Determining of transformation of Iranian school[*]

Regarding the comparative investigation on traditional vs contemporary schools

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Abstract- **Contemporary Iranian civil society needs to expand the education, specially the public education. It leads to the construction of several schools without a constructive and positive role in the development of the education process and are different from traditional schools.Despite many changes and developments in the content of education, the spatial pattern of Iran schools have been experienced no positive changes and development in the last hundred years. The aim of this research is the Determining of the diversity of the Iranian school and its role regard to the transition of educational system at each time period. Questions of this study are what is the influence of different educational systems in shaping the characteristics of the space and the educational role of the Iranian school? In contemporary schools, what is the influence of the emergence of the new education system in the educational role of the Iranian school? For this purpose, three schools are selected for further investigations. They are Chaharbagh as a traditional school, Darolfonoun as a first educational structure in modern style, and Alborz as changes index of new schools in Iran.The investigation shows that due to the traditional and new education systems, in traditional school in Iran the education was appeared in courtyard, Ivan, dome space and chamber, and thus the open, semi-open and closed spaces are the educational environment and had the active rule of the education.**

But the pattern of school design at the contemporary time with regarding its Teaching methodology, only appeared in the classroom as closed space. Moreover semi-open space and open space cannot play the educational role.

Key words- Traditional school;New schools; Semi-open space; Courtyard; Teaching method.

I.   INTRODUCTION

This study investigates the changes of education and its influence on the design and forming schools. The study method is based on the contents of the architecture literature, and case studies of observation. This research includes the history of Iran educational systems, from the classic (Safavid) era to the contemporary period.

All information about the history of school design, education, and educational environments in Iran is limited and has not been analyzed. Current studies arenot in complywith each other. One of the present research purposes is to discover correlations between school design and education during the different eras. The evolution of the educational systems in the schools is related to a particular concentration. Schools are not only studied as buildings, but also studied as structural responses to the educational needs of each era.

II.   CASE STUDY

The educational program of in Safavids era was the first program in the development of the education in Iran.Charbagh is one of the best schools in this era. Thus Charbagh (1718 AD)is selected in this study as a traditional school. [1]
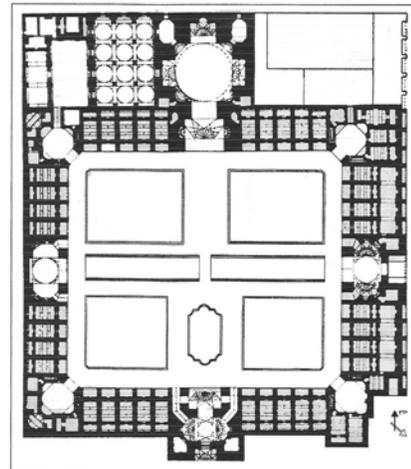

Figure1.Charbagh school (*from: www.chn.ir*)

Figure2.Charbagh school (*from: www.chn.ir*)

Darolfonon is the first institute applies the new educational programs and technical models, along with new architecture features, which had been founded in 1852 A.D. this school showed the initial tendency of the educational system of that time to move toward schools that were different from traditional schools. [2]
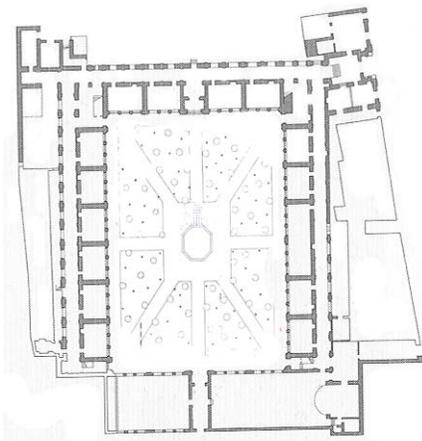

Figure3. Darolfonon (*from: [3]*)

Figure4. Darolfonon (*from: www.jamejam.ir*)

In two decades from 1921 to 1941 A.D. in Iran, numerous schools were built and education became public. In this cases,Alborz school (1925) is one of the best example of the evaluation of the new school design, western system of education. Because it shows how recent school design has developed. Many schools in different cities of Iran, continued its pattern in spatial design and function. Thus it can shows the changes of the contemporary Iranian schools. [3] That pattern continuously is used in present Iran schools.
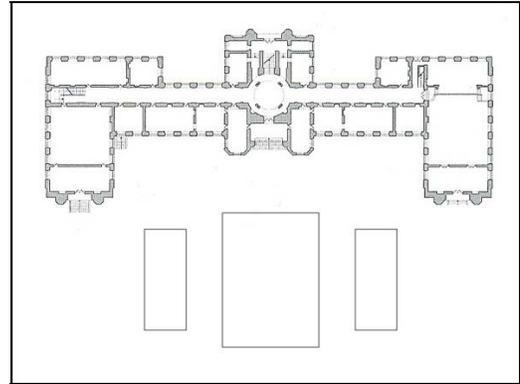

Figure5. Alborz (*from:[3]*)

Figure6. Alborz (*from: www.tehran.ir*)

III. THE PROCESS OF SCHOOL DESIGN IN THE TRADITIONAL ERA IN IRAN (SAFAVIDS 1501-1722 AD)

A. Teaching Method:

During the Safavids era, as traditional era, teaching methods are significantlydeveloped. Public educational programs for all individuals caused teaching methods to be more active and dynamic.[4] The interactive "loop teaching" which is developed at this time also developed with the people`s religious understanding in the Safavids era, and has to be the most traditional method of teaching in Iran. In this method, the teacher sat next to a pillow or a column, and students had to sit in front of teacher or next to him and they made the loop strata. How the students sat beside the teacher was related to the level of achievement and amount of knowledge. Students who were more active sat closer to the teacher in the circle, and those with lower levels of knowledge sat with the new students on the opposite of the teacher. The finest students or the other scholars sat next to the teacher on both sides. The public or the completely new people made new layers of loops and sat in the second and third loops behind the first loop. The loops were usually specified based on the name of lessons; the philosophy loop or the jurisprudence loop was the most important and most common loop. [5] (figure7)
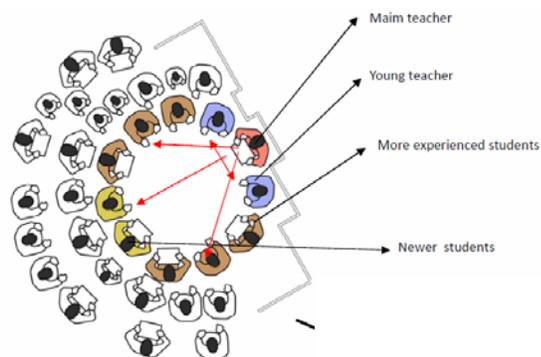
Figure7.Students' seatlocationin front of the teacher.

B. The advantages of the "loop teaching method"

1- The important point in the loop method was the student`s absolute freedom in selecting the loop and the teacher.

2- The loop method could be occurred in any space- large, small, closed, open,square, and rectangular or circle.

3- The loop method formed its own interior space. Despite the presence of people scattered in public places, such as mosques, the loop space could easily be established.

4- The students in this method arethe learner, and theyhaveto participate in the process of learning through the research and discussion. The loop method suits the physical conditions for active and responsible participation of all students.

C. Spaces that the loop method performed in school

More training places were the Ivan (balcony), the courtyard, and the chambers. The chambers provided enclosed spaces, while the Ivan provided semi-open spaces and the courtyard provided open space as the heart of the complex.

The semi-open space was used in different seasons as a place of teaching, and the school yard was added to it if it is necessary. More detail is shown in figure 8.
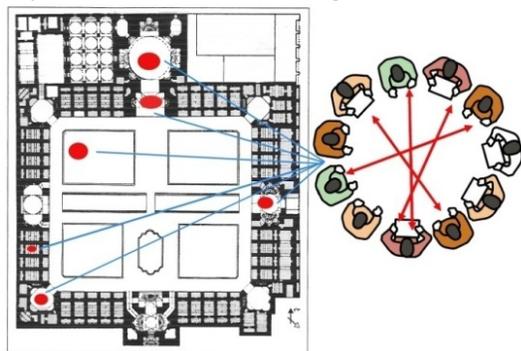

Figure 8.The relation between the loop and spaces of school, the loop has created in every space in school. Formal and informal shapes(*author*)

D. The semi-open space

The teaching process was not initiated only by the teacher, but many parts of training and learning have been done as the mutual learning, through peer-tutoring and collaborativeteam work. The special dimensions and characteristics of the Ivan`s semi-open space made a suitable place for the educational activities. [6]

The education and contents were presented in a way that could be useful for both advanced and elementary students at the same time. In semi-open spaces, students can easily join or disjoin the loop to participate freely in some educational gatherings and lecture courses.

The traditional Iranian schools were not applicable for the use of teachers and students but also for the use of the public and the locals.This semi-open space freely welcomed the public, especially for the religious programs. [7]

E. Courtyard

There are socio-cultural and physical factors for the construction of courtyards and good place for the informal loop for students. Courtyards in the traditional schools in Iran, served a space for preparation mentally and physically for the prayer, teaching and learning hall. It is a silent place, noiseless, and no rush of the surrounding urban context.

On the other hand, the physical factor is strongly related with the climatic conditions. This was the suitable way to protect against high temperatures.

F. The architectural feature of the traditional Iranian schools

In general, the architectural features ofthe traditional Iranian schools include the repetition of internal spaces surrounding a yard. This arrangement has three advantages.

First, the logical functions of Iranian architecture produced a kind of the simplicity and plainness of the design that can be seen in most projects with slight changes in pattern. This architecture can be easily adapted with only small changes for different patterns of physical spaces, such as observation seen in the mosque for worship, the caravanserai for residential space and the school for educational space.

Second, the warm and dry climate, especially in the center of Iran, was the major reason for utilizing the internal architecture in the planning of schools. The central courtyard provides an appropriate space for the circulation, exchange of air, and a suitable temperature.

Third, traditional systems of education in Iran emphasizes living and worship with learning. Thereforetheseschools providing space for educational performance, and those had to provide sacred and residential spaces.[8]The regular layout of the Ivan and chambers in the central courtyard was made with order, unity, psychologically and visual similarity to a mosque.

IV. SCHOOLS IN CONTEMPORARY ERA IN IRAN

Schools in the contemporary era in Iranare political and social situation in contemporary era in Iran.In contemporary era, Iran has undergone deep political and social changes, such as communicating with the western world, sending students to Europe, allowing foreign teachers to enter Iran, and developing the political and relations with West. In addition, the Iranian government (Qajar) became weak and collapsible. [9]

Due to thisvariations, the traditional concept of education gradually disappeared, and new education systems with new content and new teaching methods were appeared. These new training and learning methods, with slight changes, have been reminded through the years up to now. A new definition of "educational space" and their physical characteristics was created. Thus traditional schools that were not suitable for the new educational system and it was completely put aside, and as a result, the first laws of education in the history of Iran were created.[10]

Figure9.Themost important factors on the education

To better understanding the events of that time and the changes to the education and training system, this session will help to compare the traditional and the new system of the education.

G. A comparison between the traditional and the contemporary systems of education in Iran

1) The educational programs:

Traditional education, the only elementary education taught at home, was limited only to the religious education. But the new training requirements are at a university level, in line with the government`s requirements. [11]

2) The educational objectives:

Traditional education entirely followed the religious goals and was mainly supported by the community and religious leaders. In spite of the new purposes of education, the newcurriculum was to prepare people for new jobs in the government and it was supported by the government.

3) The content of education

Traditional education systems include topics such as Persian literature, logic, jurisprudence, religious sciences, philosophy, etc. thenew curriculum includesthe military sciences, engineering and medicine. [2]

4) The purpose of training in society

The aim of traditional educationwas to enhance a student`s personality and to teach him ethics, while the goal of the new education is to teach students how to earn a livelihood and help them obtain the social rank and recognition.

5) Establishing the new schools

In two decades from 1921 to 1941 A.D. in Iran, numerous schools were built and education became public. The period starting with the Reza Shah government in 1925 AD continued,with few changes, up to the Islamic Revolution in 1979 ADtill the current time. This was the stabilization period of the new education system and witnesses ofthe building of new schools in Iran. Most important time during this period was following the western approach, not only in the educational system but also in the physical and structural characteristics of the school. In this period, the numberof peoplein a school has more valuablethan the quality of its' teaching or construction, and as a result the technical design was very simple to fit more students inside them. "The physical layout of schools was more like German and English educational spaces of that time". [9]

6) Teaching methods

The main purpose of the new educational program was to teach reading and writing (the basic principles of education) and to provide students with the knowledge of how to live in society. The method of this training system describesthe curriculum subjects without the use of educational tools. The layout of the class was different from the loop method, since currentstudents sat in rows facing the teacher without moving and were rarely invited to participate actively for understanding a subject.[11]

This new layout of the education environment was formed instead ofa new definition of "training" and "learning". This new layout demonstrated the new concept of education, and the transfer of information directly from the teacher to the student. Therefore, communication, active participation, dialogues, and discussions between students have not been existed at all. [2]

Compared with the loop method, this new teaching method was more efficient for the new educational programs. But this method never had the dynamics and energy of the loop method and hasnot the power to promote the type of mental self-motivation that traditional method had.
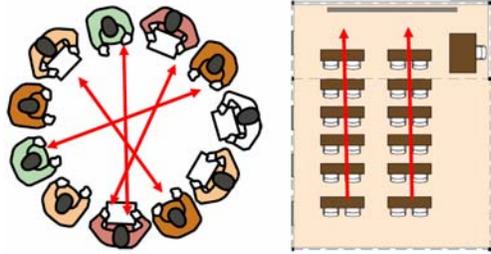
Figure10.Comparison between the new and traditional educations

H. *Courtyards of new schools lost their initial function*

Darolfonon is the first Iranian school that is not residential- welfare facilities, and all spaces have an "educational function". Darolfononrooms function isonly classroom.Unlikethe traditional school where there were both classroom and students' room, their courtyard is merely a physical place to provide lighting for the rooms and protect internal composition.

The basic design of Darolfonon has been inspired by the English barrack Lurych, and is a row of rooms around a central open space connected by a corridor. The independence of different courses from each other meant that the school had to have various rooms. Therefore, the spatial relation between the classrooms had to simultaneously coordinate with the educational program, and so the corridor was appeared in Iranian school design. Thus the role of courtyard in the circulation and welcoming entry in traditional schools was discontinued and the corridor connected each space with others, and the importance of courtyard in the traditional schools was decreased.
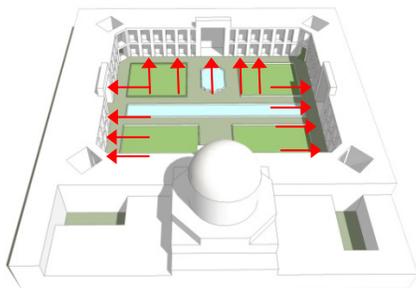

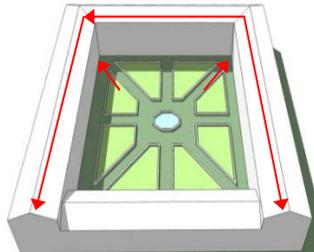Figure11.Charbagh: the important role of courtyard in circulation (*author*)

Figure12.Darolfonon: Reduction of role of courtyard in circulation and appearance of corridor (*author*)
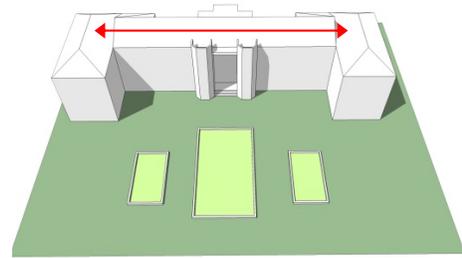

Figure13.Alborz: the important role of corridor in circulation (*author*)

I. *Reduction of importance of the Ivan as semi-space*

Another huge change in Darolfononwould be defined as losing the value of Ivan (as a semi-space). Irantraditional schoolshad Ivan in their each side [7].However,there weretwo small Ivans on the axis of the north and south side in Darolfonon. The indoor space and courtyard wereaccessible only by this Ivan, which actually had a function. The Ivan initially has been created for meetings, lectures, discussions between teachers and peer tutoring.The religious function was the most important part of an educational space in the traditional schools. But these functions could not accomplish in new schools.

The Ivan as semi-open space in school design disappeared primarily because the education system has been changed. The new education had non-religious features in contrast with the traditional schools, and was not compatible for religious ceremonies, so the religious function of the Ivan was no longer needed. [1] "Loop method" which had been traditionally held in the Ivan, was no longer used. Other aspects of that traditional method also disappeared from the new education system, most of which were focused within the Ivan: debating, discussing, peer tutoring and collaborative teamwork.
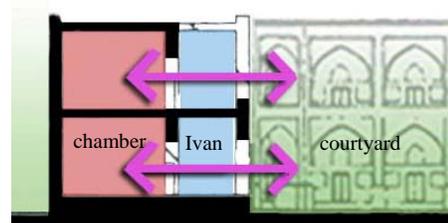

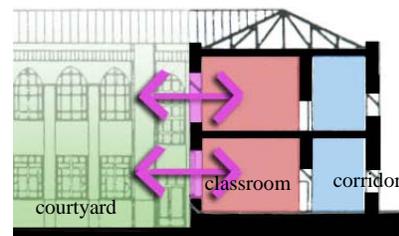Figure14.Charbagh: the role of the semi-open space in connection between the courtyard and building (*author*)

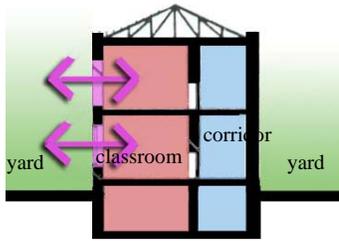Figure 15.Darolfonon: the relation between the classroom and courtyard is indirect (*author*)

Figure 16.Alborz: the relation between the classroom and courtyard is indirect(*author*)

V. CONCLUTION

The present study indicates that bonding and interaction between open and closed space at traditional schools would be strong if two spaces are separated from each other.Their structural concepts and meanings will lose and cannot be identified. Educational environment plays a positive rule regarding the educational systems. It can be concluded that the changes was appeareddue tothe changes of teaching methods.

One of the important changes is the reduction of Ivan rule as semi-open space and the courtyard as open space. Darolfonon marked the end of the traditional pattern of schools with characteristics of full and empty spaces.
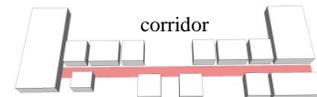
In addition, the circulation in traditional schools had always been through the yard. In fact the rule of the courtyard has been reduced as the heart of the complex to act as only an open space for playing. The dominant pattern in the current school design regardless of the educational capabilities of open space is related to an emphasis on entertainment and fun aspect. This pattern is similar to residential landscaping which floor is covered by asphalt. There are the limited number of elements and leisure equipment for kids' gameand physical activities.

The most fundamental change in how spaces are organized is the replacement of the central courtyard with the corridor. This change marked the end of traditional schools with their interior architecture of central courtyard and their traditional layout of spaces. Thecontemporary Iranianschools were planned as a chain of classrooms arranged along one or both sides of the corridor. Nowadays, the classroom-base model is the most obvious method for planning and designing a school. This great change was a revolution in school design, which started with Darolfonon, reached a peak and completed in Alborz and continued with the other new schools.

TABLE I. THE PROCESS OF THE FORMATION OF SCHOOLS(*author*)

school		Education method	Educational space	Shape of school	Special characteristics
Charbagh as an Iran traditional school		Purpose: enhance a student`s personality	Courtyard (open space) Chamber (closed space) Ivan (semi-open space)	central courtyard with chambers and Ivan that were bounded it. Ivan jointed the open space wi closed space.	• Central courtyard as the heart of the school • Internal architecture courtyard
		Contents: Persian literature, jurisprudence, religious philosophy			
		Teaching method: communication, debate and discussions			
Darolfonon as the first new school in Iran		Purpose: how to earn a livelihood	Classroom (closed space)	• rows of classroom that contracted with the corridor. • twoIvans with circulation role around the central courtyard. corridor	Appearance the corridor Reduction in role and importance of Ivan and courtyard courtyard
		Contents: sciences, military, engineering and medicine		The chain of	f

				classrooms in two sides of corridor.	corridor • Separation between yard and building
		Teaching method: express and describe curriculum subjects			↓

Legend: blue circle shows educational space, red direction shows circulation

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