Int. J. Architect. Eng. Urban Plan, 28(2): 117-133, December 2018

DOI: 10.22068/ijaup.28.2.117

Architecture

Semiotics of behavioral settings in educational spaces, emphasizing the social value of spaces

Case study of Islamic Art faculty and architecture and Art faculty of Azad university of Tabriz

S. Beyraghi[1], L. Balilan Asl[2,*]

[1]PhD Candidate, Department of Art & Architecture, Tabriz Branch, Islamic Azad University, Tabriz, Iran
[2]Associate Professor, Department of Art & Architecture, Tabriz Branch, Islamic Azad University, Tabriz, Iran

Received: August 2017, Revised: December 2017, Accepted: January 2018, Available online: December 2018

Abstract

Environment consists of a hierarchy of behavioral settings that create activity systems in conjunction with each other and it will contribute to a better understanding of environment capabilities for people. Recognizing the reflective behaviors of the students provides the possibility of optimized designing of university spaces in order to form the behavioral settings. The aim of the present research is extracting the indicators of behavioral settings and comparative comparison of them in internal frame and landscape of the universities. For this purpose, Azad University of Tabriz, based on the assumption of physical desirability, due to the assignment of use to higher education and its modernization, and Islamic art Faculty with its historical structure in urban texture and change of its function from residential to higher education has been evaluated in this study .Survey method based on map reading is used by students and the questionnaires are collected and the results are analyzed using SPSS software. The results of this study demonstrate preliminary evidence for the reliability and validity of the behavioral settings in educational spaces. The investigated factor indicates the ten principles organized in effective peripheral anatomy from the dimension of the spatial, semantic and social components in formation of behavioral settings. Islamic Art Faculty with more student-defined behavioral domains and responding to behavioral setting variables has spatial desirability for students while Islamic Azad University of Tabriz, along with the modern structure, is not responsive to behavioral variables In the meantime, through discovering the problems for evaluation of the building, some strategies are suggested to improve the present condition. Environmental variables that affect student outcomes can also be physical. Physical spaces on campus, such as the presence of places to relax and socialize, affect student health.

Keywords: *Behavioral settings, Islamic Azad University of Tabriz, Islamic Art Faculty of Tabriz, Spatial semantic, Social components, Formation of behavioral settings.*

1. INTRODUCTION

With regard to the increasing development of higher education centers in recent years, responding the social needs of the students hasn't been considered, so that the goal is to develop more classes and workshops in the structure. Consequently, considering the importance of creating desired spaces and responding to student behavior, the importance of research about behavioral places and improving their formation is evident. Since human is a behaviorist creature emphasize is on his/her behavior rather than his/her emotions and thoughts.

Universities are social environments that depict the kind of attitude, the way of perception, and students' behavioral tendencies and behaviors in order to establish a greater relationship between students and professors and communities. The more conformation and compatibility of the environment with the student, the better the results are achieved from the perspective of improving the quality of social interactions. Development of these interactions should be able to foster the student's active participation in society. Therefore, university, as a higher education center, must have spatial qualities such as enclosure, edges, centers, signs and memorable sights, elements of identity, and symbols to increase the scope of behavioral domains [1-5].

Two concepts have been introduced in environmental design theory. First, the concept of activity systems that is related to the organization of activities that occur in buildings and spaces; Second, the concept of behavioral settings that studies the relationship between the built

** Corresponding author: Lida-Balilan@iaut.ac.ir*
Tell: +984131966336

environment and the current pattern of behavior that occurs at that location. Lang described the built environment as a labyrinthine collection of behavioral settings: 1. Places, 2. Mediators. Places are sections of behavior patterns that are repeated in one specific area and mediators are moving channels that keep the places in one system and in connection with each other [6]. One of the concepts related to behavioral settings is Environment Ability. Barker *et al.* (the obligatory nature of environment) [2] Herbert Gans (the behavior effected by the environmental potential) Gans, 1986 and James Hey Gibon express the abilities of the made environment as a factor in limiting or expanding individual's behavioral choices [7]. In this paper, more emphasis is placed on affiliations or environmental incentives in the public spaces of universities as determinants of behavior. The role of public spaces of the universities is providing a meaningful place for basic needs of the students such as relaxation, social interactions and free activities. This kind of space provides students with a sense of strength and control that is only limited with the rights of others. Therefore, it must be accessible and support the most-likely activities and group activities must not interfere with the comfort of the other groups, it must provide the environmental comfort during peak hours and it must be usable for special events or temporary personal spaces [8]. Research issues were studied with different approaches in anatomy and landscapes. Among different buildings of Tabriz universities, two faculties of Art and Architecture and Islamic Art Faculty were selected by the recommendation of architectural experts due to different anatomies from the historical perspective and the modernity of the spaces, differences in the social spaces And the method of placement in urban texture. The hypothesis of adaptation of anatomic characteristics of universities was tested from spatial quality aspects with the variables of the formation of behavioral settings such as time, functional and geographical situations, cognitive and behavioral dimensions, social and physical forces, action patterns and demographics, as well as environmental comfort aspects to meet students' demands and expectations. On one hand, these analyzes have focused on activity centers for formation of behavioral settings in interior and peripheral spaces and on the other hand, they have analyzed the behaviors affected by anatomy in formation of behavioral settings. It is attempted to introduce a logical method through which the anatomy of educational buildings could be evaluated from behavioral view in order to identify the present condition and feedbacks for modification of the anatomy and to use the results in designing future buildings. Without environmental assessment from the standpoint of behavior, we will face with inefficiency of the buildings in meeting the psychological needs of individuals and spaces without communities.

This study describes, refines and validates a new instrument for the measurement of perceptions of the physical environment at universities. It also describes other qualitative methods that corroborate the selection of physical factors included in the survey. Together, these data provide rich descriptions of the factors in the behavior setting at the educational spaces and describe the interaction of these factors in psychological needs of individuals.

1.1. Evidence of research hypothesis design

The research hypothesis was presented as a normative hypothesis [9]. It was formed through precision and exploration of collective activities for formation of behavioral settings at different times and places at university level.

1. It seems that Art and Architecture Faculty of Azad University meets the needs of students for formulating behavioral settings due to the existence of a modern anatomic system designed solely for use in higher education.
2. It seems that Islamic Art University located in historical texture of city of Tabriz lacks spatial quality for formation of behavioral settings due to changing of its function from residential to educational.

1.2. Research purpose

3. Identifying the qualities in the anatomy of the universities that have a particular psychological impact on the user and encourage him/her to engage in social behavior in order to form behavioral settings.
4. Analysis and evaluation of the correlation between the items composing the behavioral settings in shaping the presence of students in the anatomy if the universities.

2. INDICATORS OF BEHAVIORAL SETTINGS IN SOCIAL ENVIRONMENTS

2.1. The specification of variables in behavioral settings

Behavioral settings, as units of environment, are in fact the various situations in which a person is engaged with and behaves in relative to each of them. In a behavioral setting, human and anatomic elements act in an organized manner in which the activities take place in a regular order. The power of behavioral setting in determining the human behavior is the result of interdependence (anatomic milieu and behavioral pattern) which is put forward by Barker under the title of *synomorphy*. Another factor in the power of the behavioral setting is the self-regulation feature, i.e., the behavioral setting continuously adjusts itself to a specific goal and eliminates the disturbances. Behavioral setting in pursuit of the function and purpose has a specific "program" in which all its elements operate according to the program. From Barker's point of view, a behavioral setting is a sustainable combination of activity and location, and is made up of four main elements: 1. A behavioral pattern that is repeated continuously 2. A context with its own specific sense and specific to that particular behavior 3. *Synomorphy* which means the link between the behavioral pattern and its context 4. A specified time period [10,12]. Also, R. Tranick

mentioned two important elements of formation of behavioral settings, namely, "place" and "connectors" that are noticeably visible in spaces. From Lang's point of view, the approach based on behavior-setting theory considers the behaviors of people in their everyday life and at the same time considers the anatomic and social elements of the environment as an analyzable framework and in combination with each other by identifying and analyzing the behavioral settings that exist in the context of the plan as well as those that need to be addressed. Therefore, the behavioral structure is composed of two environment item: anatomy and society [7, 10-14].

Table 1 The variables forming behavioral settings [7]

	The specification of variables of behavioral settings	Environmental factors	Specification of behavioral settings	Factors creating behavioral settings
1	Time situation, Event sequence , Frequency	Interaction of temporal and spatial aspects in the environment	Time zones and spatial boundaries in behavioral settings	Establishing behavioral settings at particular points of physical space and at the peak of the presence of individuals
2	Perceptual dimensions of individuals in dealing with the environment	Bilateral relation between the activity of people and perception of the environment	A high sense of belonging to behavioral settings	Formation of a behavioral setting because of the habit of repeating the practice and continuing to use a space or stimulating mental memories
3	Geographical situation of the place	Environmental capability (environmental physical configuration for doing activity)	Behavioral patterns that are repeated in the defined area of the behavioral setting and the canals between them	Places with a large crowd of people are a demonstration of space choices in shaping behavioral settings
4	The influence of the behavior on milieu	Interdependence of anatomic milieu and behavioral pattern	Self-Adjustment specification of behavior-setting with behavior of different people	Intention of the individuals to attend spaces which has been changed themselves is a factor in the formation of a behavioral setting
5	Functional position of members	Physiological compatibility or incompatibility of individuals with environmental elements	Penetration dimension or power of behavioral setting according to its function	Creating solutions for removing tension between people and anatomy is an element to form the behavior-setting
6	Population	Responsiveness of the environment to the number of people living in it	Anatomic specification of behavioral setting in determining the number of people living in it	In the case of people's presence, the sense of alienation with environment is reduced and it acts as a factor in forming the behavioral setting
7	Pattern of action	Mutual interaction of the formation of common activities and the type of environmental configuration	Creating meeting opportunities in behavioral settings	Mediators that bring people together such as common thread or activities , are factors in the formation of behavioral settings
8	Social forces	Social expectations of people from the environment	Macro and micro anatomic events in behavioral settings	Formation of current behaviors and its repetition at different times causes the anatomy to be sociable and forms behavioral settings
9	Physical forces	Environment creating social approaches	Creation of social-action knots in behavioral settings	Encouragement for pausing and presence in the space according to type of spatial arrangement and landscape designing is a factor in formation of behavioral settings
10	Environmental comfort and welfare	The interaction between the presence of people and the elements of environmental comfort	Environmental and psychological comfort in behavioral settings	Seductive invitation resulting from physical and psychological welfare is a factor in the formation of behavioral settings

3. METHODOLOGY

The approach of the present research is based on human-environment theory which is derived from the theory of evidence in theoretical foundations of architecture. So, the research method is correlated on the interrelations between the independent anatomic variables of the faculties and the dependent variables of the behavioral settings such as time situation, perceptual dimensions of the individuals, geographical situation of the place, behavior, functional position, population, pattern of action, social and physical forces, environmental comfort that can affect the dynamics of social interactions.

3.1. Data collection method

In order to collect data for analyzing behavioral settings and preparing behavioral maps, non-interfering methods such as simple observation and organized registration of behavior were used and interfering methods were used .These methods include interviewing people and preparing survey questionnaires to describe places with a special sense of belonging to students and marking them on the maps i.e. 357 maps for Azad University and 100 maps for Islamic Art Faculty. Field observations were also conducted at a seven-day visit. The students were observed every ten minutes within an hour for each University. This visit included checking the anatomic layout, the spatial quality of the places marked by individuals and spatial behavior of students.

Also, data related to the behavioral setting variables in the anatomy of the universities was randomly collected through a 5 point likert scale questionnaire (very weak, weak, average, high, and excellent) among 457 students. In fact, In fact, a survey method in this research is carried out due to the nature of the subject of assessment (assessment of the status quo in accordance with the students' behaviors, intentions and expectations) for achieving consensus and conclusions and the correlation is expressed between the variables of the behavioral settings. The relation between the main variables of hypothesis was identified and analyzed by correlation analysis in SPSS software.

3.2. Research variables

According to the research hypothesis, the adjusted questionnaire consisted of 45 questions that attempted to collect the required data in assessing the views of students about their favorite places with a sense of belonging to university buildings from the aspects of the responsive spatial quality for formation of behavioral settings. The questions were classified as follows:

Regarding the "Time situation" variable, the duration of placement of people in the morning to noon and noon to late afternoon by mentioning the hours of presence in their favorite place as an independent variable, was used to evaluate the dependent variable "Time situation".

Regarding the "Perceptual dimensions" variable, questions 5-11 were posed and variables such as environmental and anatomic motives, emotions of the individuals, reminding of mental memories, activities present in space, privacy and crowding of space, and anatomic character of the desired location and the visual significance of space (landscape and surrounding views) were considered as independent variables, are related to the extent of the impact of each item on the perception of individuals from space.

Regarding the "Geographical location" variable, questions 12 to15 were suggested in which variables such as activity knots (concentration center of activities), visible places, places that are far away from others' surveillance, places with the capability of observing surrounding environment and not being observed, were defined as independent variables in determining the interest of people in choosing a place.

Regarding the “Effect of behavior on anatomy” variable, questions 16 to18 have been posed in which independent variables such as environments with potential for personal manipulation, environments with fixed and unmodifiable elements, and environments without defined anatomic dimensions (usability by different users) were considered as independent variables for interests of the individuals when faced their favorite places.

Regarding the “Functional situation” variable, questions number 19-22 were posed and variables such as environmental factors responding to the needs of the individuals, environmental elements that lack the capability to adapt to individuals, adapting individuals with environmental elements were considered as independent variables in assessing the degree of adaptation of the behavior of individuals with their favorite space.

Regarding the “Population” variable, questions 23 and 24 were considered in order to express independent variables such as separate and mixed spaces from the user perspective to assess the presence of people in them.

Regarding the “Pattern of action” variable, questions 25 to 28 were posed and lesson studies of individuals, group activities, spending time between the class hours and visiting others were considered as independent variables in responding the willingness of individuals to perform activities in their favorite places.

Regarding “Social forces” dependant variable, questions 29 to32 were suggested in which public activities of individuals in place, presence of the acquaintances, the presence of acquaintances, the observation of unfamiliar people, the privacy of the place and the level of attention of individuals to the social forces in place, were considered as independent variables responding to attractive elements for individuals to be present in the place.

Regarding the “Anatomic and physical forces” dependant variable, questions 33 to 37 were posed in which spatial furniture, landscaping the surrounding environment, spatial enclosure, spatial openness, and historical anatomy of the space were considered as independent variables for evaluating the rate of attraction of each of the spaces mentioned for individuals.

Regarding “Welfare and environmental comfort” independent variable, questions 38 to 45 were posed in which sufficient number of sitting places, suitability of places for stopping, existence of elements for creating visual obstruction, existence of porches and canopies, stairs and moving surfaces, chairs, benches were considered for evaluating the amount of environmental comfort that universities provide for people.

4. REVIEW OF THE RELATED LITERATURE

Research on learning spaces has increased in recent years, but still faces many challenges. In a review of research, Temple (2007, 2008) shows that a large majority of studies on learning spaces are either unsupported or anecdotal about the way spaces may benefit learning.

Oblinger and Lippincott's case studies of learning spaces Oblinger and Lippincott 2006 highlight various space dimensions and their relation with what is known about learning. Savin-Baden (2007) offers an interesting analysis of the forms and functions of spaces, such as those that are reflective or dialogical. Ellis and Goodyear (2016), in perhaps the most extensive and upto- date review of learning space research, created a classification emphasizing the interaction between context (formal/informal and who provides the resources) with technology and space dimensions (physical/virtual). These reviews are significant steps towards bringing together a field that has been highly fragmented and dispersed Without sufficient attention to environmental psychology.

Khansari carried out a research with the aim of qualitative evaluation of Tehran Pardis University for recognizing its strong and weak points [3] in three scales of (1) External scale considering the interaction of site with urban, state and even international context, (2) intermediate scale, considering the site's interaction as a urban space and (3) internal scale considering the main characteristics of the university as a place of training and research and its special characteristics. The assessment criterion is based on Lynch's five pillars to assess the quality of the city, including vitality, meaning, proportionality, access, monitoring, and discretion. In a paper published by Procedia Engineering [15] in which sustainability assessment of the University of Malaysia was carried out through a survey of 100 students and their behavioral studies for the physical development of the university. According to results, access, safety and lighting, denser and more coherent areas from analytical perspective, and the priority of Pedestrian-oriented functionality of the site, are factors in the locality's socialization. According to a research conducted by [7] in ITB University of Malaysia, for recognition of meaningful places for students in university, some results have been achieved through interview and observation; learning is a kind of social activity that happens out of class as much as inside the class. The external environment that maximizes exposure to others and exchange of ideas will also maximize the process of internal learning. Therefore, the creation of spatial break such as yards in universities leads to creation of sense of ownership in individuals and adds to the sense of communication in space and most of the organizational activities of students happen in these places. According to other research by Memarian and Salehnia in the article entitled "Sociopetaloid of architecture space; Synthesis and synomorphy of humane-physical factors" [21].

Seven public spaces from three science and technology universities have been studied to explore the interactions of spaces. According to them, social-psychological factors and physical specifications of the space have a direct impact on social interactions; the more similarity between the space physics and behaviors of individuals, the more social interactions.

Kariippanon in the article entitled "Perceived interplay between flexible learning spaces and teaching, learning and student wellbeing" [26] This article explores the perceived relationship between these flexible learning spaces and teaching, learning and wellbeing outcomes. Flexible learning spaces were reported to facilitate student-centred pedagogy and selfregulation, collaboration, and student autonomy and engagement. Modified spaces were reportedly more enjoyable, comfortable and inclusive and allowed greater interaction. The findings are discussed in light of Beaton's five key design principles of student-centred learning environments to explore the connection between the physical classroom environment and teaching and learning. Self-Determination theory is used to interpret how elements of the physical space facilitate the creation of a social environment that encourages greater motivation to learn and increases student wellbeing. The research contributes to an understanding of how flexible learning spaces are used and with what effect, thereby addressing a present gap in the literature.

Yotam Hod [27] in the paper entitled "Future learning spaces in schools: Concepts and designs from the learning sciences" Based on a synthesis of four leading future learning spaces, a novel conceptualization is offered here to advance both scholarship and practice of future learning spaces. Specifically, this synthesis distinguishes between two types of spaces: content-flexible and content-specific. Content-flexible spaces are dedicated for instruction or open learning, while content-specific spaces are used as a stage for learning or as sources of content. In addition to this conceptualization, eight principles about the process of establishing future learning spaces and about specific features of their designs are provided based on interviews of lead designers of the four exemplars considered for this paper. The analysis of these principles shows that developmental principles

are relatively fixed, while design principles have a wider range of diversity. These conclusions provide formative knowledge for designers of future learning spaces.

Based on the theoretical perspective that space must be integrated with other mediators of learning, it is possible to see where building or redesigning educational spaces often goes astray. Designers building esthetic learning spaces may think that a comfortable and pleasant space will meaningfully impact learning. Without diminishing the possibility that space may have on important psychological factors like mood, this is a limited perspective because it does not sufficiently consider the complex relationship between space and other mediators of learning.

According to results of the conducted researches, universities are complex public environments that formation of behavioral settings and social interactions mostly happens as a result of cultural and scientific aims rather than biological and functional ones. According to the standpoint of the present people in these spaces, public spaces in universities as informal educational spaces are added to official educational spaces and the created behavioral settings will have positive outcomes for the students in these spaces.

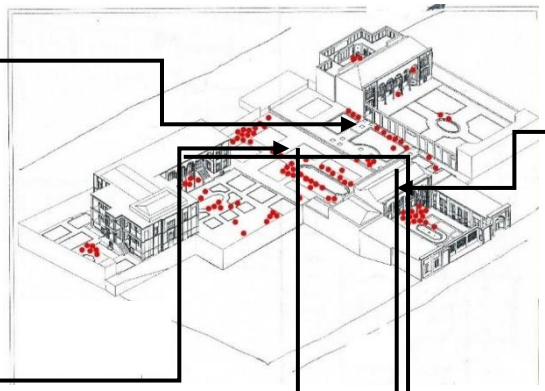
5. ISLAMIC ART UNIVERSITY OF TABRIZ

The complex, numbered 1850 in the national monuments list, has a total area of 10,382 square meters in Maghsoudiyeh St. and has 250 architecture students and at

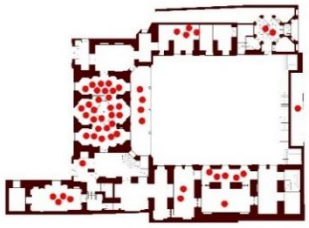
the time being it has 4 historical buildings named Behnam, Gadaki and Ganjeizadeh. These buildings are completely renovated and are being used and the fourth building is Sadaghiani house which will join the complex in the near future after the restoration. Due to the site's location in the center of Tabriz, air pollution and noise pollution are two of the main problems but because of introspection in anatomic parts and lack of visual communication with surrounding space, a very comfortable and cozy place is created at the heart of the city. Success of the plan is largely based on physical environment of the complex that provides students with many facilities for reaction and special behaviors. The university environment, as a place for displaying the behavior, is formed of humanitarian, social and non-human and physical aspects. Students interact with each other. The needs of the users and daily use of the spaces between the classes should be taken into account in formation of behavioral settings so that opportunities for confrontation, exchange of opinions, interdisciplinary communication can be enhanced and enriched [7]. The table below describes the behavioral centers within the anatomy of the Islamic Art University graphically with emphasize on the red points which is a type of behavioral geodesy from the university environment and it is suitable for registering the use of spaces with special situations for formation of behavioral settings. This method is used to confirm the findings of computational analyzes and is a factor is a factor for the proper modification of the designated behavioral settings or their redesign.

Table 2 Study of the behavioral domains with special belonging sense of the students

The margin of the wall, limiting the vision, view and special place



ARCHITECTURE AND URBAN DESIGN FACULTY SOUTH-WEST PERSPECTIVE



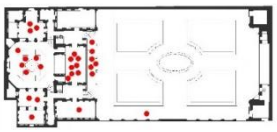
Gadaki House: Spring house

Ganjeizadeh House: Student research center in the basement

Margin of Gadaki house wall: the space is surrounded with walls that is separated from passing space and main complex

64% of the individuals sit in middle space besides the central pool

Scientific activities and social events such as student fairs in spring house



Portico of Behnam house: Historical anatomy with colorful glasses, two-sided vision to front yard of Behnam complex and back yard

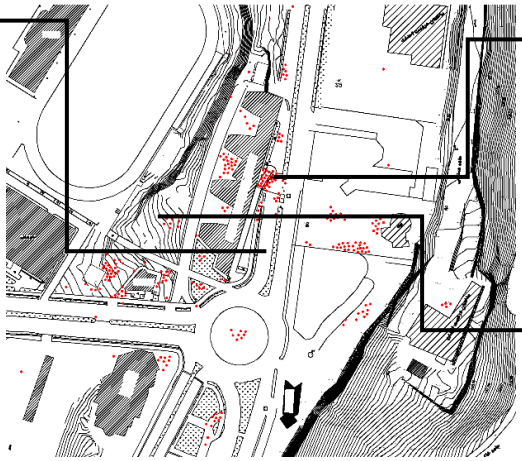
Green space and yards of the complex play a significant role in motivating outdoor activities and informal social gathering among students. The open space of the middle yard which is located along the main entrance of the yard, have a panoramic view of the historic trilateral buildings that include immediate observation of the operation of the activities, scientific functions and social processes. The sitting places around the green space, as well as the edge of the pool, provide passing knot, stopping facilities, enough space for different activities, integrity and cohesion in the creation of the behavioral setting. Students use this space for non-academic studies, waiting, resting, group activities and watching others. Main activity canon in internal spaces include, pool house, research center, terrace, porches around the building with capability of environmental comfort, separating public and semi-public spaces from each other in the anatomy of the university with the possibility of informal meetings , stopping , studying and sitting.

6. ISLAMIC AZAD UNIVERSITY OF TABRIZ-ARCHITECTURE FACULTY-ALLAMEH AMINI BUILDING AND SURROUNDING ENVIRONMENT

Azad University is located in kilometer 2 of Tehran Road on Pasdaran Highway. The university is located out of urban knots and in the suburb. Architecture faculty of Azad University named Allameh Amini building is located in Northern part of the university site as a modern building in which 1082 architecture student study in B.A, M.A and associate levels. The building is located in North-South direction and towards library space and Main Square. Bank and buffet are located in the Western part of the building that with a slope which ends in second entrance of the building. In the Eastern part, there is a more spacious space towards the library and the Human Science faculty. The maps which are marked by student with red points are given.

Table 3 Study of the behavioral domain with special belonging sense of the students

Central library or the portico and sitting places around the building, wider vision to activity scopes in central part

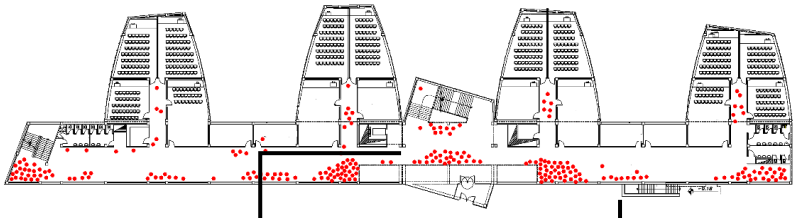


37% of the people in the entrance space: By creating a level difference from the surrounding area and a wide view of spatial visibility and concrete edges of the stairs

Green space and square around the mosque

Steep green space with multiple sitting places leading to the buffet and the bank and stairs around the building of the bank

42% of the corridors' ending part is located besides the stariways of the faculty, due to optimum privacy with the possibility of creating a quiet place



The space opposite to central stariway: With the ability to see the attendance of people and group gatherings

Northern and Southern part of central patio withan optimal space environment and platform windows and movable chairs

7. DISCUSSING VARIBLES FORMING BEHAVIORAL SETTINGS IN AZAD UNVIERSITY OF TABRIZ AND ISLAMIC ART UNVIERSITY

Data analysis was carried out using SPSS 16.0 software. Descriptive and inferential statistics were used to summarize and present the results. The subjects of the present test were 415 individuals among which 86% were from Azad University and 14% were from Islamic Art University. Among the participants 59.3% were females and the rest were males. The Cronbach's alpha value for this study was 0.837,which indicated the reliability of the results. The Likert data scale was used in which codes 1 through 5 were assigned to very weak to very good,respectively. To test the hypothesis, independent t-test was used to compare the means of two universities at a significant level of 0.05. Moreover, the ratio test was used as) H0= P≤50%) (H1 : P > 50%) , the test statistic is known as the ratio test in the statistical books.

7.1. The extent of the impact of individual characteristics on the formation of behavioral settings in the university

Individual characteristics are also of great importnace in social orientation and the development of sincere social communication [17].

In describing the individual characteristics and its role in the formation of the behavioral settings, age, gender, educational level have been pointed out. 63.68% of participants in formation of behavioral settings were at the age of 20-25 years and the least amount (2.12%) were older than 30. Among these individuals 68.4% were studying in B.A, 30.1% in M.A and 0.7% in PhD level. The analysis of this relationship shows an inverse relationship between the age and level of students' education in formation of behavioral settings, so that female B.A students with a high presence in the university are important factors in creating behavioral settings.

7.2. Time situations

Considering the time situations set forth in the questionnaire, Islamic Art University students come to their favorite places during the noon and evening periods and between classroom hours more than Azad University students. The t test with a significant value of 0.000 reflects this issue that this difference is due to the flexibility of the place in responding to the desire for long-term presence of individuals and with the passage of time and the long time the presence of people in it, social interactions in the environment gradually increase and people become attached to that place.

Table 4 Comparison of architecture faculty of Azad university of Tabriz and State university of Tabriz from time situation aspect of students in formation of behavioral settings

Time situation variable in formation of behavioral settings	Number of Art University students	Number of Azad University students	Effective percentage	P- Value	Average of Azad University	Average of Islamic Art Faculty	Standard Deviation of Art University	Standard Deviation of Azad University	P- Value
Period of time between classes	54	336	%59	<0.05	2.55	3.54	1/077	1/347	0.00<0.05
About one to two hours at morning and noon intervals	49	319	%49	>0.05	2.55	2.33	1/068	1/143	0.290>0.05
About one or two hours at noon to evening intervals	52	319	%47	>0.05	2.32	2.75	1/250	1/126	0.012<0.05
More than the mentioned time	48	291	%37	>0.05	2.25	1.98	1/360	1/395	0.21>0.05

7.3. The perceptual dimensions of individuals in dealing with the environment

In the study of the influence of perceptual components, the majority of individuals (73%) considered environmental and anatomic motives to be a poor factor in choosing the most suitable place .The reason is that choosing a favorite place is based on memories and communications of the individual that happen in one place and only anatomic, environmental and personal characteristics on the basis of social relationships, experiences and surrounding places can't establish the behavioral settings.

The absolute majority of people (about 80%) rely on feelings as an important factor in choosing a favorite place. Since emotional attachment means the ability to convert a location into an environment appropriate to the individual's mental conditions for collective activity, approximately 66% of students have chosen moderate and higher dimensional meanings and spatial concepts If the atmosphere provokes the memory of its audience and creates a mentality for him/her, it will have an important influence on him/her. Individual subjectivities, especially in places, are mainly based on two factors of mental image (such as follow-up visits and daily mental experiences from it, and frequent experience of space) and cognition of the map. Therefore, it is necessary that embed in the environment symbols and symbols that represent a convex and understandable concept for individuals, so that the person understands what he receives and can make sense of it [18].

Table 5 Comparison of architecture faculty of State university and Azad university of Tabriz from the aspect of perceptual dimensions in formation of behavioral settings

Perceptual dimensions	Number of Art University students	Number of Azad University students	Effective percentage	P-Value	Average of Azad University	Average of Islamic Art Faculty	Standard Deviation of Art University	Standard Deviation of Azad University	P- Value
Environmental-anatomic motives	54	328	%27	>0.05	2.53	3.26	1/231	1/301	0.05<0.001
Relying on emotions	54	333	%80	0.05<	3/25	3/78	1/076	1/143	0.05<0/000
Rememberin g the mental memories	57	321	%66	0.05<	2/88	3/54	1/240	1/308	0.05<0/000

Table 5 shows that the students of Islamic Art University significantly (p-value <0.05) rely more on their emotions, concepts and meaning and environmental motives than the students of Azad university in selecting their favorite place which is due to factors affecting students' perceptions.

Table 6 Comparison of Architecture faculty of State university and Azad university of Tabriz from the aspect of factors affecting students' perceptions

Factors Affecting Students' Perceptions	Number of Art University students	Number of Azad University students	Effective percentage	P- Value	Average of Azad University	Average of Islamic Art Faculty	Standard Deviation of Art University	Standard Deviation of Azad University	P- Value
Present activities in space	53	330	66%	<0.05	2/95	3/43	1/047	1/315	<0.05
Quietness and crowdedness of the space	56	337	69%	<0.05	3/34	3/80	1/069	1/147	<0.05
Physical and anatomic specification of the space	66	328	61 %	<0.05	2/98	3/45	1/033	1/156	<0.05
Visual importance of the space	56	331	80%	<0.05	3/37	3/89	1/123	1/297	<0.05

In investigating factors influencing people's perception of space, about 80% of the students mentioned the visual importance of the space higher than other elements. Therefore, the view and landscape of the peripheral space, with a significant level (p-value<0.05) has a significant effect on the choice of the place; The landscape of the Islamic Art faculty is under the influence of its historical anatomy and memory making factors that leads it to be an introverted factor in perception of the students.

Table 7 Correlation between time variables and perception of the environment

		Time situation	Perceptual Dimensions of the Environment
Time situation	Pearson Correlation	1	.176**
	Sig. (2-tailed)		.002
	N	326	311
Perceptual Dimensions of the Environment	Pearson Correlation	.176**	1
	Sig. (2-tailed)	.002	
	N	311	363

**Correlation is significant at the 0.01 level (2-tailed).

To assess Pearson correlation index in accordance with table of perception of the environment with the duration of the presence of people in space, there is a direct relation with correlation factor of 0.176 and meaningful relation of 0.002.

7.4. Geographical location of space in selecting the favorite space by individuals:

In the scope of the questionnaire, considering a cumulative percentage of about 67% of the individuals have mentioned closeness to places that is recognizable and

observable, and (60%) students like to stay in places beyond the control of others and are surrounded and have specified boundaries among the desired items for selecting a place. Considering the significance level, these two factors (p-value<0.05) are the most important factors in selecting a favorite place.

Table 8 Comparison of Architecture faculty of State University and Azad University of Tabriz from the aspect of the geographical location of the space in formation of behavioral settings

Geographical location of place	Number of Art university students	Number of Azad university students	Effective percentage	P-Value	Average of Azad university	Average of Islamic Art faculty	Standard deviation of Art university	Standard deviation of Azad university	P- Value
Proximity to activity focus centers	53	331	51%	>0.05	2/55	2/98	1/380	1/401	0/03<0.05
Recognizable places that are visible	53	330	67%	<0.05	3/00	2/72	1/378	1/249	0.12>0.05
Enclosed places with physical elements and distinct boundaries	56	338	60%	<0.05	2/77	3/16	1/187	1/269	0/03<0.05
Places with the possibility of observing others and not being seen by them	55	315	52%	<0.05	2/66	3/00	1/277	1/357	0.08>0.05

As can be seen from the comparison table of the two universities, the students of Islamic Art University find closeness to activity nodes as one of the criteria for choosing a favorite place (P-value=0.03) which is due to the willingness of individuals to select the behavioral settings with a large population and activity nodes. According to Ian Gel, most stops occur in places where human activities are ongoing; these stops are often accompanied by questions and answers, or commenting and expressing feelings, and extricating human communication from a completely inactive state [19]. Moreover, students of Islamic Art University emphasize the choice of places with specific boundaries (P-value = 0.03). The reason is that the spaces and territories created in the historical anatomy of the building such as such as porches, balconies, and spatial joints are suitable places for formation of behavioral settings.

Table 9 Correlation between geographic location variables and time situation

		Geographical location	Time
Geographical location of place	Pierson correlation	1	.252**
	Sig. (2-tailed)		.000
	N	354	303
Time Spent in place	Pierson correlation	.252**	1
	Sig. (2-tailed)	.000	
	N	303	326

**. Correlation is significant at the 0.01 level (2-tailed).

In assessing the correlation index between places with the highest percentage of attendance of individuals and their rate of use, the coefficient of 0.22 with a meaningful value of 0.00 indicates a direct relationship between the two variables.

7.5. Population variable in formation of behavioral settings

In analyzing responses, most students (63%) regard their favorite space as a coherent space from the perspective of users and users (p-value <0.05) because, according to White, what attracts most people is the presence other people in one place. In fact, it can be said that the presence of large groups of people is a demonstration of the choice of space [18].

Table 10 Comparison of architecture faculty of state university and Azad university of Tabriz from the aspect of population variable in formation of behavioral settings

Population dimension of space	Number of Art university students	Number of Azad university students	Effective percentage	P- Value	Average of Azad university	Average of Islamic Art faculty	Standard deviation of Art university	Standard deviation of Azad university	P- Value
Unobtrusive and independent spaces with small number of people	54	310	46%	>0.05	2.48	2.46	1.313	1.296	>0.05
Shared spaces from the aspect of their use with higher population	56	318	63%	<0.05	2.98	3.34	1.164	1.230	<0.05

Using the table above, it is noted that the students of the Islamic Art University emphasize more on mixed and crowded spaces for their behavioral settings than the students of Azad University. It is due to the presence of collective and active spaces as the center of gravity in the central yard of the site.

7.6. Functional situation of members in physiological adaptation to environmental elements

The spatial structure is analyzed according to the arrangement of spaces and adjacent spaces [20]. According to analyses of the findings, more than 62% of the individuals have conveyed the fixed and semi-fixed environmental elements weak or very weak that shows the incompatibility of the environmental elements with behavioral patterns of the students. About 63% of their students adapt to environmental elements and adjust their behavior to the anatomic elements of the environment. In this case, the behavior changes to whatever the anatomy is capable of and both of them change in order to achieve a level of balance [7, 14].

Table 11 Comparison of Architecture faculty of State University and Azad University of Tabriz from the aspect of functional situation in formation of behavioral settings

Functional situation of the members	Number of Art university students	Number of Azad university students	Effective percentage	P-Value	Average of Azad university	Average of Islamic Art faculty	Standard deviation of Art university	Standard deviation of Azad university	P-Value
Fixed and semi-constant environmental elements are perfectly suitable and there is no need for change.	53	315	38%	>0.05	2/10	2/57	1/135	1/118	0.007<0.05
Environmental elements are not responsive to activities and the need for change in layout is felt	53	324	64%	<0.05	3/54	3/23	1/031	1/221	>0.05
Environmental elements do not create a place for collective action	53	309	50%	>0.05	2/69	3/04	1/414	1/256	>0.05
Reconciliation and adjusting the behavior of the students to environmental elements	53	309	63%	<0.05	2/94	2/83	1/051	1/212	>0.05

Comparing the results of two faculties, p-value=0.007 , indicates the need of the Azad University to change environmental elements responsive to student behaviors.

7.7. Pattern of action variable of behavioral settings

The action plan of a behavior-setting is the reason for its existence. Behavioral settings that their programs are similar belong to a basic species. Classifying the behavioral settings in the anatomy of the faculties, the patterns of behavior and the main activities that occur at these sites are determined. This classification in the anatomy of the faculties includes out-of-class spaces that are not governed by a particular order. Therefore, Students, with their discretion and influenced by the relationship with the environment as well as those in the environment, are involved in the formation of these settings. Considering the data analyses, most people (60%) focus on community and group activities in behavioral settings throughout classroom hours. (P-value <0.05)

Table 12 Comparison of Architecture faculty of State University and Azad University of Tabriz from the aspect of pattern of action in behavioral settings

Pattern of action	Number of Art university students	Number of Azad university students	Effective percentage	P-Value	Average of azad university	Average of Islamic Art faculty	Standard deviation of Art university	Standard deviation of Azad university	P-Value
Studying lessons Individually	53	312	46%	>0.05	2.41	2.34	1.255	1.395	0/079>0.05
Collective and group activities	55	316	72%	<0.05	3.15	3.51	1.153	1.233	0/04<0.05
Spending time between class hours	56	322	71%	<0.05	3.10	3.66	1.014	1.297	0/02<0.05
Just waiting to meet others	53	308	50%	>0.05	2.72	2.62	1.147	1.319	0/06>0.05

According to the table above, the students of Islamic Art University are more likely than Azad University students to participate in collective activities and spend their time in favorite environments. The reason is that the activity areas in the basements of the historical building are provided for group activities of different architectural trends. While students of Azad University use the edges of the public hall and non-space environments for group activities.

7.8. Social forces variables of the environment is an element in formation of behavioral settings

Social interactions in public spaces are achieved using proper elements of architecture in anatomy of the space and social-psychological elements. In fact, environment reflects the relation between social elements of place and physical elements around it. Hanna Arnedt states that public space brings people together or separates them from each other. Charles Taylor defines public space as the chosen space, in which people can communicate with each other in different ways or face-to-face. According to the social forces present in behavioral settings, about 70% of the students emphasize the presence of acquaintances and friends as a factor in attracting them to behavioral settings. Since homogeneity of the individuals, encourages the visits and increases the interaction with physical and social places [15, 21-22].

Table 13 Comparison of architecture faculty of State university and Azad university of Tabriz from the aspect of social forces in behavioral settings

Social forces existing in behavior-setting	Number of Art university students	Number of Azad university students	Effective percentage	P-Value	Average of Azad university	Average of Islamic Art faculty	Standard deviation of Art university	Standard deviation of Azad university	P-Value
Seeing people and hearing their voice	53	312	56%	<0.05	2.57	3.08	1.269	1.373	0/002<0.05
Presence of acquaintances and friends	55	318	70%	<0.05	3.17	3.62	1.130	1.262	0/032<0.05
Watching out unfamiliar people busy doing something	52	313	49%	>0.05	2.53	2.42	1.144	1.253	0.071>0.05
privacy of the place	54	312	58%	<0.05	2.78	2.98	1.236	1.322	0.168>0.05

According to comparison of the variables of social forces between the two faculties, the two variables of the presence of acquaintances and friends and public activities at the place (seeing and hearing the voices of students present at the place) in Islamic Art University, are more powerful in attracting people to behavioral settings which is due to the conceptual and formal conformance of the anatomy with the accumulation of students in the behavioral nodes marked in the maps of the Islamic Art Faculty.

7.9. The variable of physical forces of environment in formation of behavioral settings

Space experience in the physical environment depends on the plurality and sequence of spaces, spatial communication, the depth and openness of space outwards. Occupations with space function and other social variables in each space are directly related to activity [16]. According to analyses of the findings, about 76% emphasized spatial opening variable with panoramic view, because one of the reasons for the formation of behavioral scopes in anatomy, spatial openness, free choice and the

emergence of sudden movements of people that allow for the creation of interesting social encounters [23]. 67% of the individuals referred to landscaping with plants and 60% mentioned the historical anatomy as important factors in their favorite space. The reason is that historical anatomy is a connotation of the specific meaning of the place being studied and the factor of meaning of environment and mental memories of the individuals are discussed as an effective variable in the perceptual dimension of the behavioral settings and play a significant role in the degree of attachment to the place. (P-value <0.05).

Table 14 Comparison of architecture faculty of State university and Azad university of Tabriz from the aspect of physical forces in behavioral settings

Physical forces of environment variable	Number of Art university students	Number of Azad university students	Effective percentage	P-Value	Average of Azad university	Average of Islamic Art faculty	Standard deviation of Art university	Standard deviation of Azad university	P-Value
Spatial furniture	52	314	46%	>0.05	2/33	3/19	1/138	1/411	<0.05
Landscaping of the surrounding environment with plants	54	316	67%	<0.05	3/05	3/72	1/123	1/381	<0.05
Enclosure of space with retaining walls and fences	56	309	52%	>0.05	2/56	3/02	1/120	1/243	<0.05
Spatial openness with panoramic view of the surrounding environment	53	323	76%	<0.05	3/29	3/58	1/262	1/247	>0.05
Historical anatomy of space	55	311	60%	<0.05	2/78	3/38	1/194	1/431	<0.05

Table 15 Correlation between variables of social and physical forces of the environment

		Physical forces	Social forces
Physical forces of place	Pierson correlation	1	.411**
	Sig. (2-tailed)		.000
	N	349	331
Social forces of place	Pierson correlation	.411**	1
	Sig. (2-tailed)	.000	
	N	331	347

**Correlation is significant at the 0.01 level (2-tailed).

In comparing two universities from the physical force dimension (p-value<0.05), the difference between the meanings of the four factors between the two faculties is significant. Regarding the higher mean in the Islamic Art University from the dimension of physical force variables, this faculty is a success factor in the formation of behavioral settings by providing appropriate spatial furniture, plant landscaping in the form of the relationship of paths and the natural environment on the site and enclosure of space with retaining walls in the form of a public and private space hierarchy in the coherence of the style of the historical anatomy.

Based on the data in the table below, evaluation of correlation index between the social and physical forces variables of the environment with a correlation coefficient of 0.411 and a significant value of 0.000 indicates a relationship between the two variables.

7.10. The variable of welfare and environmental comfort in formation of behavioral settings

The emotional relationship between the individual and place depends on his/her satisfaction and evaluation of the place [24] and its extent depends on the perception of the individual from the place and such information is received consciously or unknowingly, objectively or subjectively, individually or collectively, and the result of which is the development and preservation of that place [25]. Considering the analyses of the findings, 60% of the individuals have expressed the presence of elements for environmental comfort, such as canopies and porches and 52% of the individuals have mentioned presence of comfortable seats as factors for environmental welfare in behavioral settings.

Table 16 Comparison of Architecture faculty of State University and Azad University of Tabriz from the aspect of environmental welfare variable

Environmental welfare and comfort variable in formation of behavioral settings	Number of Art university students	Number of Azad university students	Effective percentage	P-Value	Average of Azad university	Average of Islamic Art faculty	Standard deviation of Art university	Standard deviation of Azad university	P-Value
Enough number of sitting and comfortable chairs	49	329	52%	>0.05	2.47	2.92	1.170	1.512	0.02<0.05
Enough place for stopping	52	327	35%	>0.05	2.97	3.23	1.096	1.252	0.15>0.05
Existence of elements prevent from visual access to people	53	324	50%	>0.05	2.58	2.70	1.295	1.270	0.59>0.05
Canopies and porches	50	323	60%	<0.05	2.95	3.04	1.399	1.436	0.69>0.05
Using the edge of the windows and short walls for sitting	49	332	52%	>0.05	2.67	2.73	1.221	1.524	0.7>0.05
Using the stairways and motional surfaces for sitting	51	325	43%	>0.05	2.45	2.47	1.239	1.294	0.9>0.05
Leaning to walls and lack of place for sitting	51	326	69%	<0.05	3.0368	2.647	1.293	1.487	<0.05

Considering the comparisons between the two faculties in the T test table, (p-value<0.05), the central space of Islamic Art University is marked by students because of clarity and being memorable due to the anatomy, pedestrian-oriented functionality of the site, porches , canopies and benches embedded for student gathering as inviting factors and responding to more environmental comfort in behavioral settings. While, 70% of students in Azad University believe that environmental comfort elements in their university is weak and they state leaning to the wall, lack of enough space for sitting in their behavioral settings, which is due to the lack of seats throughout the public spaces of the hall. Moreover, the places marked in site lack he appropriate shadow elements and space constraints.

8. CONCLUSION

Following the response to main question of the research on the factors affecting the formation of behavioral settings in the anatomy of two totally different faculties from the environmental and social aspects, the main approach of the research was to identify the effective variables in the formation of behavioral settings in the higher education anatomy. The investigated factor indicates the effective peripheral anatomy from the dimension of the spatial, semantic and social components in formation of behavioral settings. The research findings were derived from two main sections: inferential statistics and student mapping. The mapping section was done by students marking their favorite places and the inferential statistics section was allocated to data analysis and analysis according to the observed frequency and test hypotheses. In the hypotheses test section, t-test and Pearson correlation coefficient between variables were determined and T test indicated the completely positive condition of the test and correlation analysis reminds us of caution action when relying on the results of the survey. In the statistical analysis section, the relationship between the variables had significant levels. The results of comparing the variables in terms of the priority of formulation of behavioral settings and the difference in mean are presented in the table below.

Table 17 Prioritizing the calculated variables of behavioral settings

	Prioritization of dependent variables on formation of behavioral settings	Effective percentage of dependent variable	Effective independent variable	Effective percentage	Effective faculty average
1	Perceptual dimensions of individuals in dealing with the environment	63.85%	Emotional dimensions of the environment	80%	3.78 Islamic Art Faculty
2	Physical forces of the environment	60/2%	Spatial openness with panoramic vision to the surrounding environment	%76	3.58 Islamic Art Faculty (pedestrian-oriented functionality of site is a situation for exchange of ideas and face to face communication in behavioral settings)
3	Geolocation of space	59/75%	Recognizable places with possibility of observing the surrounding environment	%67	There is no significant relationship between the two faculties
4	Functional situation of members in physiological compatibility of environmental elements	59/75%	Environmental elements are not responsive to activities and the need for change in layout is felt	%64	3.54 Architecture Faculty of Azad University
5	The pattern of action in the behavioral settings	59/75%	Collective and group activities	%72	3/51 Islamic Art Faculty
6	Social forces in the environment	58/25%	The presence of acquaintances and friends as a catching factor in the behavioral field	%70	3/62 Islamic Art Faculty
7	Present population in the environment	54/5%	Space with mixed functions or high population	%63	3/34 Islamic Art Faculty (central yard with environmental balance with the present population
8	The effect of the behavior on the anatomy	53/66%	multi-purpose environments	%63	3/25 Islamic Art Faculty, holding fairs, social events in the defined scopes
9	Environmental comfort and welfare	51/57%	Leaning to wall and lack of a place for sitting	%69	3/03 Architecture Faculty of Azad University
10	Effective time situations	48%	Breaks between classroom hours	%59	3/54 Islamic Art Faculty

Comparing the variables in questionnaire survey, the variable of perceptual dimensions of individuals in dealing with the environment has a higher effective percentage (85.63%) compared to other variables in the formation of behavioral settings. Emotional dimension and visual importance of the place in the people's perception has the effective percentage of 80% compared to other variables of environmental perception and the lowest average calculated rank is related to the time situation. Islamic Art University with higher average of scoring (3.59) is responsive to the perceptual dimensions of students as a factor in shaping behavioral settings and has more semantic and anatomic capabilities compared to Azad University. According to map-reading of survey, due to the location of faculty at the heart of the city, the sharp edges of the building act a factor in the separation of the city and the university. While by creating the edges of the site as a communication link with the city, the physical-identity of the university buildings will be aligned with the city context and the edges of the site which are empty of student will be effective in formation of behavioral settings. Architecture faculty of Azad University has a lower level of anatomic and semantic functionality for formation to behavioral settings. Among the ways of building behavioral settings in the anatomy of Azad University Architecture and Art faculty is attention to proper site landscaping with the priority of Pedestrian-oriented functionality for the attractiveness and coherence of the environment. Reviving the vitality of the paths and sites by creating collective spaces, taking into account the environmental comfort, creating spaces in the areas marked in the public hall of the faculty with observance of activity areas with the ability to monitor the surrounding environment of the students' belonging to the atmosphere of education and the creation of active social events.

RESULT

Based on the theoretical perspective that space must be integrated with other mediators of learning, it is possible to see where building or redesigning university

spaces often goes astray. Designers building esthetic learning spaces may think that a comfortable and pleasant space will meaningfully impact learning. Without diminishing the possibility that space may have on important psychological factors like mood, this is a limited perspective because it does not sufficiently consider the complex relationship between space and other mediators of learning.

To further advance knowledge about how behavioral settings are designed, this paper describes the results of an analysis of different types of contemporary learning spaces, which I discuss following this introduction. In analyzing these behavioral settings particular attention was paid to (a) the way the designs integrated key pedagogical principles, (b) the use of environment, (c) the way space served the students' learning, and (d) the subject material being taught.

Considering the categories and types of behavioral settings in educational spaces Through an analysis of Prioritization of dependent variables on formation of behavioral settings provided ten principles organized into two categories. The first category focuses upon

- Perceptual dimensions and Emotional dimensions of the environment
- Spatial openness with panoramic vision to the surrounding environment
- Recognizable places with possibility of observing the surrounding environment
- Environmental elements
- Collective and group activities
- The presence of acquaintances and friends as a catching factor in the behavioral field
- Space with mixed functions or high population
- Environmental comfort and welfare
- Effective time situations.

Islamic Art University with higher average of Integrate spaces across activities, ideas, and people even within one educational setting. Diversity on campus enhances learning for all students; it can be supported through institutional policies, inclusiveness as a concept within curricula, structural diversity, and efforts to increase intergroup interactions diversity in structure as a significant environmental factor. Which increases the the variable of perceptual dimensions of individuals in dealing with the environment in shaping behavioral settings and has more semantic and anatomic capabilities compared to Azad University.

NOTE

1. This article is extracted from the MSc thesis of Sara Beyraghi with the supervision of Dr. Lida Balilan at Islamic Azad university, Tabriz Branch.

CONFLICT OF INTEREST

The authors declare that there are no conflicts of interest regarding the publication of this manuscript.

REFERENCES

[1] Altman I. The Environment and Social Behavior: Privacy, Personal Space, Territory, Crowding, Brooks/Cole Publishing Co, 1975.

[2] Edwards B. University Architecture, E & FN Spon, London, 2001.

[3] Mahmoudi MM. Designing Educational Spaces with a Flexible, Tehran University Press, Tehran, Iran, 2012.

[4] Dober RP. Campus Landscape, John Wily and Sons, New York, 2000.

[5] Carol F, Teresa D, Schuh SP. The role of the landscape in creating a sustainable campus, Planning for Higher Education, 2003, Vol. 31, No. 3, pp. 142-149.

[6] Lang J. Creation architecture theory, The role of behavior science in designing the environment, Van Nostrand Reinhold Company, 1987.

[7] Shamin G. Behavior-Setting a Unit for Analysis of Environment, Armanshahr Publications, First Edition, 2012.

[8] Hanan H. Open space as meaningful place for student in ITB campus, Procedia-Social and Behavioral Sciences, 2013, Vol. 85, pp. 308-317.

[9] Peña WM, Parshall SA. Problem Seeking: An Architectural Programming Primer (4th Ed), Wiley, New York, 2001.

[10] Wicker A. Ecological Psychology: Historical Contexts, Current Conception, Prospective Direction, R and Churchman, A, The handbook of environmental psychology, John Wiley and Sons, New York, 2002.

[11] Scott MM. A Powerful theory and a paradox: Ecological psychologists after barker, Environment and Behavior, 2005.

[12] Lang J. Creating Architectural Theory: The Role of the Behavioral Sciences in Environment, Van Nostrand Reinhold, New York, 1987.

[13] Motalebi Gh. Environmental psychology is new science in duty of architecture and urban design, Fine Arts Magazine, The Faculty of Fine Arts, Tehran University, Iran, 2000, No. 8.

[14] Lang J. Urban Design: The American Experience, John Wiley and Sons, New York, 1994.

[15] Majedi H, Modiri A. Public Sphere of Space of Transpersonal and Interpersonal Relationship, Badi Magazine, New Series, Tehran, Iran, 2006.

[16] Markus TA. Buildings as classifying devices, Environment and Planning and Design, 1987, Vol. 14, Issue 4, pp. 467-484.

[17] Low SM, McDonough GW. Remapping the City: Place, American Anthropologist Association, 2001.

[18] Pakzad J, Bozorgh H. The Alphabet of Environment Psychology for Designers, Armanshahr Press, Tehran, Iran, 2012.

[19] Pakzad J. Theoretical Principles and Urban Design Process, Shahidi Press, Tehran, 2006.

[20] Abd-Razaka MZ, Mustafab NKF, Che-Ania AI, Abdullaha NAG, Mohd-Nora MFI. Campus sustainability: Student's perception on campus physical development planning in malaysia, The 2nd International Building Control Conference, Malaysia, 2011.

[21] Salehinia M, Memarian G. Sociopetaloid of architecture space; Synthesis and synomorphy of humane-physical factors, International Journal of Architectural Engineering & Urban Planning, 2012, Vol. 22, No. 1, pp. 7-19.

[22] Daneshgarmoghaddam G, Bahrainy SH, Einifar A. An investigation on sociability of the spaces based on perception of nature in the built environment, Architecture and Urbanization Journal, 2011, No. 45, pp. 27-38.

[23] Carmona M, Heath Tim T, Taner O, Steven T. Public places of urban spaces, different dimensions of urban planning,

Trans. Ghorani F, Shokouhi M, Ahari Z, Salehi Esmaeili, Art University of Tehran Press, Second Ed, 2011.
[24] Bonnes M, Secchiaroli G. Environmental Psychology: A Psycho-social Introduction, Sage Publications, London, 1995.
[25] Mesch GS, Manor O. Social ties, environmental perception, and local attachment, Environment and Behavior, 1998, Vol. 30, Issue 4, pp. 504-519.
[26] Kariippanon KE, Cliff DP, Lancaster SL, Okely AD, Parrish AM. Perceived interplay between flexible learning spaces and teaching, learning and student wellbeing, Learning Environments Research, 2018, Vol. 21, Issue 3, pp. 301–320.
[27] Hod Y. Future learning spaces in schools: concepts and designs from the learning sciences, Journal of Formative Design in Learning December, 2017, Vol. 1, Issue 2, pp. 99-109.

AUTHOR (S) BIOSKETCHES

Beyraghi, S., *PhD Candidate, Department of Art & Architecture, Tabriz Branch, Islamic Azad University, Tabriz, Iran*
Email*: Sara.Beyraghi@gmail.com*

Balilan Asl, L., *Associate Professor, Department of Art & Architecture, Tabriz Branch, Islamic Azad University, Tabriz, Iran*
Email: *Lida-Balilan@iaut.ac.ir*

HOW TO CITE THIS ARTICLE
Beyraghi, S., Balilan Asl, L., (2018). Semiotics of behavioral settings in educational spaces, emphasizing the social value of spaces (case study of Islamic Art Faculty and Architecture and Art Faculty of Azad University of Tabriz). Int. J. Architect. Eng. Urban Plan, 28(2): 117-133, December 2018.

URL: http://ijaup.iust.ac.ir/article-1-207-en.html