s specifications is essential.

In recent years, many of classes that is being designed, provide much more than common needs. One of matters in classroom designing is providing a capability in class so as that to be allocated to public activities of student and their common training, meanwhile to be able to change as a space for their individuals activities [7], [8]. Conditions for controlling an observing of student’s activities by teachers should be available. Classrooms should be flexible, for example, by using by movable partitions, desired spaces could be available.

Idea of flexible classrooms in many cases is against the imaging of classroom that many people think it as a four wall frame thus changing toward flexible classrooms should be done intelligently.

It needs wall understanding of school scheduling, otherwise can’t be successful. In classrooms that are designed for primary school, is more flexible. But in upper grades that professional training of student will begin, it isn’t so easy. For upper grades, professional, art, science and etc trainings need special spaces, but the main subject that is increasing efficiency by improvement of space is true here, perhaps some of trainings need to traditional classroom with many rows of desks. All of these depend on schedule and theirs presentation method of teacher.

James Dick in an article titled as L Classrooms implies that in past times purpose of children training was preparing them for living and working in a factory, for this reason

Fig.2.Without Wall School

Fig.3.Scheme of Ideal Class
classrooms where the same as factory too, but these days purpose of classrooms and schools have changed [9]. Today classrooms should provide conditions of learning in small groups too. Spaces should be flexible based on needs and should be manageable and be organized by teacher. Based on James Dick’s opinion, regarding to specifications that he defines, L design is suitable for these goals. Also changing the furniture of classrooms affects the quality of creativity and innovation of student. Thus future classrooms more than providing a calm and comfortable for students, it is necessary to allow them to learn by their own method. For achieving this goal it is necessary that the plan of training’s space be compatible with various training methods. Thus designing of modern training space the same as schools and universities, have caused challenges about traditional teacher-student role and caused motivation for creating notions and providing new experiences for faculty. Louis Kohn defines school as all places that human use them for learning and these places not only are inefficient for learning and training of ideas and notifications, but also existence of every things and mutual relations and interaction between human and nature is used. Many scientists believe that architecture with a story as well as human history as an important part of culture has a basic role in configuration and promotion of human being meanwhile, training spaces designing that has more long period than human life, has deserving portion in this procedure because environmental features is a affected by both discussion of architecture and training, the same as lightning color and especially effect of training space on quality of training and behavior of students and teachers due to very close relation between architecture and training.

The architectural group named future system that established in 1979 by Jan KAPALICKY and AMAND LEVETE, in their plans followed majority of technical approach with view to nature. This architectural group has planned a project named world classrooms in accordance with constructing modern environmental condition training and learning out of traditional complexity of training centers and schools. Active experts is this group believe that quality of the environment that individual is being trained there means factors the same as space, light, noise, etc and range of his (or her) enjoying of that space and their effects on quality of learning, because human so as gets alive from nature is always affected psychologically by nature. This debate caused arising of human and environment interaction. Influencing in environment with physical organizing caused continuous habits of human. Objective and precise organizing in a training environment is a powerful tool that affects behavior of training environment users indirectly and intangibly. This debate starts from somewhere that school and institutional environment in general is further than somewhere for being taught or for learning. Organizing of learning spaces, theory classes grant various qualities to user’s life especially to students of universities and in this way increases the eager of learning. Intelligently organizing of space encourages the user to use his (or her) creative power and caused the group of leading, good relation and at least facilitating and supporting empirical activities and training. Because of serious effects of new researches about environmental structure of training it is noted as hidden subject in training. In this interpretation intelligent space affects users psychologically structural environment of school applies in two steps, architectural designing and internal decorating. Architectural designing provides the theme and the base of human effort and human relation between physical space and human factor and in this way foundation of construction and organizing the availability to internal and external spaces will be possible. Architectural designing adjusts specification related to environmental conditions the same as noise, light, heat and separating of traffic. More ever, some qualities the same as color, texture, forms of surfaces and various spaces becomes visible by architectural designing. Internal decoration has a constructive role in creating training environment. Of course this role is the same structure that entirely and in general has been provided by architectural plan. The school designing architecture should be seeking for suitable factors for directing the user’s nation and innovation toward promotion.

So as an uncompleted building can affect viewer, thus these affects should be compatible with schedule. Therefore designing training environment the same school in fact provides raw materials that teacher and student create an environment compatible with his(or
her) interest. In this method of thinking, each environment itself should be ready for change and be adjusted with needs of users. As a conclusion training environment changes to a tool that will be applied for the better implementation of training strategy by trainers therefore environment should be flexible in different parts and situation for a deep revelation in school design that has been forgotten these days.

Fig.4. color’s Effect in School

Analyzes of training spaces in other word that is more general, learning environment for different contemporary architectures have been challenging and school designing has been the cause of challenge, where has had some various nations beyond itself in field of training philosophy. Training spaces had been allocated for the sort of training and learning the philosophy of training. For this reason is it is one of the samples of architecture that it’s performance should be engaged with concepts of training and pay attention to it seriously. In this field, many of architectures have suggested a plan regarding to their own specification of designing and some of them have been able to create suitable buildings in accordance with theorem of training by their efforts. Most of contemporary famous architectures have been tried for developing solutions of designing learning environment, but it can indicated to a few of them:

4.1. KOUKKALA SCHOOL
This school has been built for children ages 13 to 14 and its construction has been finished in 1994. This school has been constructed based on flexible principles and being open. In other side there are goals of school, children’s self motivation learning, practices and acquiring knowledge.

4.2. ALPHA HIGH SCHOOL
This school has been surveyed as one of the AIA models and perhaps is one of the most gallant of without wall school .This school have won the Governors livability prize and has been built in 1999 in Portland. Alpha high school is an alternative school that in general emphasis on occupational skills of children. In construction is so as that various training can be presented there. Less number of students provides a family environment that students and faculties are familiar with each other there. In structures provide possibility of cooperating with society by relations with jobs. One of the main objectives of modern school design was that to be different form conventional schools. Managers consisted that facilities should be comfortable and flexible, teachers have power of movement and etc, but efficient part of it is moving walls that provides possibility of changing the walls and furniture by children and teacher in accordance with their willing. Philosophy of Alpha is encouraging young to get ready for job and also for growth as a citizen.

4.3. SANT STEPHAN SCHOOL
Main idea of this building is a compilation the school with the space of park. All classrooms are related to a central half open space and are very flexible and provide different facilities for training. Thus evaluation of school construction shows that environment and special quality is effective on range of learning. Of course this matter is faced with some constraints, because modern training systems has a lot of costs and as this system needs to basic studies and researches, thus economical aspect of this plan can be one of its constraints other constraint factors in the current culture of training in society that drives training society toward wrong training systems that is not responsible to user’s needs, but from other side modern training approach in establishing new school have increased bases of learning and has caused creativity and innovation in students and have given them the opportunity to cooperate with school and society, therefore implementation of this plan can change these constraints to opportunity for students. Mazlo has said that training system in accordance with training buildings is directing fostering self realization and until
people view schools traditionally, such approach to school is impossible. Thus quality of space has affected the learning and creativity of student. Of course quality of space should be adjusted with requirement and behavior of student. Regarding to sensitivity and extent of the subject, choosing a method for developing the research it doesn’t seem to be enough, thus an extent of compound methods (quantity and quality) for clarifying unknown aspects seems to be more efficient, but for this reason that this research is going to clarify the effect of environmental and special quality on quality of modern training, conclusion and analyzes of relations, purpose of main problem cogitation and achieving to accurate theorems of research by precise method of data coding obtained by questionnaires and sampling and assigning them by quality method is easily possible. And also it has used interview and observation for current situation and explanatory statistics is more efficient for expressing the unknown points. Thus method of this research is a kind of explanatory-analytic method. Regarding to the subject, trial society is student of guidance school ages 12 to 15 years, but in sampling due to low percentage of error instead of simple probability sampling Cochran method is used.

5 Conclusion

Thus, physical environment doesn’t change behavior, but can be effective in learning. Therefore, being sought for environmental designing that leads to freedom and creativity in order to control and centralized training and also tries to develop schools by modern approach with more capability. That doesn’t mean it is the only respond, but it is related to this approach and how much that have learned about this modern approach and patterns of modern schools(without wall school) and idea of other modern classrooms based on paying attention to external society and sometimes is being done by cooperation of different people of society. The idea of without wall school doesn’t define only patterns of open plan or private training schools and similar patterns, in fact this idea emphasis this subject that school for achieving to its real existence should be changed to environments for life of people of society and should be seeking for using different cultural-social specifications and needs, and social performance of school it is the most important and emphasis subjects. Thus school plan should be designed by cooperation of different people who are near the school. Cooperation will realize at time that different people know that they are effective in decision making. Therefore, this concept that training space is only inside of building has been abolished and should be changed. Training space includes all open and closed spaces and all spaces and materials that related to school environment. Thus training has more extent meaning and public training can more reinforce the bases of development and growth of every countries. Constructing schools without paying attention to its cognitive out comes is one the problems that may lead to weakness and disinterestedness of students.

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