ABSTRACT
Nowadays the attention is drawn to the issue of the effect of student dormitory architecture on academic progress of students. Studies indicate that little research has been conducted on student dormitories. Unsuitable environment in accommodations can have a serious effect on academic progress of the students, and by taking into consideration the large number of students in each room and the fixed room area conducting extensive reviews and research is required. The present research focuses on the necessary environmental conditions for academic progress with respect to the area allocated to each student. The present study is carried out by utilizing the available library resources and referring to articles and websites, field observations, distribution of questionnaires and their statistical analysis using SPSS software and conducting interviews with specialists and students themselves. In this respect the specific area required by students with regard to facilities such as toilet, bathroom, library shelf, wardrobe, bed and desk can be acknowledged.

Keywords: Student Dormitory, Room Area, Design Standards, Quality of Life, Academic Progress

INTRODUCTION
Nowadays students are considered to be one of the most important classes of the society, because they play a significant role in the country’s future governance. Hence, providing accommodation for this class of society during their education should be a priority for planning programmes. Unfortunately, our country’s universities’ dormitories, with more than five hundred thousand students, are now merely used as community centres which only satisfy a small fraction of the students’ basic needs, whereas at prestigious universities of the world student dormitories are considered as tools for students’ academic progress.

Question
Do student dormitories affect the academic progress of male students at public and Islamic Azad universities of Ilam?

Hypothesis
Environmental conditions in dormitory with respect to the area allocated to each student seem to affect the academic progress.

MATERIALS AND METHODS
Research Methodology
Since this is a new research topic and there is a lack of resources on this subject in Persian language, the following methods were used in order to provide resources for this research:

- Referring to books and articles
- Referring to websites related to the topic
- Carrying out field observations of Ilam’s public and Islamic Azad universities’ student dormitories
- Designing questionnaires and distributing them among the students residing in the dormitories of public and Islamic Azad universities of Ilam and their statistical analysis using SPSS software
- Conducting interviews with the psychologists at the aforementioned universities’ student counselling centres to obtain some information about the rise or fall in educational level, the problems faced by
students residing in dormitories and their individual needs, and also identifying those problems which from the experts’ point of view are associated with dormitories

- Conducting interviews with the students residing in dormitories regarding the conditions in dormitories
- Summarizing, interpreting and generalizing the information collected about the research and analysing the data obtained

The present research methodology uses a descriptive – analytic approach which studies this topic by utilizing the available library resources and documents, and describes the existing relationship after explaining its historical background.

**The Necessity of the Research**

The students residing in dormitories are faced with a number of problems including lack of concentration, insufficient time of study, crowded places, a lot of noise and consequently a decrease in the rate of academic progress, because of the large number of students in each room and small room area with respect to the fixed number of students in each room (14 square meters for 4 students). While providing accommodation is a social responsibility for the educational system, most public and Islamic Azad universities’ dormitories in Iran do not have the necessary facilities to meet the students’ physical and psychological needs and do not provide ideal conditions for them.

**Research Objectives**

To improve the rate of academic progress in students residing in dormitories

**Literature on the Subject**

There are various types of accommodation which can be provided for students such as dormitories, student neighbourhoods, apartments and suites, and university towns (Karimpourfard, 2007).

**Research Background Information**

There has not been much research conducted in Iran on the effect of dormitory architecture on academic progress of male students; moreover, searching the internet and international websites for such research led to no result. Unfortunately, there has been no scientific approach in Iran to study this subject and little research has been conducted on different aspects of living in a dormitory.

**Dormitory**

A dormitory is a type of accommodation which is neither a home nor a hotel or other commercial accommodation; however, it has their features. They all fall into the same category with regard to architecture, but of different types of structures (Allen, 1971).

**Dictionary Definition of Dormitory**

A room for several people to sleep in, especially in a school or other institution (Oxford Dictionary).

1- A room for sleeping, especially a large room containing numerous beds 2- A residence hall providing rooms for individuals or for groups usually without private baths (Merriam – Webster online Dictionary).

**History**

Since the early family formation, an accommodation or a shelter has been a place for the members of a family to spend many years of their lives together as a group. The ancient Greeks and Romans used to place their adolescents in boarding schools in order to nurture their masculine virtues and qualities. These schools prepared the children and adolescents for their future lives. During the middle ages, adolescents and youths lived in monasteries and ecclesiastical institutions and spent their time learning and working. This system played a major role in the nurturing the youth just as the educational system in which the children go to school on the daily basis (Paki, 2007). The history of dormitory at Islamic scientific centres dates back to a thousand years and no school was built without chambers in the Islamic world (Mahmoudirad and Arasteh, 2004). When universities were first founded in Europe, the students usually came from afar, and consequently there was an urgent need for dormitories (Paki, 2007). The history of establishing student dormitories dates back to the University of Bologna in Italy in the 12th century. At that time hundreds of students traveled to Bologna in order to acquire knowledge and study science (Mahmoudirad and Arasteh, 2004). In the United States where many colleges and universities were built away from densely populated and industrial areas, the necessity for building student dormitories was
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initially recognized as aid to students. However, a fundamental change gradually occurred in the concept of dormitory and from being a necessity for aiding students became a necessity for nurturing them in order that they can acquire the skills for living together. Thus, the student dormitory which was interpreted as a place having cramped and narrow space for sleep became another means of academic study and research (Paki, 2007).

The History of Ilam’s Public University and Islamic Azad University’s Dormitories

Ilam Public University was founded in 1975 having only the faculty of Animal Husbandry with 23 undergraduate students. The first two dormitories of this university, one for male students and the other for female students, were constructed in the urban area in 1975 with 7 male and 4 female students (Sayyadi, Vice Chancellor for Student Affairs, 2012). Furthermore, the Ilam branch of Islamic Azad University was founded on the 12th of October 1999 with five associate degree courses and with 235 students. The first dormitory of this university was established in 2002 under the name of Al Zahra Dormitory with 37 female students (Heidari, Vice Chancellor for Student Affairs, 2012).

The Role of Student Dormitory

The purpose of studying at a university is for the students to become mentally, physically and emotionally prepared (Paki, 2007). Unfortunately in Iran, the urgent need for quick construction of dormitories with limited funds in order to eliminate the problem associated with the lack of accommodation has caused the design criteria to be limited to the decrease in floor area per capita and economical construction of these buildings. Subsequently, other principles which should be implemented in the design of a dormitory are practically forgotten. In fact disregarding the nurturing aspect of university life would cause a decline in the students’ academic quality (Paki, 2007). Unsuitable environment in a dormitory can lead to psychological problems and disorders which have a serious effect on the students’ mental health and educational process. Subsequently this could lead to a fall in their educational level and occasionally make them to drop out of university (Paki, 2007).

The Effects of the Indoor Environmental Quality

Room Size

A few types of activities can be conducted in small rooms, whereas a wide range of activities can be carried out in very large rooms (Bentley et al., 2003). In a space of fourteen square meters, which is considered to be an average room size, a broad spectrum of activities which students have in common can be conducted (Bentley et al., 2003).

Shape of a Room

The shape of a room has an effect on the number of activities which can be conducted in a specific area. With regard to this fact, compact rooms are preferred to narrow rooms and they offer choices which are more economical (Bentley et al., 2003).

Wall Surfaces

In student dormitories the best surfaces to apply wallpaper are smooth wall surfaces. The upper and lower borders of the walls which are considered to be joint surfaces are the best locations for the optimal use of wall trimmings and a variety of colours (Bentley et al., 2003).

Colour Psychology

In modern psychology “colour” and “colours” are considered to be one of the determinants of personality, because each colour has a specific psychological and physical effect on a person. Hence, colour is an indication of an individual’s psychological and physical condition. This fact has been proven with respect to advancement of physiology and psychology.

The effects of colours on an individual are explained in the following table (Luscher, 2005):

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**Colour** | **The Effect on an Individual**
---|---
Blue | As a passive and decorative colour, blue is connected with peace and happiness (Luscher, 2005). Blue is always patient and passive; however, blue is always spiritually active and alive. Blue is an introvert. Blue lifts the human spirit to the summit of excellence. Blue means faith (Seyedsadr, 2007).
Green | Green causes “will flexibility” which allows an individual to overcome his problems. Fertility, happiness, peace and hope are the concepts associated with green (Seyedsadr, 2007).
Red | Red creates “will power” which demands action and competence (Seyedsadr, 2007).
Yellow | Yellow makes the individual to get “involuntary” pleasure out of actions and gives him the ability to predict his future status and the results of his actions (Luscher, 2005). Symbolically, it is appropriate to associate yellow with concepts of understanding and knowledge (Seyedsadr, 2007). Grey is completely “free” from any stimulus with mental orientation. Grey is neutral. It is neither subjective nor objective, neither internal nor external; it does not cause anxiety and it is not comforting. Grey does have a domain and a territory. It is only a border (Luscher, 2005).
Violet | Violet represents “replication” (Luscher, 2005). In terms of contrast, violet expresses mystery, imagination and sometimes violence and intimidation. Violet is the colour of piety (Seyedsadr, 2007).
Brown | Brown indicates feeling in the form of its use in physical senses (Luscher, 2005).
Black | Black indicates apathy, submission or the final aberration (Luscher, 2005).

*(Eghbalinia, 2014)*

**Light**

Light is a form of energy. This energy is a very small portion of a broad spectrum of electromagnetic waves found in nature (Luscher, 2005). Sunlight is composed of a series of lights. These lights are red, orange, yellow, and green, blue, indigo and violet, and when combined equally white light is produced (Luscher, 2005). The phenomenon of light and particularly daylight is considered to be a human’s most basic physical and psychological need. While maintaining health, sunlight brings about comfort and also increases efficiency because it induces a feeling of connection and familiarity with the natural environment (Miller, 1994). Research show that the level of intensity, type of source, colour, direction and distribution of light in different areas of human activity may greatly affect an individual’s behaviour, mood, efficiency and competence. Essentially, natural light i.e. sunlight is the most perfect and favoured light. The emission of sunlight and visual communication with the outside world in different...
environments such as work and places for leisure, recreation, education, etc. improves the individual’s competence and efficiency; moreover, it reduces anxiety, improves behaviour, develops personality and also maintains health (Hong, 2002).

The Relationship between Quality of Life and Academic Progress in a Dormitory

According to previous studies, quality of life bears a significant and indirect relationship to depression, anxiety and stress. Quality of life is decreased with the increase in any of the three aforementioned variables; subsequently, students’ efficiency and their rate of academic progress are also reduced (Adriani, 2007). This issue has become important when it has been observed that the rate of depression, anxiety and stress is more among male students than female students (Adriani, 2007). Furthermore, the psychiatric disorders of the students who live in crowded rooms not only cause negative change in their behaviour towards others and in their attitude towards environment, but also endanger their physical health and eventually cause a fall in their educational level and occasionally make them to drop out of university (Paki, 2007).

The major problems relating to students residing in a dormitory (Paki, 2007):

<table>
<thead>
<tr>
<th>1- Living in groups under compulsion (similarities and differences)</th>
<th>When a student resides in a dormitory, he becomes a member of a group called the students of a dormitory and has to live with some of them in a room.</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Different languages: There is a considerable linguistic diversity in our country and the possibility of roommates speaking in the same language and dialect is not strong.</td>
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<tr>
<td>b) Cultural differences: Usually, the differences in customs and traditions and etc. in different regions are quite significant.</td>
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<tr>
<td>c) Religious differences: With respect to the existence of different faiths and religions in Iran, religious difference is observed in our dormitories.</td>
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<tr>
<td>d) Individual differences: Some of these differences are as a result of cultural differences and some of them are related to heredity. However, a combination of these two is known as individual differences.</td>
<td></td>
</tr>
<tr>
<td>e) Differences in the field of study: This leads to a difference in the method of study and doing homework and also the time at which the exams are held. Moreover, there are differences between the mentalities of individuals in different fields.</td>
<td></td>
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<tr>
<td>f) Differences in financial situation: The students are generally of different social classes with different levels of income. These differences sometimes cause inferiority complex in students of lower social class and consequently a fall in their educational level.</td>
<td></td>
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<tr>
<td>g) Intellectual and ideological differences: People have different views on social issues and living in the same residential unit would inevitably lead to making judgments and remarks. This can cause a lot of tension.</td>
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</tbody>
</table>
The students who are satisfied with their families and even the ones who are not initially experience some complications such as sadness, isolation, feeling of extreme loneliness and dislike for study because of being away from their families, change in their place of residence and not adjusting to a new environment (Khoshabi, 2000).

The compatibility between the dormitory’s roommates is affected by two sets of factors: internal factors and external factors. Internal factors include individuals’ emotions and mentalities. External factors are related to the environment and its prevailing conditions (dormitory). In case number 2, unfavourable conditions prolong the time for adjustment (Khoshabi, 2000). Students in more crowded rooms experience more problems with their relationships with others compared to students in less crowded rooms and are under psychological stress.

With respect to the facts already mentioned, student dormitories, as learning communities, are regarded as tools to improve the learning process. Studies show that student dormitories play an important role in the students’ personal and professional development (Mahmoudirad and Arasteh, 2004). Student dormitory is considered an important topic because it is not only associated with the complexities of human behaviour and his private life, but also with important social issues (www.sid.ir).

The word “utility” means “the quality of being useful” (Allen, 1971).

Confidence
Confidence is an individual’s ability and authority to select the method of relating to the environment and specifying the conditions under which he wants to do it (Behroozfar, 2000).

Privacy
The human need for privacy and solitude is sometimes defined in relation to crowded places (Mortazavi, 1988).

Establishing Territory
Establishing territory is one of the effective behavioural mechanisms in order to protect privacy (Akbari, 2007).

Comfort
For an individual the most distinctive feature of the environment is the level of comfort. Comfort is qualitative which facilitates the performance of tasks or makes it easier for a person to be in a certain place (Behroozfar, 2000).

Rooms
Rooms are the most important spaces of a dormitory; hence, their use and features are going to be discussed. The activities which are carried out in a dormitory room are: sleeping, studying, relaxing and holding small gatherings, performing personal tasks, keeping cloths and personal belongings. The design of a room is affected by the certain requirements for each of these activities.

The use and the required dimensions
1- Sleeping space
It is obvious that sleep and its form is exclusive to each individual and takes up a certain space. The dimensions of a single bed are 206 x 96cm. and its standard height above the floor is 45cm (Akbari, 2007).
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2- **Storage space**
The most important spaces for storage are wardrobes and book and stationery cabinets. Studies indicate that an ordinary wardrobe with a height of 120cm. and 5 drawers satisfies a male student’s needs (Akbari, 2007).

3- **Study space**
Study space just as sleeping space is exclusive to each individual and it is necessary for a student to have this space. A desk with dimensions of 110 x 60 and a chair with dimensions of 45 x 45 are required for studying (Akbari, 2007).

4- **Space for relaxing and holding small gatherings**
The student room is always a place for interesting public discussions. These intellectual debates have their specific rules.

5- **Summary**
With regard to the analysis of the current use of a dormitory room, the minimum requirements for internal spaces can be summarized as follows (Akbari, 2007):

- **Wardrobe dimensions:** 155 x 150
- **Spatial dimension of using the door:** 108 x 90
- **Dimensions of an armchair and the space for its use:** 120 x 150
- **Dimensions of the book cabinet and the space for its use:** 90 x 90
- **Dimensions of the bed and the space for its use:** 260 x 150
- **Dimensions of a small desk and the space for its use:** 170 x 150

**Combining room spaces**

1- **Single rooms**
A single room gives the student control over his privacy (Akbari, 2007).

2- **Double rooms**
Double rooms give the students the opportunity to become involved in a social interaction in a room that they both share. A double room is the current standard for accommodating students and it is economical. Currently, the floor area of a double room varies between 13 and 22.5 square meters (Akbari, 2007).

3- **Triple rooms**
Tripel rooms raise the serious issues of the students’ upbringing and personality.

4- **Quadruple rooms**
The four students who share a room have the same problems as the students in a double or triple room.

**Summary and the data obtained per capita**

Area per capita of different room types (Akbari, 2007):

<table>
<thead>
<tr>
<th></th>
<th>Single Room</th>
<th>Double Room</th>
<th>Double with Beds</th>
<th>Room Folding</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The United States</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>8.3</td>
<td>16.16</td>
<td></td>
<td>12.9</td>
</tr>
<tr>
<td>Ideal</td>
<td>10.12</td>
<td>20.3</td>
<td></td>
<td>14.75</td>
</tr>
<tr>
<td>Maximum</td>
<td>11</td>
<td>22</td>
<td></td>
<td>16.6</td>
</tr>
<tr>
<td><strong>Time Saver</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>10</td>
<td>18.6</td>
<td></td>
<td>12.6</td>
</tr>
<tr>
<td>Ideal</td>
<td>11.2</td>
<td>18.6</td>
<td></td>
<td>14.4</td>
</tr>
<tr>
<td>Maximum</td>
<td>12.8</td>
<td>18.6</td>
<td></td>
<td>16.2</td>
</tr>
<tr>
<td><strong>Architect’s Data</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minimum</td>
<td>10</td>
<td>15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>15</td>
<td>25</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Ministry of</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>Science, Research</strong></td>
<td></td>
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<tr>
<td><strong>and Technology</strong></td>
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<tr>
<td>Minimum</td>
<td>12</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum</td>
<td>14</td>
<td></td>
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</tr>
</tbody>
</table>

The range of numbers mentioned in the table is as follows (Akbari, 2007):

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With respect the aforementioned facts, it is obvious that in the student dormitories of our country, especially Ilam’s public and Islamic Azad university dormitories there is a large number of students living in each room with regard to the size of the room (14 square meters for 4 students). This fact has caused the students to face some problems including lack of concentration, insufficient time of study, crowded places, a lot of noise and consequently a decrease in the rate of academic progress. If the criterion for student accommodation is a single or a double room, then the standard floor area is between 15 to 22 square meters. However, the fact is that the floor area of our dormitory rooms is 14 square meters for 4 students (Author, 2014).

**Research Methodology and Tools**

The present research methodology is field study and the research tools are questionnaires and interviews. In order to be certain of the effects of different factors on the students’ academic progress, initially 30 questionnaires were distributed among dormitory students comprised of questions about the effects of colour, building material, floor area, light, view, etc. Ultimately, the majority of the students (70%) believed that floor area has more effect on their academic progress compared to other factors. This result became the basis for this research to focus on this factor. Then questionnaires with open-ended questions were distributed among the student dormitories of Ilam’s public and Islamic Azad University and their statistical analysis was performed by utilizing SPSS software. Half of the questionnaires belong to the dormitories of Ilam’s public university and the other half to the dormitories of Islamic Azad University, Ilam branch. One of the two dormitories of the public university is situated outside the city (within university campus) and the other is situated in the residential area of the city. One of the dormitories of Islamic Azad University, Ilam branch is situated in the proximity of the university and the other is situated in the city.

The analysis of the questionnaire (Author, 2014):

<table>
<thead>
<tr>
<th>Questions and the Percentage of Answers</th>
<th>Analysis of the Question</th>
</tr>
</thead>
</table>
| 1- Have you previously experienced living in a student dormitory? (the results of both public and Islamic Azad University)  
a) Yes 55.55% b) No 44.44% | The result of this question indicates that 55.55% of all students are familiar with living in a dormitory and its problems, obstacles, limits and sometimes its advantages. This shows that their answers are realistic and can be taken into consideration and generalized. |
| 2- If your answer to the above question is “yes”, have you visited other dormitories of the same university or the dormitories of the universities situated in other cities? (the results of both public and Islamic Azad University)  
a) Yes 44.44% b) No 13.88% | The result of this question indicates that these students are aware of the problems in other dormitories in addition to their own. This shows their veracity, realistic view and genuine understanding of the problems in the dormitory when answering the questions. |
| 3- Are you familiar with design standards in relation to floor area? (the results of both public and Islamic Azad University)  
a) Yes 38.88% b) No 61.11% | The percentage of the students who are not familiar with design standards is 61.11%. This is a significant factor in recognizing the facts about the students’ views regarding their rooms and problems and also their living spaces in the dormitory environment. Their answers are honest, because they are not familiar with any design standards in order to answer the questions. |
| 4- What is the first thing that enters your mind when |

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you hear the word “dormitory” with regard to floor area? (the results of both public and Islamic Azad University)

a) Small space 19.44%  
b) Large space 8.33%  
c) Room 8.33%  
d) Prison 11.11%

5- What is your opinion regarding the floor area allocated to you? (the results of both public and Islamic Azad University)

a) Too large  
b) Large 2.77%  
c) Average 38.88%  
d) Small 44.44%  
e) Too small 13.88%

6- What is your opinion regarding the floor area of the room, considering the number of your roommates? (the results of both public and Islamic Azad University)

a) Too large  
b) Large  
c) Average 30.55%  
d) Small 50%  
e) Too small 16.66%

7- The floor areas allocated to you in other dormitory facilities (sports, computers, etc.) are appropriate. (the results of both public and Islamic Azad University)

a) I entirely agree 8.33%  
b) I agree 16.66%  
c) No comment 11.11%  
d) I disagree 22.22%  
e) I entirely disagree 41.66%

8- The floor area allocated to dormitory students has an effect on their concentration while studying. (the results of both public and Islamic Azad University)

a) I entirely agree 30.55%  
b) I agree 36.11%  
c) To some extent 22.22%  
d) I disagree 8.33%  
e) I entirely disagree 2.77%

small space by hearing the word “dormitory” is 19.44%, which is a reason to assume that the hypothesis is accurate. This option has the highest percentage and options (b) and (c) the lowest. The answer to this question indicates that the floor area of the rooms do not meet the roommates’ needs.

According to results, 44.44% of the students believe that the floor area allocated to them is small. Furthermore, 13.88% express the same opinion by choosing the option “Too small”. With regard to the fact that 61.11% of the students are not familiar with the design standards of a dormitory, a total of 58.32% of the students believe that the floor area allocated to them is not appropriate. These answers indicate that the floor area of a dormitory room is not appropriate with respect to the students’ needs.

According to the results, 50% of the students stated that the floor area of their room is small, considering the number of their roommates. This means that the design standards are not implemented with respect to the number of students in each room. Moreover, 16.66% of the students chose option (e) which means that a total of 66.66% of the students believe that the floor area of their room is small or too small with respect to the number of their roommates. This can have various reasons including lack of space, a lot of noise, lack of concentration and lack of personal space.

According to the results, 63.88% of the students are suffering indirectly from stress and anxiety caused by their lack of space. A total of 66.66% of the students acknowledged that floor area affects their concentration by choosing options (a) and (b). This means that when the floor area allocated to students is smaller compared to design standards, then there is a decrease in efficiency and a decline in the rate of academic progress, because some of the floor area of the room is occupied by wardrobe, bed, desk,
9- The floor area allocated to the dormitory students meets their requirements. (the results of both public and Islamic Azad University)
a) I entirely agree 16.66%
b) I agree 5.55%
c) To some extent 33.33%
d) I disagree 38.88%
e) I entirely disagree 5.55%

Considering the results, 38.88% of the students stated that the floor area allocated to them does not meet their requirements. According to the percentage of other options, this is a proof of the fact that their rooms are small with respect to their requirements.

10- How much floor space do you propose for each individual in a dormitory with respect to their needs? (the results of both public and Islamic Azad University)
a) 8-10 square meters 13.88%
b) 10-12 square meters 50%
c) 12-14 square meters 8.33%
d) 14-16 square meters 19.44%

Option (b) with 50% has the highest percentage. Indeed, the students chose this floor area without considering the toilet, bathroom, book cabinet, desk, etc. The researcher carried out a field study of the students’ dormitory rooms who answered the questionnaires and also conducted interviews with them. Subsequently, it became evident that the rooms do not have the aforementioned facilities and that the reason behind choosing option (b) is this fact. In answering this question, the students considered their ability to move easily about the room.

11- The floor area allocated to each individual has an effect on his level of satisfaction with living in a dormitory. (the results of both public and Islamic Azad University)
a) I entirely agree 52.77%
b) I agree 33.33%
c) No comment 8.33%
d) I disagree 5.55%
e) I entirely disagree 5.55%

With respect to the results, 52.77% of the students stated that if the floor area allocated to them is in accordance with design standards, then it affects their level of satisfaction with living in a dormitory. This can be explained by arranging the furniture to have sufficient space for their optimal use.

12- What solutions do you propose for more appropriate use of the floor area allocated to each individual considering that this area is fixed? (the results of both public and Islamic Azad University)
a) Appropriate facilities 8.33%
b) Reducing the number of individuals 2.77%
c) Separate personal space 5.55%
d) Bunk beds 5.55%

The solutions which the students proposed for more appropriate use of the floor area include appropriate facilities, separate personal space, bunk beds and reducing the number of individuals. All these proposals are the criteria for increasing the floor area.

13- Have you had to move from one room to another (displacement) with the start of a new term? (the results of both public and Islamic Azad University)
a) Yes 72.22% b) No 22.77%

The purpose of asking this question is to show that the answers given by the dormitory students are to be trusted. With respect to the results, these answers can be trusted implicitly and generalized.

14- Have the floor areas of the rooms been different in this displacement? (the results of both public and Islamic Azad University)
a) Yes 63.88% b) No 13.88%

The main purpose of this question was to enquire about the difference between the floor areas of the rooms (previous room with new room) in order to become more familiar with the dormitory students’
15- What was the difference between your new room and your previous one? (the results of both public and Islamic Azad University)
a) The floor area of the new room was larger 50% 
b) There was no difference 13.88%
c) The floor area of the new room was smaller 13.88%

16- Has this displacement (from previous room to the new room) affected your academic progress? (the results of both public and Islamic Azad University)
a) Very much 16.66%  
b) Much 33.33%  
c) Average 22.22%  
d) Little 2.77%  
e) Too little 5.55%

17- If you are considering a point which has not been mentioned in the questionnaire, clarify it by choosing one of the following options. (the results of both public and Islamic Azad University)
a) Increase in floor area 8.33%  
b) Necessary equipment 2.77%  
c) Separation of the study room 2.77%

A Summary of the Analysis of the Questionnaire by SPSS Software

With respect to the aforementioned issues and the analysis of the questionnaires, it is determined that most of the students who answered the questionnaires asked for an increase in the floor area of their dormitory rooms and acknowledged its effect on their academic progress. Indeed, it is necessary to mention that this increase in the floor area is proportional to the number of the students. According to the researcher’s field study, 4 students are provided with accommodation in one room with the floor area of 12-14 square meters and except beds there are no other facilities in the room. Considering that there are 4 bunk beds in the room, there is little space to move about the room which is considered to be a cause of the decrease in the rate of academic progress. The conditions of these dormitories with respect to floor area forces the students to use their beds for studying (lack of appropriate floor area) (Author, 2014).

Conclusion

Student dormitories are not merely designed for relaxation and creating social relationships. The nature of student dormitories and their transformation to a place for increasing the rate of academic progress has called for modifications of buildings structural plans. Student dormitories have become important tools for learning and academic progress of the students. According to this study and the analysis of the questionnaires by SPSS software, it is concluded that the students ask for special space standards in relation to the student dormitories’ floor area. An increase in the floor area with respect to the fixed number of students in each room causes an increase in the students’ level of satisfaction with living in a dormitory and subsequently an increase in the rate of academic progress. The design standards proposed for dormitory rooms on the basis of the studies and the analysis of the questionnaires by SPSS software are as follows:

- The floor area of a single room 12.8 square meters
The floor area of a double room 21.2 square meters

These floor areas include the facilities such as toilet, bathroom, wardrobe, bed, desk and book cabinet. The students prominently display their mental abilities, scientific progress, scientific independence, critical appraisal, problem solving and cognitive development in living and learning environments which are merged together.

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