

ARCHITECTONIC ANALYSIS OF COMMON FACILITIES IN EUROPEAN STUDENT HOSTELS IN 21ST CENTURY *

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Abstract. *At the global level, the University campuses represent a dominant type of organization of all the living activities of students. This paper dealt with the architectonic analysis of common features of the recent European student hostels, which were constructed as standalone buildings. The analysis presents the advantages and shortcomings of such spatial organization. In detail are considered the common facilities, which are present to a significant degree in such spatial organization, and which can serve as models for construction of student hostels in Serbia.*

Key words: *common facilities, student hostels, European examples.*

1. INTRODUCTION

Student housing belongs to the category of specific, collective housing. It is specific because of: definition of the category of users (age structure of students in the hostels ranges 18-26 years), relatively short period of stay in the hostel (4-6 years) and the housing concept oriented and subordinated to the intellectual work requirements. [1]

The fact that the quality of collective housing in the student hostels cannot be evaluated only through the housing group, but through a wider area comprised in the term "housing", indicated the significance and role of the public, social space in the everyday life of students. [1]

University Campus is a British term for a University situated on a single location, with student accommodation, buildings for lecturing and research, as well as with the structures for leisure time activities. Such way of organization of high education institutions

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flourished in the period 1950-1970 in many European countries. As opposed to the classical universities composed of individual buildings dispersed throughout a city, with separated functions of intellectual work, housing, rest, recreation and entertainment, the Campuses proved to be the excellent way of joining all the functions important for life and work of the student population. [3]

In Serbia, since the founding of the University, mostly in 50's of the 20th century, student housing structures were build, which apart from the accommodation rooms also had the common facilities satisfying the social needs of the students. This paper considers the examples of European student hostels, standalone buildings at the turn of 21st century, and in terms of the presence of common facilities, so that based on these experiences, suggestions could be given for construction of new student hostels in Serbia.

The common facilities satisfying the social needs of the students in student hostels can be divided into the following groups: [1]

- Areas for living (multi-purpose hall, separate TV hall, student club, music club)
- Areas for work, learning and cultural activities (reading, drawing and workshop rooms)
- Areas for catering (restaurants, café-bars, cafeteria, sweet shops, fast food bars)
- Shopping outlets (store, supermarket, boutique)
- Services (post-office, photo-copy shop, washing, drying and ironing service, hair-dresser's, shoemaker's)
- Health service (doctor, chemist, dentist, psychologist, pharmacy)
- sports-recreation facilities (sports hall, covered swimming pool, gym, fitness-club, open-air sports facilities, open air swimming pools, terraces and park areas)

In the paper are analyzed six student hostels in Europe. The examples of constructed buildings are chosen in the period of ht past ten years, 2003- 2013. Some of these buildings were constructed in central and some in peripheral urban areas.

2. STUDENT HOSTELS IN PERIPHERAL URBAN AREAS

Example 1: University of Southern Denmark

Architects: C.F. Møller

Location: Odense, Denmark

Year: 2009-2012.



Fig. 1 Perspective



Fig. 2 Floor plan

The design is a sort of a vertical campus, designed by the architectonic bureau C.F. Møller, in 2009. Three towers of twelve floors were mutually rotated (fig. 2). The towers accommodate housing units, and the central zone, receiving light from three sides, accommodates the common areas at each floor. The living room with TV, kitchen and dining room were planned for all the residents on one floor. On three sides of the living room are the large loggias for rest in summer time. The common kitchenette and dining room were designed next to the stairway area in the central part of each housing block used by a small number of residents.

In the ground floor (fig. 3) there are the following common facilities: the entry hall with reception desk in the central part of the structure. The services are the washing service and bicycle parking in one tower. In the other tower, there are the rooms for accommodating handicapped persons, with the kitchen, dining room, living room and covered terraces. In the third tower, there are work, rest and socialization areas: café-bar with accompanying rooms, dressing room, hygiene block and the storeroom, large lecture hall with 50 seats and the large open sitting area covered with a canopy.



Fig. 3 Ground floor plan



Fig. 4 Last floor plan

The landscape design combines the paved sections in the regular square network with green areas. The paved areas are used pedestrians, car access to the structure and rest and socialization in the summer period in the immediate vicinity of the cafés in the ground level. The series of precisely defined, square lots on the north side of the location are used as a car parking and multifunctional gardens. Those lots comprise recreation on the tennis courts, rest and urban farming production. They are arranged in the vicinity of the building, and they are combined with the existing natural environment (marshes, reed and wild plants). Multifunctional gardens are connected by a network of paths to the rest of the University. [14]

The ultimate floor (fig. 4) provides a wonderful view of the surrounding, and accommodates the following facilities: workshops for common leisure activities in the domain of culture, such as music and drama, a library with a reading room and the recreation areas (gym). Apart from this, the floor has the passable roof terraces. A part of the terraces is covered with greenery and is used for growing plants, which is the activity of some of the hostel residents. [9]

This student hostel houses a large number of facilities, starting from the ground level to the floors and the roof. Extraordinary functional quality of the structure is a huge com-

mon living room with the kitchen and dining room in the central part of each floor, used for socialization and rest. Existence of the common functions at the ground level and the highest floor contributed to the quality of the designing solution. The handicapped persons are also planned for, as their accommodation is planned in the ground level, for an easier access. A lot of attention was paid to the areas for rest and recreation of the residents (open air sitting area with the canopy, café-bar terrace, open tennis facilities, park areas). Apart from those, it is important to mention that there are gardens for plant growing in an urban area, which is not typical of the student housing. [10]

On this basis it can be inferred that the designers paid great attention to leisure activities of the students indoors and outdoors. In this way the improvement of psychological, social and cultural needs of the students are met as well the cultural ones (creative activity space – music and drama). This building is an example of the quality and humane form of student housing which should be aspired to in the contemporary conditions. [12] It is desirable to implement the positive experiences from this design in the student hostels in Serbia.

Example 2: Grundfos Kollegiet Dormitory

Architects:CEBRA

Location: Aarhus, Denmark

Year: 2012

One of the important characteristics of the Grundfos Kollegiet student housing project in the city of Aarhus, Denmark is an inexpensive housing at a very attractive location. Grundfos Kollegiet project includes a complex for housing of various categories of residents. The total surface area of the complex is 800.000 m², so this is one of the largest developmental European projects.

The student hostel is well situated in respect of the main city services, and it has a good public transportation link to the University and Library buildings. The constructed building has shape of a tower with eth covered atrium and accentuated main entrance. The main mass of the structure is composed of the individual units which have various heights and finish. The external finish with prominent vertical stripes resembles the books on the shelf which should raise association to this type of structure. [11]



Fig. 5 Perspective image



Fig. 6 Housing floor plan

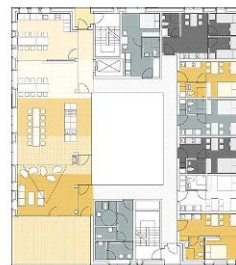


Fig. 7 Combined floor plan

The twelve floor tower has 159 apartments for the young population (fig. 6). As opposed to classical hostels where single and double room housing units are designed, this

structure has on room and two-room flats for various categories of residents: single persons, pairs or friends living together. The access to the flats on one floor is realized from the gallery around the atrium.

The structure has not got only the housing facilities. The common rooms, living room with the TV hall, kitchen, dining room and reading room are planned for several floors (fig. 7). All the roof terraces used from various floor have an excellent view on the city. They are used for gathering and rest of the residents, and they can be accessed from the living room and the gallery. Apart from these common areas, galleries too can serve for socialization and gathering because the material and colors used contribute to a better communication and orientation in space of the residents, and the mirrors transport the daylight to the bottommost floor.

Great quality in the design of this student hostel is that it features all the common functions on several floors, on large areas which are typically used for gathering, rest and socialization of the residents, and can also be used for work and learning apart from the closed areas used for the social life of the residents, the structure possess a large number of open areas for this purpose. Another remarkable quality of the functional design of the structure is that instead of classic housing unit with the bathroom and mini-kitchen, the flats for various categories of residents were planned for. This structure lacks service, shopping and sports and recreation facilities in the building and immediate vicinity. [11]

Example 3: Student Housing Proposal / CEBRA

Architects: CEBRA

Location: Esbjerg, Denmark

Year: 2012-2014.g



Fig. 8 Perspective image



Fig. 9 Appearance of the attic

In cooperation with the engineers of LB Consult, the design bureau CEBRA won the competition for 48 units of student apartments in Esbjerg, Denmark. The design proposition is a ten storey building with apartments for the students and young professional, elite sportsmen in the common areas for rest, socialization and recreation within the structure. The common areas are located in the ground level and the attic.

The characteristic of this building is a central communication core around which are located the housing units and common areas at each floor (fig. 11, 12, 13 and 14). By using the skeletal structural composition the flexibility of functional design is allowed, according to the needs of the resident. Except for this, the building stands out because of its height of over 30m as a new landmark in the city. The building is designed so as to

satisfy the needs of various groups of users, to use the volume of the building to its maximum, and it pays great attention to the attractive design. Peculiar window openings, whose form of a pointed band directs the look from the ground level to the roof, introduce evenly the daylight into the structure and creates the illusion of a megasculpture. [16]

In the immediate vicinity of the building (fig. 10) there are open sports facilities and park area used for recreational purposes. For the rest and socialization in the open air, there is a large plateau with sitting places, towards which the living room in the ground level is oriented.

The common facilities in the ground level (fig. 12) living room, dining room, kitchen and separate mini bar are intended for large groups of residents. In the attic, (fig. 14) are planned the separate areas for rest and recreation in small groups. Large glazed walls of the common areas create an impression of staying in the open air. The common facilities are emphasized on the façade, as characteristic incisions, which represent the dominant elements transforming the sharp silhouette into an important landmark. They visualize a logical connection between the internal functionality and external appearance of the building. These prominent "eyes" (fig. 9) emphasize Fig. 10 Layout of the hub of social life in the building.



Fig.10 Layout of the hub of social life in the building



Fig.11 Basement layout

In the basement of the structure (fig. 8) there are storerooms for bicycles, dress rooms and technical structures.



Fig.12 Ground level plan

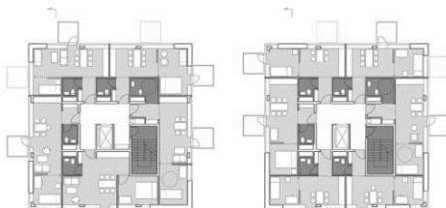


Fig. 13 Characteristic floors plans



Fig.14 Attic plan

Common facilities in this structure are planned for only in the basement, part of the ground level and the attic. Diversified functions in separate areas are planned in the attic, for rest and recreation, while there is a single living room in the ground level. The quality of the design lies in the fact that there are open sports areas and park areas intended to recreation are in the immediate vicinity. A very compact design with efficient communications at the floors and the attractive design are also a quality of this building. [9]

Example 4: Student Housing Tower Block 1

Architects: GROUPA

Location: Arnhem, Netherlands

Year: 2005-2009.g

Student Housing Tower Block 1 in Arnhem, Holland is a landmark and the way to renovate a housing district. The tower of ten storeys is on an isolated location, surrounded by greenery. All four facades contain a large number of large and small windows and the building appear bigger than it is. The combined structural composition, load bearing wall structure in the central part and skeletal around the periphery of the buildings, allowed different treatment of housing functions on the floors, which left marks on the façade. Various opening sizes and large glazed surfaces on the corners of the building contribute to the opening towards the exterior and attenuate the monotony the tower would have had if the layout had been uniform.

In the ground level of the structure (fig. 16) there are the entry hall, common living room for rest and socialization of the students, the technical area and service rooms – washing room and photocopy shop. At every of the floors, (fig. 17) there are ten housing units, arranged around the central elevator core. On the 9th floor (fig. 18) a part of the structure accommodates a terrace, and on the tenth floor is the roof terrace with the fine view of the surrounding area, for rest and socialization of the residents. [9]

**Fig. 15** Perspective image**Fig. 16** Ground level plan**Fig. 17** VI floor plan**Fig. 18** IX floor plan

Enclosed areas for common facilities in this structure are present only in the ground level. Apart from that, there are two large terraces for rest and socialization of the residents in the open air. The sports areas are not planned in the immediate vicinity, so it is another deficiency in terms of presence of common facilities. The housing quality is contributed by the natural environment, which can be used for recreation.

3. STUDENT HOSTELS IN THE CENTRAL URBAN AREAS

Example 1: Student apartment studios in Paris

Architect: OFIS architects

Location: Paris, France

Year: 2008.g

The student hostel is situated in Paris, France and has 180 housing units. The main goal of the design is the hostel for student residence, which is a healthy living environment for studying, entertainment, and socialization.

The lot is very narrow, 11 m, and very long around 200 m lying in north-south direction. The east side is oriented towards the street which was widened to adopt the tram lines, cyclist and pedestrian paths, and at the same time a lot of greenery was planted along. On the west side are the sports facilities intended for the recreation of the resident. The goal of the design was to integrate the structure to the existing urban landscape. The student hostel building is divided into two parts, with a green garden in between. Both parts are organized in a simple manner, with a number of housing units with a common gallery corridor and the central elevator and stairway core. All the housing units on the floor have trapezoidal loggias, whose materialization and formation contribute to the dynamic appearance of the structure.

The ground level of a large number of the structure (fig. 20) has the following facilities: entrance, several residential units with provisions for the handicapped persons access, living room with the sitting area in the garden, administrative block for the employees, sanitary blocks and storerooms. The common facilities in the ground level of the smaller part are the: storeroom for bicycles and three catering shops.

**Fig. 19** perspective image**Fig. 20** Ground level plan

The garden on several levels is situated in the northern part of the lot (fig. 20) and has a private character, but is transparent from the street. In the garden are timber canopies used as places for rest and socialization of students.

The common facilities on the floor (fig. 21) in the longer part of the living room are the kitchen and dining room for all the residents of a floor. The living room is oriented towards the greenery separating the structure.



Fig. 21 Characteristic floors layout

Regarding that the structure was built in the city center, the immediate proximity of sports facilities on the west side allows the residents to undertake sports and recreational activities. Another quality of the designing solution of this structure is the garden on the north side, as well as the green street on the east side serving the rest and recreation purposes. In design, care was taken to provide presence of a large number of common facilities, concentrated in the ground level of the structure. On every floor, the common living room is opened towards the greenery, and the kitchen with the dining room are the areas where the residents can gather and socialize, which is another quality of a designing solution. [11]

Example 2: 380 Student Units and Public Space Design

Architects: Architectenbureau Marlies Rohmer

Location: Utrecht, Netherlands

Year: 2003-2008.g

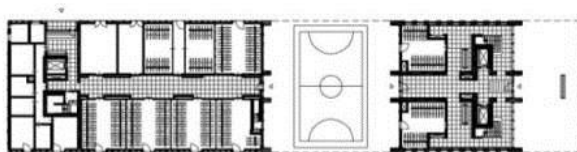


Fig. 22 Ground level plan



Fig. 23 Perspective image

Construction of the student hostel as a standalone fourteen storey building the city of Utrecht, Holland, in the urban core, contributed to solving of the persisting problem of the lack of housing for the young people in this city.

The mass of the structure is divided into two entities at the level of fourth floor, with mostly service and shopping outlets and means of vertical communication. The higher floors house 380 independent housing units grouped into tracts around the main horizontal communication. Apart from the housing functions at the higher floors, there are separate common areas for work rest and socialization of the residents around the vertical communication.

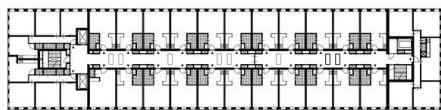


Fig. 24 Characteristic floor plan

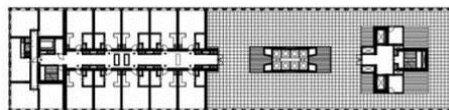


Fig. 25 Attic layout

In the ground level (fig. 22) are situated the main entrance to the building from the street, the covered space for gathering and socialization, covered sports facility with the accompanying functions and services, storerooms for bicycles, washing rooms and technical bloc. The terrain is open to use for the residents of the hostel and of the surrounding buildings.

In the attic (fig. 25) at the half of the building is a passable terrace for rest and socialization of the residents.

Common facilities in this hostel are diverse: living rooms on each floor, shopping and service facilities on the first four floors and sports facilities on the ground level, contributing to the better quality of student housing. The deficiencies of this structure are: living rooms on the floors have peripheral position in respect to the housing block, it has an elongated plan and it is very high. This is attenuated by the existence of common facilities from the ground level to the attic, which is conditioned by the location. It can serve as an example how this kind of buildings can be interpolated in the existing urban core.

4. CONCLUSION

On the basis of the analysis of common facilities, performed on six European examples of student hostels constructed in the last ten years as standalone buildings, the following conclusions were made.

- In most of the examples the most present areas are those for the daily living activities. Most often it is a multifunctional hall which in some of the examples has the section with the TV, dining room and the kitchen and seldom a special TV hall. These areas are present on every floor in most of the examples, which represents a quality of the functional design. It is desirable that these areas occupy the central part in the layout design so as to be equally accessible to all the residents of the floor.
- The technological advancement brought about usage of PCs in many fields. The areas for work and learning such as reading and drawing rooms lost their purpose, as the housing units are equipped with fitting for PCs and internet communication, so these activities take place mostly in them. In one of the buildings are present workshops for cultural activities (music, drama), which can serve as an example to the future designs of student hostels.
- Restaurants are not analyzed as they are not within the structures. In some of the examples, café-bars are provided for. Other types of food catering outlets (cafeterias, sweet-shops, fast-food shops) are not present. It is desirable that these facilities are planned within the structure, especially if it is located in peripheral urban areas.
- Shopping outlets (general store, supermarket, boutique) were mostly left out in those buildings built in the central city areas. It is desirable to plan for the general store or supermarket inside the building, if the student hostel is designed for the peripheral urban area.

- Service facilities in most of the buildings comprise only the laundry washing, and they are located in the ground level. There are little examples where the washing room is within the housing floors, which is quality of functional design. Other service facilities, post office, photocopy shop, hairdresser, shoemaker are not planned for. There are several examples with the bicycle storerooms. The automobile garages were not planned for, but they should be considered in the future, since cars in 21st century are not the luxury by the necessity, for all social groups, and thus for the students.

- Health service (doctor, pharmacy, dentist, psychologist) were not present in the analyzed student hostels. These facilities are needed, and it is desirable to plan for them in the building, especially if it is in the peripheral urban area.

- Open air sports facilities, terraces and park are most frequently planned sports-recreation facilities in the analyzed student hostels. The sports hall and the closed swimming pool are not included as they require considerable finances. Only one structure had the gym, and it would be useful if there was also the fitness-club. Arranged park areas around the buildings can be used for rest and recreations and should be designed wherever possible. An example of a combination of a park with multifunctional gardens used for production of plants in the urban area stands out.

On the basis of the analysis of the previous examples, the conclusion was drawn that the common facilities in the European student hostels in the 21st century are present to a different degree. The most frequent are the living rooms and sports and recreational facilities. Other types of common facilities occur in a small number of examples. The structure where the various common facilities are present, to a greatest extent is the student hostel in Odense, Denmark. It can serve as an example to look up at when designing the student hostels in the world, and in our country.

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ARHITEKTONSKA ANALIZA ZAJEDNIČKIH SADRŽAJA U EVROPSKIM STUDENTSKIM DOMOVIMA U 21.VEKU

Na globalnom nivou Univerzitetski kampusi predstavljaju dominantan tip organizacije svih životnih oblasti studenata. U ovom radu je izvršena arhitektonska analiza zajedničkih sadržaja evropskih primera studentskih domova novijeg datuma, koji su građeni kao samostalni objekti. Analiza ukazuje na prednosti i mane ovakve prostorne organizacije. Posebno su sagledani zajednički sadržaji, koji su ovakvom prostornom organizacijom zastupljeni u većoj meri, a mogu poslužiti kao primer za izgradnju studentskih domova u Srbiji.

Ključne reči: *zajednički sadržaji, studentski domovi, evropski primeri.*