



# Learning from architects' mistakes, a case study of three female students residence halls

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**Abstract:** For years and years design precedents have been used as sources of inspiration for designers. Beside the positive aspects of design precedents, they could be considered as examples of architects' mistakes in design. The current study attempts to analyze design of three female residence halls, from a university in southern part of Iran in order to specify the negative aspects of their design. A typical floor plan of each residence hall was analyzed. It was found that in all of these three residence hall the architects have overlooked needs and requirements of disabled students, there is no lobby or gathering space for meeting of students and their visitors, some of rooms do not have any balcony or the width of balcony is too small to be used. In addition, it was found that none of these residence halls have a storage room for unused stuffs of students which all are very essential for assuring the quality of life in residence halls. Finally, several recommendations are made for design of female residence halls.

**Key words:** female students' housings, design precedents, plan layout , residence hall

## Introduction

Living faraway from the family members and staying in a university residence hall could be considered as one of the most challenging parts of a student's life. Not all of students have the chance to attend in the universities of their own hometown and it is more common among those who select the public universities. It is mostly due to the fact that universities accept students based on their total scores of an entrance exam that held annually. Hence it is very common that students for example from southern cities are accepted to study in the northern cities of a country. Leaving family members and staying in a residence hall for about 1 to 4 years could be both a great and difficult experience.

learning to be more independent and to cope with different characters and personalities as well as enhancing social communication skills are just some of benefits of living on campus. However these great experiences can easily turn to a nightmare if the social and physical environment of residence hall are not in line with the students' expectations, needs and requirements. In addition due to the important affects of residence hall design on students' life, mental health and study the university organizers must take a great concern about these buildings.

There are several studies that has shed light on the importance of living on campus. (Astin 1973, Moos and Lee 1979, Pike 2009). However studies has also supported the notion that the absence of proper study room, inability to cope with the roommates and in general being unable to study properly in the residence hall can negatively affect the students' academic performance. For example Masoudi and Mohammadi (2006) in their study of residence hall students who resided in Shiraz University residence halls found significant differences between

on campus and off campus students' academic performance. The on campus students' academic performance was significantly lower than off campus students as they were unable to study effectively in the residence hall.

The majority of studies that has conducted on the student housing concentrate on the contributing factors to students' satisfaction (khozaei et al 2010, Najib et al 2011, Thomsen and Eikemo 2010, Stern et al. 2007, Foubert et al. 1998). There are few studies that have concentrated on design aspects of residence hall. For example Motazadian and Matlabi (2013) sheds light on some of the residence hall design aspects that has caused the students' dissatisfaction. In study of a university residence hall in Tehran, they came to the conclusions that allocating less than 8 square meter to each student in their room, residing with 4 or more roommates in a room and lack of privacy for students in room all negatively affect the students' satisfaction.

The constructed dormitories that has been occupied with the students for several years can be good examples learn about. Besides the positive aspects of these buildings, they can also reflect the architects' mistakes or misconceptions about the students' real needs and requirements. The current study is an attempt to highlight the architects' design mistakes in three residence halls that were built over 12 years ago. These buildings are constructed in a city located in the southern part of Iran. This study further attempts to come out with some recommendations for design of residence halls.

## Analyzing residence hall plans

### traditional residence hall No.1

The first examined residence hall was built about 12 years ago. As it could be seen in the figure 1, the stairway is very far from the main entrance and is not easy to find for the newcomers. Initially the architect allocated 5 entrances to the building and probably his intention was provision of an easy access to the building. But after occupying the building all of the doors has been closed permanently except the main entrance. Asking the residence hall organizers, it has been due to enhancing security of female students and a better control over those who enter and exit the residence hall. The other design problem is the absence of a lobby or gathering space in the ground floor. The only kitchenette of this floor is located at the eastern part of building and it is not big enough to support the needs of all about 50 students of each floor. In order to assure the visual privacy the southern windows are covered by steel sheets and has blocked the view to the outside. It is interesting to know this alteration, has been applied after occupancy. It seems the architect overlooked the visual privacy need for female students. However this need was felt hence the residence hall organizers applied a simple but inappropriate solution for solving this problem by covering windows with steel sheets. Ignoring the needs and requirements of disabled students and the absence of storage area for students' extra stuffs are the other design problems with this residence hall.

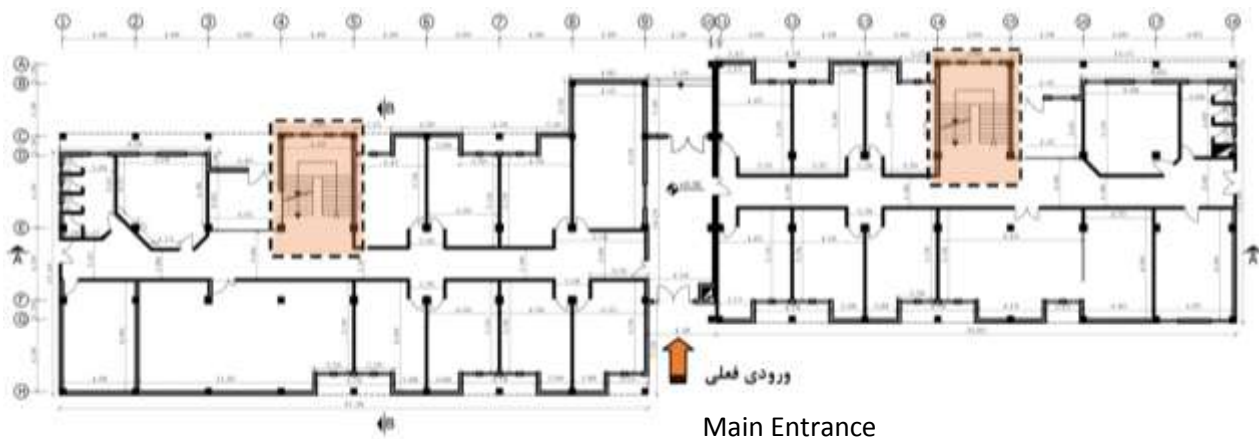


Figure 1: the typical floor plan of residence hall No, 1

### Traditional residence hall No.2

In comparison with the previous residence hall, this building has smaller corridors. Stairway is located at the center exactly in front of the main entrance hence the building has a good permeability and legibility. Similar to the previous plan, the architect hasn't considered any lobby or gathering space in the ground floor. This gives more institutional look to the building.

Blocking the view to outside of building by using inappropriate materials (steel sheets), and overlooking the needs and requirements of disabled students are similar mistakes that were taken by the architect.

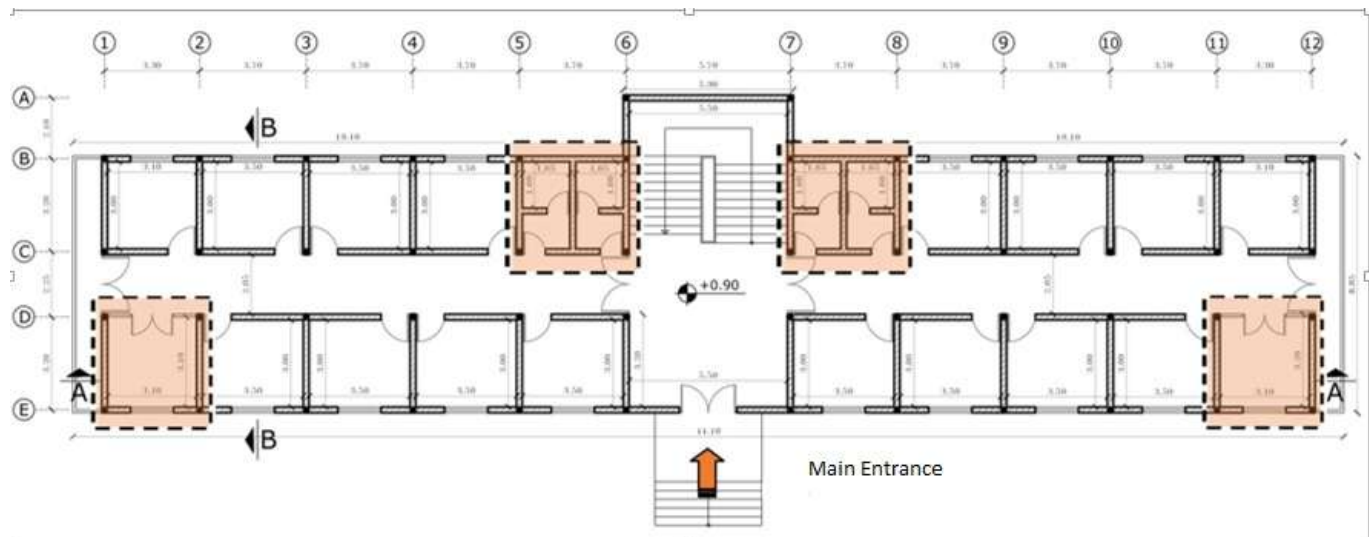


Figure 2: the typical floor plan of residence hall No, 2

### Traditional residence hall No 3

Like two previous residence halls this building do not have any lobby or gardening space in the ground floor. In two previous buildings rooms are exposed to the north and south sunlight. But rotation of building has diminished the received natural lighting. The observations reveal students mostly use the artificial light during day time in their residence hall. The other problem is the absence of balcony for each room or very small size of it (about 1 meter width) which has made it impossible to use. Similar to previous residence halls, overlooking disabled students' needs and the absence of storage space for unused stuffs can be considered as the mistakes that architect has made in design of this building.

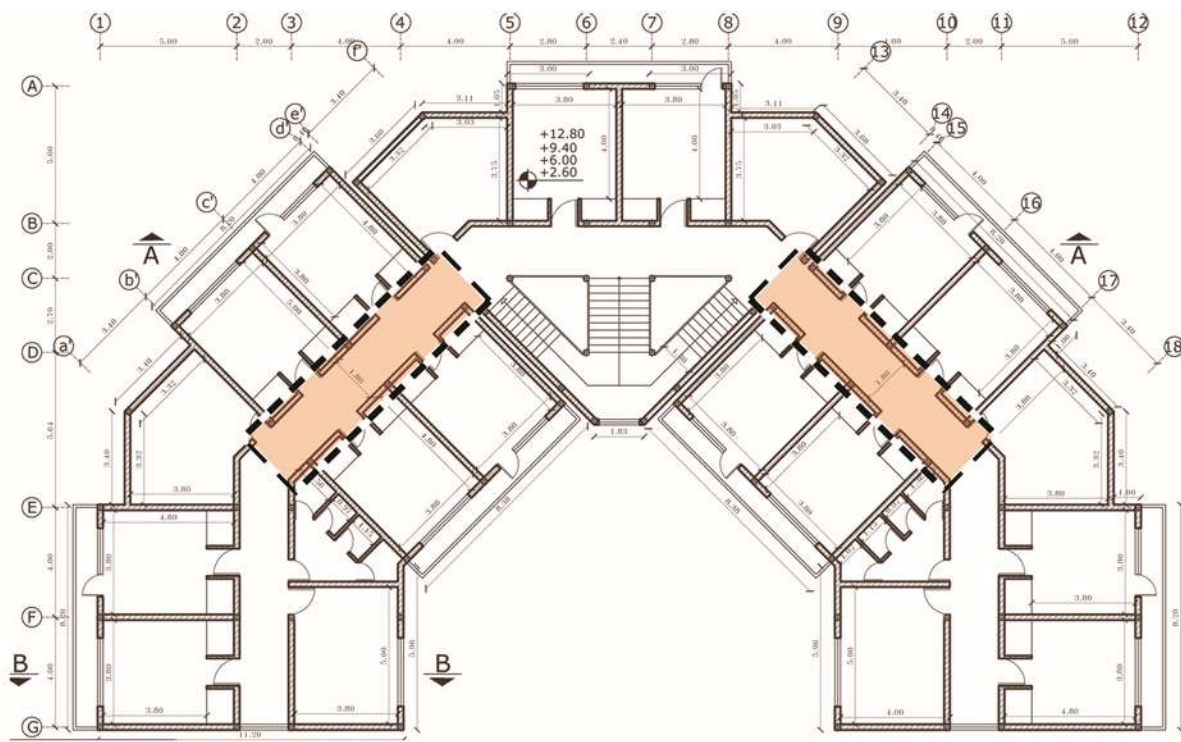


Figure 3: the typical floor plan of residence hall No, 3

## Conclusion

The current study aimed to analyze three residence hall plans and canonized the architects' mistakes in design of such buildings. The study further gives some recommendations for design of such buildings.

1. In female residence hall generally the students do not wear hijab in inside building. The architects must take this into account and provide enough visual privacy for these students both inside building and in the courtyard.
2. The female students and in general the residence hall students might have visitors from family members or friends. A meeting room near the main entrance or a small café in the ground floor can make it easy for both students and their visitors to spend time together.
3. The staircase should be located near the main entrance and easy to find.
4. Locating the only kitchenette of residence at the end of corridor, attracts the students from all rooms to this zone and makes it overcrowded. Hence there must be balance between the number of kitchenettes and the number of students that use this space.
5. Visual privacy is very important for female students in the context of Islamic societies. When the architects do not take into account this need when designing a residence hall, the inappropriate solutions might be applied by the residents to solve the problem.
6. In design of female residence halls the control of entrance and exit of students is very essential to assure the highest security to the residents. As it was explained earlier in all of the three floor plans that were

studied the architects designed more than 1 entrance for the buildings but all of them were permanently locked and closed for the sake of security, except the main entrance.

7. The ignorance of disabled students' needs and requirements can exclude these part of society from using residence halls. Considering one or two standardized suites for disabled students seems necessary. In addition locating a ramp with proper slope by the entrance seems necessary.
8. All residence halls must have storage rooms for unused stuffs of students.

This specially can be used by the students during semester break when the students leave the residence hall temporarily.

9. Design of a balcony that can be used by the students is highly appreciated. When the balcony width is very small it is not easy to use and more probably will have decorative role in façade design.
10. Architects must take into account using natural lighting in building. When the orientation of building is not selected wisely the students will be enforced to use artificial lightings more frequently during day time.

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