



Fundamental and Influential Factors in Choosing the Dormitory Complex Site for Male Art Students

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Abstract: *The necessity of student dormitory was firstly proposed as a help to student community, but little by little, fundamental changes were created in the meaning of dormitory, and the necessity of helping students turned into the necessity of educating them in order to acquire collective life skills. In this way, student dormitory was no longer interpreted as just a tight place for sleeping. The present study aimed to examine the important and influential factors in choosing dormitory complex site for male art students. Accordingly, the present study was applied in terms of research method. SWOT method has been used for analyzing the selected site. Also, TOPSIS analysis has been used in order for ranking important and influential factors in choosing dormitory complex site.*

Keywords: *Dormitory complex, Site's design, Students' satisfaction*

INTRODUCTION

The issue of designing an accommodation place for students is not new. Since the past, when religious schools of Christians and Muslims began working in Europe and Asia, designers have been facing the issue of appropriate accommodation for students, which has continued so far (Rajabi Barfe, 2013), as for many students, entering university is the beginning of a new stage of life and the experience of living in dormitory is also considered a part of that. Studies have shown that the living environment and changes in it is one of the determinant factors in emotional state of individuals (Beals, 2010). Hence, the placement of individuals in dormitory based on the field of study is a step toward more homogenization of the community living in it and the reduction of some of the problems. All students of art and architecture who have experience of residence beside individuals from other fields of study in dormitory, know that others look at them as strange and sometimes disturbing people; people who have large papers that if they flatten them on the floor, no other place remains for passing. Homogeneity of the resident community in terms of the field of study can reduce many of these kinds of problems (Mousapour, 2011).

Student dormitories are one of the spaces and facilities effective in educating human resources, and their role is not less than educational spaces. Dormitory environment is a reflection of home environment for the student, and should be associated with a sense of presence in home for him/her. For this reason, understanding the relationships between students and their new place of life

(university dormitory) and their attitude toward this environment is very important (Matin Shahabi, 2015).

In practical terms, designing a student dormitory, in addition to creating a safe environment for life, and dynamic for continuing education, as well as the creation of a special space for male art students (such as design studios, art galleries, social events, sports spaces, etc.) has led to firstly, creation of attachment and then sense of belonging to place in students that the above mentioned issues can be considered as innovative features of the plan; as to this day, in most of the student dormitories, in addition to paying attention to providing basic needs of students, not much attention has been paid to their emotional and peripheral needs. Therefore, the present study aimed to examine the important and influential factors in choosing a dormitory complex site for male art students.

Theoretical foundations of the research

Core ideas of the construction of student dormitories

Dormitories not only should be desirable places for sleeping but also should provide suitable opportunities for individual and educational growth of students (Estrada et al., 2008). Jon Beck is also another theorist of dormitory theories who says that dorm room use cannot be easily defined through a name; a student may want to play in his/her room, meet with someone, talk about his/her religion, listen to Beethoven, or have his/her own personal library. In his point of view, one architect cannot plan for all these activities in one place, but the character of the dormitory must imply the space and vitality that these activities require (Tahmasebi et al., 2012).

Table 1. Opinions of different intellectuals about the definition of dormitory (source: author)

Author's name	Publication date	Theory	description
Beals	2010	Environment is the determining factor for mental conditions	For many students, entering university is the beginning of a new stage of life, and experience of living in dormitory is included in that. Studies have shown that the living environment and changes occurring in it are one of the determinants of emotional state of individuals (Beals, 2010).
Hill	2007	Responding to future needs	Dormitories should respond to future student needs, academic changes, social life and students' and their parents' demands. Designing with futuristic thoughts can be a practical and appropriate solution to solve the difficult situation and problems of today's dormitories (Hill, 2007).
Estrada	2008	Dormitory as a place for individual growth	Dormitories should not only be ideal places for sleeping, but also should provide appropriate opportunities for individual and educational growth of students (Estrada et al., 2008).
Allen	1979	Diversity of uses in dormitory	He considers dormitory's special purpose to be meeting the needs and facilities in order to help educate humans, and emphasizes that residential place can help

			individuals and groups to plan for future, advance and flourish their capabilities (Mohr, 1991).
Jon Beck	1962	Designing based on student's character	Jon Beck states in this regard: A student may want to play in his room, meet with people, talk about his/her religion, listen to Beethoven or have his/her own personal library. From his point of view, one architect cannot plan for all these activities in one place, but the character of the dormitory must imply the space and vitality that these activities require (Tahmasebi, 2012).
Behbahani	2011	Futuristic design	Dormitories should respond to future needs of students, academic changes, social life, students' and their parents' demands. Designing with futuristic thoughts can be a practical and appropriate solution to solve problems and difficult situation of today's dormitories (Behzad Behbahani, 2011).
Mahdavi Nejad	2010	Designing based on individuals' living conditions	Architects in designing dormitories should try to, by obtaining deep and correct understanding of life with all its dimensions, form the space such that it be suitable for people's living and at the same time, provide their comfort (Mahdavinejad, Bemanian and Khaksar, 2010).
Rezayee	2010	Dormitory as the ground for nurturing personality	Dormitory is a place where students as groups create a new life. Student homes are the ground for nurturing personality and establishment of productive and beneficial links and the creation of new group attitudes and organizational culture (Rezayee and Abbasi, 2010).
Ali Abadi	2010	Gender, one of the factor affecting the design	Lack of attention to the issue of gender in terms of differences in emotions of both genders and also different educational groups in designing dormitories can be one of the factors influencing the life of dormitory students (Ali Abadi, Behzad Behbahani and Pournaderi, 2010).

The role of environmental issues in the creation of sense of satisfaction in students

1. Sense of territory

Territory finds psychological identity with a place, and becomes a symbol with the sense of ownership and physical combination. From Altman's point of view, "territory-watching behavior is a mechanism for regulating the privacy between self and others which is stated through personalization or marking a place or object and its belonging to an individual or group". According to this definition, the following four characteristics can be named for territories (Lang and Eynifar, 2004).

On the other hand, congestion in territory occurs when lonely mechanisms do not have a successful function and the individual or group establishes mutual relationship with others more than the desirable level; namely, when the acquired privacy is less than the desired one. It should be noted

that the sense of congestion occurs in any conditions where interaction with the outside environment is out of control and some information is transmitted from one person to others that the person is not satisfied with it or vice versa, an influx of information is given to the person that he is reluctant to receive (Altman and Namazian, 2003). Human, in order to deal with such an emotion uses psycho-defensive mechanisms such as “avoidance from direct looking” or “going into solitude”, etc. on one hand, and physical-architectural data on the other hand; for example, in dormitory rooms. In order to reduce the sense of congestion, tools such as shelves and tall tables are used and, by re-classification of the space using furniture, “density” is reduced (Kaldi and Fallah, 2009).

2. Satisfaction

Satisfaction from the environment has a direct and positive effect on a behavior congruent with the environment; and, finally, satisfaction from the residential environment leads to relative satisfaction of the whole life. The factors affecting quality of social interactions of students in dormitory is one of the most common issues about students living in dormitory; creation and strengthening of students' incompatibility with each other, and sometimes with officials, can be attributed to the following factors (Ansari, 2011): in dormitory environment, on the one hand, the presence of different customs and habits and different cultural backgrounds beside each other and on the other hand, environmental factors such as population density and space constraints, the impacts of congestion in dormitory and its impact on residents, population density in rooms, discipline rules in student dormitory environment, native culture of the location of dormitory, and lack of coordination between student expectations of the surrounding environment and the status quo (Kaldi and Fallah, 2009).

On the other hand, internal factors also affect students' satisfaction. Any student who has to leave family in order to continue education will face some problems that, in psychological terms, some of these problems are due to bad and stressful experiences of a young student in the family in the past and some of them are related to the person's temperament and occasionally environmental changes. Internal factors such as: internal personality, lack of flexibility, students' dissatisfaction with the field of study, and sensitivity can involve the student (Kaldi and Fallah, 2009).

Different physical factors affecting students

Lack of attention to the type of building and body of dormitory causes a lot of problems for majority of students such that according to a study by Massoudi and Mahmoudi in Shiraz University, residential place can have unfavorable effects on educational level of dormitory students. The results of this study indicated significant difference between dormitory and non-dormitory students only in terms of average educational scores. In this study, students living in student dormitories, due to the lack of suitable place for studying and problems such as non-uniform roommates in terms of field of study, culture, and educational levels, have had lower educational performance than non-dormitory students (Massoudi and Mohammadi, 2017).

Physical and functional factors in architecture education spaces, especially in faculties, are of particular importance. Kurt's findings showed that the type and structure of internal design of architecture education space as well as the whole collection as the most important place for thinking of architecture students, is of great importance which not only affects students' architectural view, but also its favorable mental quality leads to its historical continuity. Other researchers including Yields and Chackir argued that the structure of architectural form which affects education is influenced by many factors among which the role of architect, designer, internal designer, psychologists, anthropologists, geography specialists, and environmentalists can be mentioned (Khazayee and Eshaghi, 2015).

These studies have shown that if student settlements are not designed in accordance with students' standards and behavioral needs, they cannot meet their needs, and the students will inevitably be forced to use some mechanisms in order to protect their own territory and create their desired

solitude. This effort, if it be more than the desired level for personalization and definition of territory according to aesthetic needs, it will require using a lot of energy that will have an adverse effect on the quality of life and spirit of individuals in the short or long term (Yaquobi and Yaghoubi Sangharchi, 2010). In this regard, a study entitled “Examination of problems of living in dormitory from the viewpoint of students” concluded that physical priorities of dormitory such as welfare, residential and health spaces have the greatest share in priority of dormitory problems from students’ point of view (Khazayee and Eshaghi, 2015).

Ulyani et al. also in a study on dormitories concluded that availability of dormitory facilities (study room, bathroom, public room, recreation space, and supporting services) in dormitory campus can lead to a better life for students and in this case, students can experience their lives such as living in their homes or even better than that in their education period, and, in addition to that, students can be expected to do well in their studies (Ulyani, Anin and Sanim, 2012).

In a study titled “Examination of the quality of life and satisfaction of students from dormitory”, Kenneth found significant relationships between the place of meeting with family, facilities for storing and warehousing the equipment, and satisfaction of students from dormitory (Kenneth, 1981). Payameni conducted a study titled “Examination of problems of residence in dormitory from the viewpoint of students living in single student dormitories at Tehran’s medical universities”. Results of this study indicated that there are many environmental stress factors that can threaten students’ physical and mental health. Mostly prioritized problems of residence in dormitory from the viewpoint of sample students were in welfare and health fields and the least ones were about the management of dormitories (Payameni, 2006).

Light and color of dormitories and their impact on students:

In a study by Darini about physical space plan of dormitories based on increased social interactions, it was found that light has had a significant effect on students’ mental conditions; and students have always had complaints about the width of the windows in their rooms. This effect has been so high that lack of adequate light in rooms and different sections of dormitories has caused many problems including cross-sectional depression in students (Darini and Delghandi, 2015).

In a study by Zamani, it was found that the color selected for student rooms should be congruent with their joyful spirit as well as with the furniture and equipment in the room. Use of fun colors in rooms and corridors greatly reduces monotony and vapidness of dormitory spaces. In order to spiritualize most students, it will be appropriate to use mild and warm colors. Use of cool colors such as light blue and gray will lead to more boredom (Yousef Zamani, 2012).

In this regard, in a study by Bahriayee entitled “Examination of the role of psychology of colors in spatial quality of married students’ dormitory” it was found that the existing spaces such as bedroom, living room, bathroom, and kitchen have a lot of problems in terms of form and color in the viewpoint of student that these problems in bedrooms and living rooms are the main priority due to spatial importance. In the existing spaces, only two spaces of bathrooms and corridors had relatively good conditions in terms of form and color quality that these two are in low importance levels (Bahriayee and Maddi, 2015).

Introduction and analysis of domestic and foreign instances and samples


In comparison, firstly it is required to propose comparable factors; then, based on them, positive and negative features of dormitories should be evaluated. These factors include: 1) site, 2) access and circulation of campus and buildings, 3) subsidiary buildings (form, space, and function), 4) dormitory buildings (form, space, and function), 5) interior spaces, 6) quality of interior spaces (per capita and standards), and 7) student rooms. Of course, other factors such as climatic conditions, dormitory management system, and even fields of study may also be among the comparable factors, but here

only the mentioned factors that are mostly related to architectural features (form, space, activity, dimensions and proportionality, gender, etc.) have been considered.



Students need to communicate with people, and with prominent individuals of the community and the university; they need to be guided and educated. Therefore, spaces such as conversation rooms and small and large lecture rooms are required for such communications. Students need to become aware of what goes on in the family, in other universities, and in the community through visits and meetings with their relatives and friends, and these visits and meetings need spaces such as guesthouses, living rooms, teahouses, etc.

Students need to engage in creative activities such as painting, photography, film making, poetry and literature, music, and ... in their leisure time and in this way, develop their human emotions in an optimal way. These kinds of activities require workshops and spaces for social and artistic activities.

Table 2. Examination of the impact of components of case studies according to the project goals (source: author)

Project name	Image	The influential component according to goal 1	The influential component according to goal 2	The influential component according to goal 3	Positive points	Negative points	Conformity with theoretical framework	Application in the project
STUDENT RESIDENCES, OXFORD		✓		✓	<ol style="list-style-type: none"> Positioning of service space at the center and ease of access for the units; Creation of an entrance space for entering the rooms; Use of balconies as well as natural light for indoor lighting; Positioning of linking stairs in the center of the complex and ease of access for units; Use of ceiling lighting for lightening the linking stairs 	<ol style="list-style-type: none"> Creation of long and monotonous corridors; Lack of student independence in use of public spaces such as kitchen and so on and congestion in them due to low number of service spaces; Lack of spaces for conversations, recreation, and social interaction of students; Lack of designing 	<ol style="list-style-type: none"> Appropriate spatial relationship; Creation of privacies; Good lighting for each room; Social participation 	<ol style="list-style-type: none"> Creation of entrance space for entering the rooms; Use of balconies as well as natural light for indoor lighting; Positioning of linking stairs in the center of the complex and ease of access for units; Use of ceiling lighting for lightening the linking stairs

						subsidary spaces such as TV room etc. in a desired amount proportionate to the resident population		
STUDENT HOUSING IN CAMBRIDGE			✓	✓	<p>1. Students' independence in use of kitchen, bathroom, restrooms; 2. Separation of spaces for sleeping, studying, living room, and non-interference of their different behaviors; 3. Prevention of creation of noise and congestion in the linking stairs due to separation of the stairs of every some units; 4. Not narrow and long stairs; 5. Creation of a central yard and an enclosed space for students with circulation of units beside each other.</p>	<p>1. Lack of suitable place for entering the building such as lobby and so on and creation of confusion at the entrance time; 2. Opening of a high number of doors to the small entrance space; 3. Lack of subsidiary spaces in a favorable amount proportionate to the population and inappropriate access of units to them.</p>	<p>1. Provision of private space; 2. Creation of privacy; 3. Good lighting for each room; 4. Attention to spatial scale; 5. Good spatial relationship.</p>	<p>1. Students' independence in use of kitchen, bathroom, restrooms; 2. Separation of spaces for sleeping, studying, living room, and non-interference of their different behaviors; 3. Creation of a central yard and an enclosed space for students with circulation of units beside each other.</p>
Tighthen dormitory		✓	✓	✓	<p>1. Independence of student units from each other in line with creation of sense of attachment to the dormitory; 2. Designing a circular plan which has caused creation of introspection and unity of structure; 3. Designing a central yard and placement of green space in order to</p>	<p>1. Lack of good separation of spaces for services and resting of students in some points; 2. Opening of a lot of doors and creation of congestion in the central lobby; 3. Lack of subsidiary spaces in a favorable amount</p>	<p>1. Provision of private space; 2. Creation of privacies; 3. Creation of spaces for increasing social participation.</p>	<p>1. Independence of student units from each other in line with creation of sense of attachment to the dormitory; 2. Designing a circular plan which has caused creation of introspection and unity of</p>

					increase students' interactions.	proportionate to the population and inappropriate access of units to them		structure; 3. Designing a central yard and placement of green space in order to increase students' interactions
Science and Industry University dormitory		✓	✓		<p>1. The rooms' being one-sided toward the corridor in order to prevent congestion and maintain quietness; 2. Creation of balcony in some floors in order to use fresh air; 3. Use of direct light to lighten the corridors; 4. Creation of central yard by use of blocks' symmetry which have created a relatively closed and more private space.</p>	<p>1. Creation of confusion when entering the building; 2. Creation of narrow and long stairs; 3. Lack of designing subsidiary spaces in a favorable amount proportionate to the resident population; 4. Lack of designing the required spaces for the disabled.</p>	<p>1. Provision of private space; 2. Creation of privacies; 3. Good lighting for each room.</p>	<p>1. Creation of balcony in some floors in order to use fresh air; 2. Use of direct light to lighten the corridors; 3. Creation of central yard by use of blocks' symmetry which have created a relatively closed and more private space.</p>
Ghods dormitory			✓		<p>1. Placement of spaces which do not require lighting such as warehouse, powerhouse, etc. in the basement; 2. Placement of public spaces such as reading room and prayer room in the ground floor in order to prevent much traffic in the floors; 3. Independence of units in use of kitchen and restrooms; 4. Possibility of entrance of natural light to all rooms.</p>	<p>1. Lack of a lobby and lack of an appropriate provision for entrance space; 2. Lack of students' independence in use of bathrooms; 3. Lack of a space for recreation, conversation, social interaction, and spending leisure time.</p>	<p>1. Creation of privacies; 2. Attention to spatial scale; 3. Good spatial relationship.</p>	<p>1. Placement of spaces which do not require lighting such as warehouse, powerhouse, etc. in the basement; 2. Placement of public spaces such as reading room and prayer room in the ground floor in order to prevent much traffic in the floors; 3. Independence of units in use</p>

								of kitchen and restrooms; 4. Possibility of entrance of natural light to all rooms.
400-people dormitory of Tehran University			✓		1. Existence of telephone receiver in each room, relative independence of every 5 units in the use of bathrooms and restrooms, etc.; 2. Creation of advance space for entering each room; 3. Circulation of units and creation of an enclosed yard in the center of them.	1. Existence of long monotonous corridors and opening of the doors of units opposite to each other like hospitals; 2. Lack of a space for recreation, conversation, social interaction, and spending leisure time; 3. Lack of balcony; lack of spatial independence in use of kitchen; 4. Lack of appropriate and adequate subsidiary spaces proportionate to the resident population in the dormitory.	1. Creation of privacies; 2. Attention to spatial scale.	1. Creation of advance space for entering each room; 2. Circulation of units and creation of an enclosed yard in the center of them.

Research Methodology

The general purpose of the present study was to design a dormitory complex for male art students using principles of environmental psychology in Shiraz. Accordingly, the present study was applied in terms of research method. The methodology for analyzing the selected site was SWOT analysis method which is one of the tools of strategic planning used to assess an organization's internal and external status. SWOT is the acronym for the words Strength, Weakness, Opportunity, and Threat. In addition to strategic planning, this method is generally used to analyze the status of organizations. In fact, this analysis should be considered an efficient tool for identification of environmental conditions and internal capability of organization. The foundation of this efficient tool is influential in strategic management as well as marketing. In the following, in order to rank the

important and influential factors in selecting dormitory complex site, TOPSIS analysis has been used.







Results

Site selection

1. Suggested sites

In this study, based on Detailed Plan of the city of Shiraz, three lands have been proposed first, and considering the criteria mentioned for the location finding of lands for dormitory complexes in the book of rules and standards of dormitory complexes, TOPSIS has been done using hierarchical analysis method through SWOT. Finally, considering the criteria, the best choice as a suitable site for the plan was considered.

Table 3. Examination of the options selected for choosing the plan substrate (source: author)

Site	Situation	Area	Satellite image	Ground image
Farmandari Site	This land which is located adjacent to Farmandari Street, in addition to being located in an area with good access from the surrounding area, also has a good view of the surrounding, which puts this site among the suggested cases for the selection of a desirable ground for male art students' dormitory.	12213 square meters	 A satellite image showing a blue-shaded rectangular plot of land in an urban area. The plot is labeled with Persian text 'سایت فرمانداری' (Farmandari Site).	 A ground-level photograph of the Farmandari site, showing a dirt area with some sparse vegetation and trees in the background.
Arian site	This site, located in Arian Street, is an unused area that has been abandoned for some time. Residential houses are located around this site and, in terms of accessibility, it seems to have a good connection with the surrounding roads. Among the factors for selecting this site are having good landscape as well as suitable access and view to the surrounding environment.	8236 square meters	 A satellite image showing a blue-shaded rectangular plot of land in an urban area. The plot is labeled with Persian text 'سایت آریین' (Arian Site).	 A ground-level photograph of the Arian site, showing a paved road in the foreground and a line of trees in the background.
Haji Pour site	This site which is a land located next to Haji Pour Street and near Dr. Hesabi Highway both in terms of view to the surrounding and in terms of quietness of the region has good features for being selected as a site for student dormitory.	13521 square meters	 A satellite image showing a blue-shaded rectangular plot of land in an urban area. The plot is labeled with Persian text 'سایت حاجی پور' (Haji Pour Site).	 A ground-level photograph of the Haji Pour site, showing a dirt area with several tall trees and a clear sky.

2. The criteria for selecting dormitory`s complex site

In designing dormitory complexes of art students, in addition to paying attention to the location of the site in an area with good accessibility from the surrounding area, it should also have a good view of the surrounding area so that using a beautiful view, it can create an increasing sense of comfort for students. Also, proximity to educational centers for ease of students' coming and going to the dormitory complex should be considered.

2.1. Important and influential factors in choosing dormitory complex site

The main factors for choosing the desirable site for a dormitory complex are as follows:

- 1) Suitable distance from the educational centers.
- 2) Good access to the specified public transport vehicles.
- 3) Having a natural landscape for increasing the sense of comfort in students and promoting presence in place for the students.
- 4) Ability to expand the selected site.
- 5) Good readability when entering.

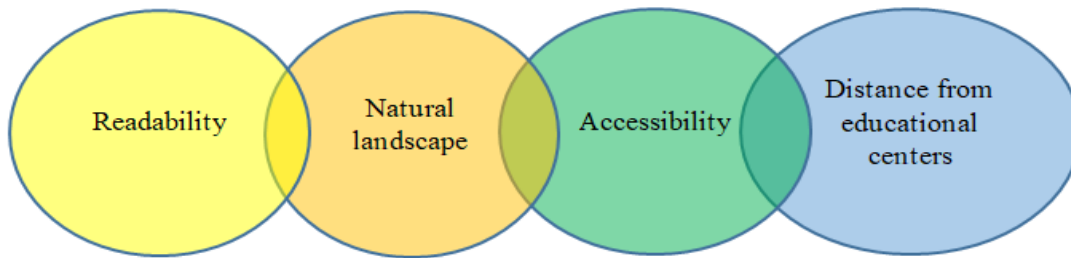


Diagram 1. Criteria for the selection of dormitory complex site (source: author)

2.2. Examination of the status quo of the recommended sites using SWOT and TOPSIS methods

Finding the location of the site using SWOT method

Table 4. Criteria for dormitory complex site`s selection using SWOT method (source: author)

Criteria	Options	Criterion weight	Farmandari site		Arian site		Haji Pour site	
			Option score	Score * criterion	Option score	Score * criterion	Option score	Score * criterion
View and landscape	Skyline	1	2	2	1	1	3	3
	Line of sight	3	2	6	1	3	3	9
Accessibility	Pedestrian access	3	3	9	2	6	3	9
	Vehicle access	2	2	4	1	2	3	6
	Adjacent neighborhood	2	3	6	2	4	1	2
	Surrounding open space	1	2	2	1	1	3	3
Environmental capabilities	Possibility of lighting	3	1	2	2	4	3	6
	Good view	3	3	9	2	6	3	9
	Memorable space	2	3	6	1	2	2	4
	Capability for expansion	2	2	4	1	2	3	6
	Sense of comfort	3	2	6	3	9	1	3
Noise pollution	Traffic	2	2	4	3	6	1	2
	Proximity to activities with loud noise	2	3	6	2	4	1	2
Readability	Proximity to street	3	3	9	2	6	3	9
Security	Being adjacent to security places	2	3	6	2	4	1	2
Total				81		60		75

Finding the location of the site using TOPSIS method

Table 5. Criteria for dormitory complex site's selection using TOPSIS method (source: author)

نام گزینه ها	ضریب نزدیکی	نام معیارها	وزن معیارها
A ₁ سایت فرمانداری	0.67469276015	B ₁ دید و منظر	0.11253649290
A ₂ سایت آرین	0.35853312445	B ₂ دسترسی	0.11253649290
A ₃ سایت حاجی پور	0.41283243698	B ₃ بیت های محیطی	0.11253649290
گزینه ها A1 A2 A3	ضریب نزدیکی	B ₄ آلودگی صوتی	0.11253649290
		B ₅ خوانایی	0.10612227482
		B ₆ امنیت	0.11253649290
		B ₇ سازگاری	0.11253649290
		B ₈ همجواری	0.10612227482
		B ₉ انسایش	0.11253649290

[Option's name:

Farmandari site

Arian site

Haji Pour site

Criteria's name

View and landscape

Accessibility

Environmental capabilities

Noise pollution

Readability

Security

Adaptability

Neighborhood

Comfort]

The general philosophy of TOPSIS method is that using the available options, two hypothetical options are defined. One of these options is a set of the best values observed in the decision matrix which is called positive ideal (the best possible state). The criterion for calculation of scores in TOPSIS is that the options be as close as possible to the positive ideal option and be as far as possible to the negative ideal one. Accordingly, one score is calculated for each option, and the options are ranked according to these scores; Farmandari site was selected on this basis.

Conclusion

In order to identify the principles governing the design of a dormitory for male art students, library studies through content analysis method could be used.

Dormitories are sometimes defined as temporary residence of students and sometimes as part of the campus where students from other cities reside there for a limited amount of time in order for educating. But its real status is far beyond these definitions, because this place can (or, in other

words, must) be a place for students’ growth and evolution and comfort. Dormitory should not be considered only a refuge or a place to escape from cold and heat but part of a university campus, just like classrooms, libraries, laboratories, etc. (Mousapour2011).

Importance of having a good place, both quantitatively and qualitatively, to accommodate students in the cities of study, is one of the main concerns of relevant authorities. However, most of the spaces considered for the residence of students by universities merely provide some basic needs and security of students and provision of all physiological needs and other basic needs and extra needs have been neglected. This negligence occurs in a situation where a person is going through a sensitive and effective age of his/her life, and is in conditions that on the one hand, he/she may have his/her first experience of being far from his/her family and city, and on the other hand, has entered an environment in which he/she experiences a lot of new actions and interactions (Beals, 2010).

In the twenty-first century, student dormitories in universities are important in the first place after the issue of education. These dormitories should be responsive to future needs of students, academic changes, social life, demands of students and their parents. Designing with futuristic thoughts can be a practical and appropriate solution in order to solve the problems and difficult situation of today’s dormitories (Hill, 2007). Dormitories not only should be good places for sleeping, but also should provide good opportunities for personal and educational growth of students (Estrada et al., 2008).

Table 6. Designing the components given in the case studies (source: author)

Case study	Personal (perceptual, cognitive)	Social factors	Environmental, physical
Student residences, oxford	<ul style="list-style-type: none"> • Holding motivational conferences in the dormitory 	<ul style="list-style-type: none"> • Existence of different spaces for gathering of students 	<ul style="list-style-type: none"> • Positioning of service space at the center and ease of access for the units • Creation of an entrance space for entering the rooms • Use of balconies as well as natural light for indoor lighting • Positioning of linking stairs in the center of the complex and ease of access for units • Use of ceiling lighting for lightening the linking stairs
Student housing in Cambridge	<ul style="list-style-type: none"> • Semi-autonomous rooms in line with increasing student commitment 	<ul style="list-style-type: none"> • Holding festivals and different ceremonies 	<ul style="list-style-type: none"> • Students’ independence in use of kitchen, bathroom, restrooms • Separation of spaces for sleeping, studying, living room, and non-interference of their different behaviors • Prevention of creation of noise and congestion in the linking stairs due to separation of the stairs of every some units <ul style="list-style-type: none"> • Not narrow and long stairs • Creation of a central yard and an enclosed space for students with circulation of units beside each other
Tighten dormitory	<ul style="list-style-type: none"> • Holding technical workshop in the dormitory environment 	<ul style="list-style-type: none"> • Holding monthly and seasonal free meeting sessions 	<ul style="list-style-type: none"> • Independence of student units from each other in line with creation of sense of attachment to the dormitory <ul style="list-style-type: none"> • Designing a circular plan which has caused creation of introspection and unity of structure • Designing a central yard and placement of green

			space in order to increase students' interactions
Science and Industry University dormitory	<ul style="list-style-type: none"> • Holding technical workshop in the dormitory environment 		<ul style="list-style-type: none"> • Independence of student units from each other in line with creation of sense of attachment to the dormitory • Designing a circular plan which has caused creation of introspection and unity of structure • Designing a central yard and placement of green space in order to increase students' interactions
Ghods dormitory		<ul style="list-style-type: none"> • Creation of changing facilities in order for students' meeting with their families 	<ul style="list-style-type: none"> • The rooms' being one-sided toward the corridor in order to prevent congestion and maintain quietness • Creation of balcony in some floors in order to use fresh air <ul style="list-style-type: none"> • Use of direct light to lighten the corridors • Creation of central yard by use of blocks' symmetry which have created a relatively closed and more private space.
400-people dormitory of Tehran University	<ul style="list-style-type: none"> • Giving the right for furniture arrangement in rooms in order to increase students' commitment 		<ul style="list-style-type: none"> • Existence of telephone receiver in each room, relative independence of every 5 units in use of bathrooms and restrooms, etc. • Creation of advance space for entering each room

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