

**Variety as a Key to Responsive Environments:  
Students' Evaluations of Public Open Spaces on  
Eastern Mediterranean University Campus**

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## ABSTRACT

The observations on many university campuses illustrate that some of the activities like meeting, eating, sitting, chatting, waiting, studying, and even protests take place outdoors. In this context, students from different environments and other users of different ages, cultures, and with different needs may use the public open spaces of a campus. Accordingly, the quality of variety emerges as a significant quality. In this thesis, first, variety as key factor of responsive environments and the public open spaces will be explored through a literature survey.

In this regard, according to the main question of this study about how variety can effect on quality of public open spaces, and by considering three main factors of variety including variety of uses, variety of users and variety of forms, on the basis of students' evaluations and site observation in the open spaces in Eastern Mediterranean University (EMU) campus, the most and the least preferred public open spaces of the campus will be selected.

In the next step, the selected public open spaces and the role of variety on these spaces will be investigated by three mentioned factors of variety through a questionnaire survey. The research methodology includes literature survey, data collection from both qualitative and quantitative analysis, user survey and observation.

**Keywords:** Responsive environments, public open spaces, variety, EMU campus, Famagusta, North Cyprus

## ÖZ

Gözlemlere göre, birçok kampüste, bazı faaliyetler, toplantı, yemek yeme, oturma, konuşma, bekleme, ders çalışma, hatta protestolar açık alanlarda yapılmaktadır. Bu bağlamda, çeşitli öğrenciler ve farklı yaşlardan, kültürlerden farklı ihtiyaçları olan diğer kullanıcılar, kampüs kamusal açık alanlarını kullanırlar. Buna uygun olarak, çeşitlilik kalitesi önemli bir kalite olarak ortaya çıkmaktadır. Bu hipotez doğrultusunda, çeşitlilik, duyarlı çevrelerin önemli bir faktörü olarak, Doğu Akdeniz Üniversitesi kampüsünün kamuya açık alanlarında incelenecektir.

Bu bağlamda, öğrencilerin değerlendirmelerine göre, çeşitliliğin kamusal açık alanların kalitesini nasıl etkilediği; çeşitliliğin üç ana faktörü olan kullanımların çeşitliliği, kullanıcıların çeşitliliği ve biçimlerin çeşitliliği göz önüne alınarak, Doğu Akdeniz Üniversitesi kampüsünde en çok ve en az tercih edilen kamusal açık alanlar belirlenecektir.

Bir sonraki adımda, DAÜ kampüsünde anket yoluyla seçilen kamusal açık alanlar, çeşitliliğin üç ana faktörüne göre incelenecektir: kullanımların çeşitliliği, kullanıcıların çeşitliliği ve biçimlerin çeşitliliği. Araştırma metodolojisi, literatür araştırması, nitel ve nicel analizlerden veri toplama, kullanıcı anketleri ve gözlemlerini içermektedir.

**Anahtar Kelimeler:** Duyarlı ortamlar, kamuya açık alanlar, çeşitlilik, DAÜ kampüsü, Gazimağusa.

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# Chapter 1

## INTRODUCTION

### 1.1 Background of Study

Variety is essential for responsive environments and can play a vital role to reach sufficient and successful public open spaces. As Bentley et al (1985) mentioned in their book, *Responsive Environments*, variety is the second key quality in designing responsive environments, a space with variety of uses and activities with various building types and various forms can attract and support various people in various times with various reasons. On the other hand, Jacobs (1961) mentioned in her main book that variety is one of the key qualities in urban environments. Likewise, different people, such as families with their children, older persons, office employees and college students spend most of their time in open spaces by walking, shopping, sitting, meeting, talking and etc., so considering designing open spaces with respect to “variety” as important as designing indoors as well.

In this research, students’ expectations and needs from open spaces of university campus are investigated in terms of variety. Students have different activities in open spaces of campus, such as studying, meeting, walking, resting, entertaining, doing sports and etc. hence, considering designing campus open spaces as a part of students’ life is one of the most significant issues.

In this study, variety as a key factor of public open spaces in campus have been investigate by researcher's observation and students' evaluation of campus public open spaces of EMU (Eastern Mediterranean University), Famagusta, North Cyprus.

## **1.2 Research Problem**

Variety is a key factor for responsive environments, but in many cases the central areas of cities lack variety of forms, uses and users (Bentley, 1985). Also Jacobs (1961) pointed in her book "the missing diversity, convenience, interest and vitality, do not spring forth, because the area needs their benefits"

Plus the fact that, variety as one of the key factor of successful public open spaces can effect on people to enjoy the environment. A mixture of uses, if it is to be sufficiently complex to sustain city, public contact and cross-use, needs an enormous diversity of ingredients. (Jacobs, 1961)

On the other hand, observation on many campuses shows that a great handle of the casual interchange, chance meetings, entertainments, and study between classes takes place outdoors, when the weather permits (Marcus and Francis, 1997).

In EMU campus, as a specific case, as regards to international university with various students from various country with different culture, the lack of variety of uses and activities in public open spaces is one of the most important problems, and also there are serious differences between daily and nightly activities in public open spaces. The first problem is about the lack of variety of uses and activities for students in different level and different ages from different countries. Another one is

about the lack of various sufficient public open spaces according to different times of the day and night.

### **1.3 Research Aim and Objectives**

**Aim:** The aim of this study is to investigate the role of variety in public open spaces in EMU campus by assessing students' own evaluations and site observation.

**Objectives:**

- To find out how variety as a key of responsive environments can affect the public open spaces in campuses.
- To produce a set of data about students' needs towards more ideal public open spaces in campus.

### **1.4 Research Methodology**

Because urban open spaces are directly related to people, and investigate of this issue is related to students, the methodology of this research will be based on user survey with students' evaluation of the public open spaces of EMU campus, along with a literature review, personal observations and visual documentation.

### **1.5 Structure of the Thesis**

This thesis, comprises five main chapters. The research will be described briefly in Chapter One by explaining the conceptual and methodological aspects of the thesis. This part will clarify the background of research by clearing the problem, aim and objectives, methodology and also the framework of the thesis. Understanding the concept of variety will be illustrated in Chapter Two, as a main part of literature review of research by explaining the different level of variety, purpose of variety and limitation of variety. In Chapter Three, a literature review will be made about public open spaces under the titles of main public open spaces and different types of public



open spaces. And also the effective factors on public open spaces will be described. The good examples of campus public open spaces including university of Berkeley's campus open spaces and George Mason University's campus open spaces, will be explained in Chapter Four. Chapter Five will introduce the EMU campus as a case study of this research and evaluation of students' idea about the campus public open spaces and also show the result of researcher observation of open spaces of EMU campus. The results of the survey and observations will be presented and interpreted in Chapter Six.

## **Chapter 2**

### **UNDERSTANDING THE CONCEPT OF VARIETY**

#### **2.1 Brief Introduction**

In this chapter, first of all, variety as a key factor of public open spaces have been defined from different points of view. Following that, different levels of variety, including variety of uses, variety of users and variety of forms have been explained. The purposes of variety is the next part of this chapter which have been explained. The last section has described the limitation of variety. The chapter has ended with its conclusion.

#### **2.2 Definition of Variety**

Lozano (1974) defines ‘variety’ as “The characteristic of an environment made up by sets of similar but not equal elements, which belong to a common and recognizable taxonomy (typology) perceived by the observer in terms of the rhythmical differences appearing within the common characteristics unifying the set.”

Over the last decades, from Jacobs (1961) to Krier (1984), throughout modernist urban developments, urban designs were centered on the variety of experiences which were offered to users of contemporary cities (Saeidi and Oktay, 2011).

Variety as a key factor for responsive environments can play significant role to reach sufficient and successful public open spaces. Various kinds of forms and functions let users to have more choices. As Bentley et al (1985) mentioned in their book,

*Responsive Environments*, variety is a quality key in designing efficient public spaces likewise a place with variety of uses and activities with various kinds of buildings and forms can appeal and support various people in various times with various reasons. Also Jacobs (1961) mentioned in her main book, *the Death and Life of Great American Cities*, that variety is one of the important factors in urban environments; she also added “to understand the cities, we have to deal outright with combinations or mixtures of uses, not separate uses, as the essential phenomena.”

An ideal public open space which faces all users’ needs, is best to be in a form which widely varies in terms of form, use and user. Actually, a composition of uses and facilities in a succeeding public open space will attract a variety of groups of people. Therefore, these uses and facilities will accomplish the requirements of various users in age, education, income level etc. Furthermore, the perceptual meaning of the public open space will get richer.

## **2.3 Different Levels of Variety**

### **2.3.1 Variety of Forms**

The purpose of variety in public open spaces, is to create a physical setting for a well-functioning and sociable space (Talen, 2002). In this respect, some different elements to be surveyed are such as formation of public open spaces, essence of legibility of center and boundaries, size and shape of open space districts, legibility and accessibility for transportation systems and pedestrian and also attention to disabled users’ needs. Plus the fact that public open spaces with diverse building types with wide range of harmony between buildings can support and attract various population within themselves. On the other hand, to investigate the factor of natural environment, variety of natural environments among public open spaces, as a one of

the most significant factors, can effect directly on shaping the open spaces and visual dimension. It includes waterfronts, natural parks, green open spaces, hills, trees and flowers and greenery in public and private and also semi private spaces. As Duany (2001) said existence of the natural elements, for instance the green open spaces or waterfronts not only supply a space for people with recreational activities, but also improve their quality of life by providing such conditions to feel more relax, calm and happy between or after daily routines work.

As Watson implies “as intelligent and curious individuals, we enjoy an environment with variety, detail, and complexity. A sidewalk might have a brick paving edge that change design at intersections. A building might have a mosaic of tile in front of the door that catches our eye or a change in appearance around windows. Details, variety, and complexity provide the richness that makes thing interesting for us. This is not to say that infinite variety is preferred. Too much variety and our world become hard to understand. A building may have a palette of three to five related colors, not twenty unrelated ones. Landscaping may consist of groupings of a selected number of species, not one of everything. Variety is best provide within an overall cohesive framework” (Watson, 2001).

### **2.3.2 Variety of Uses**

Murrain (1993) considers variety as “a finely grained mix of primary land uses, namely a variety of dwellings and workplaces with housing predominant, closely integrated with all other support services, within convenient distance of the majority of the homes”, can be useful. The variety of uses of mixed public open spaces tend to cooperate with others and improve the character sense of the open spaces by equipping with variety of functional factors such as different types of official and

educational buildings, neighborhood parks, playground, greenery spaces, etc. located close to each other in walkable district. Therefore, variety of uses is an important fact in raising the level of livability factors and social activities.

In this respect, Jane Jacobs (1961) mentioned in her seminal book, the *Death and Life of Great American Cities*, “a mixture of uses, if it is to be sufficiently complex to sustain city safety, public contact and cross-use, needs an enormous diversity of ingredients. So the first question about planning city is this: how can cities generate enough mixture among uses – enough diversity – throughout enough of their territories, to sustain their own civilization?”

To maximize the variety of uses, considering those three main factors is necessary: first the range of demands that are located there, second the feasibility of providing an affordable open space in the design containing these activities, and third the extent that scheme countenances positive reactions within them. The major problem to reach the application of this concept is the existence of variety of uses and activities presented by urban open spaces that needs the variety of building types and other forms of built up. Therefore, variety of uses is noticed the most important level of variety to insure a high variety of users functions and also experiences. Then, these factors together manufacture a high level of variety in physical, functional and spatial setting, including a rich level of visual diversity. (Bentley et al, 1985)

### **2.3.3 Variety of Users**

The need for improved social life in cities and lively public open spaces which are usable by different groups has been interest of urban designers and sociologists in the last decades. The variety of functions in public open spaces will give opportunity to

different types of people, i.e. families, workers, students, children, elderly, etc. to enjoy their environments, through which different meanings are given to the area.

## **2.4 Purposes of Variety**

### **2.4.1 Increasing the Choices**

Variety as one of the key factor for responsive environments can play important role to have more successful open spaces because various kinds of forms and functions let users have more choices.

It should be pointed that more suitable design of public open spaces satisfy more demands of users. One of the key objective of appropriate public open spaces is to consider people's needs and adjusting to their uses and activities as well.

### **2.4.2 Improving the Vitality**

Vitality is a factor which has a direct relation to the success of the urban spaces from the social point of view. One of the dimensions of good urban design is vitality, likewise he characterizes it as the rank of that the form of spaces that supports the functions, biological requirements and capabilities of human beings. (Lynch, 1981).

Vitality could be defined by the number of users or the amount of crowds during the day and night in the desired area, various kinds of celebrations and events which are held in urban spaces (Montgomery, 1998). Likewise vitality culminates from diversities of functions and level of visual quality of urban spaces (Jalaledini and Oktay, 2011).

According to effects of vitality on public open spaces, vitality could be investigated from social and physical points of views. Vitality is considered as one of the most

significant criteria which shape the health factor of the urban spaces by effecting on viability leads to reduce crimes, enhance amenity, social interactions (Jalaledini and Oktay, 2011).

Definitions can be defined according to the general vitality of the vitality, the ability to provide space for a variety of activities and users (with different fields of economic, social and cultural) diversity of experiences and social interactions such as security, equality and provide convenience for all users considered (Dadpvr, 2011). The Urban Dictionary, Robert Cowan vitality and viability of these together and there has been: "Vitality and Viability" of small towns and large centers is successful (Cowan, 2005).

## **2.5 Limitation of Variety**

Although planners and developers have different trends, both attempt to make ideal and efficient environments. Planners want to have controllable spaces, whilst developers interested in economic factor in performance. As Bentley et al (1985) mentioned in their book, both groups, developers and planners, consider to serve their preferred by two key concepts: "specialization and economies of scale". These keys together, has negative effect on variety.

There are three main special situations that caused to limitation of variety, first of all, variety between districts, since these area are specialized for single use, second is related to variety between blocks, because sites are combined to greater units, third, variety between buildings to benefit of easy handling and corporate image.

But in practice, as Bentley et al (1985) pointed, it is important to consider to “who can afford high mobility? Can children or poor people? Or disabled or sick people? Or parents with young children? Or even women generally?”

For especial group of people like them, they prefer to have a minority of variety to catch their choices.

With all these pressures against variety, it is pointless to agonize over exactly how much is needed: designers should simply get the most they can. Because of all the constraints, there is no danger of ending up with too much.

## **2.6 Conclusion of the Chapter**

It has been understood that when designing campus open spaces, variety is the most important factor to have successful campus open spaces. Variety as a key factor of responsive environment and successful public open spaces can attract various people with various levels of needs in various times. The purpose of variety is to increase the choice for various users, because of the fact that various activities in public open spaces lead to have more affordable space. On the other hand, the public open spaces with various uses and activities can support more users, and the public open space with various users have more vitality.

Although variety is one of the most important quality factor in public open spaces, considering to limitation of variety is as important as considering the creation of variety. Also urban designers should pay attention to how much variety is enough to make efficient public open spaces. Because of the fact that too much variety can have



bad effects on special people such as: disabled people, parents with young children,  
etc.

## **Chapter 3**

### **UNDERSTANDING THE MEANING AND USE OF PUBLIC OPEN SPACES**

#### **3.1 Brief Introduction**

The strong correlation between people and different types of public open spaces, can indicate the significant values and meanings of their users. In this chapter, first of all, definition of public open spaces as a main area of the thesis is explained, after that, main types of public open spaces, including streets and squares will be investigated, and then different types of public open spaces such as urban plazas, neighborhood parks, mini parks and campus outdoor spaces will be described.

Since more than half of the population of the world live in cities, so considering to different effective factors in quality of open spaces is playing vital role, in this respect Lai et al (2013) mentioned in their article about outdoor space quality: “Outdoor space quality, including outdoor thermal comfort, functionality, safety, convenience, and aesthetic concerns, is the primary factor in the activity level of community residents. It also affects the community’s closeness and the city’s livability and vitality” (Lai et al 2013).

One of the main results of people interaction within the open spaces is quality of life of people in those spaces. In discussion of the importance of public open spaces, as Delianur, A and Zahrah said, many studies represent public open space as one of the

most significant elements in urban environment that directly related to quality of life. (Nasution & Zahrah, 2012)

### **3.2 Definition of Public Open Space**

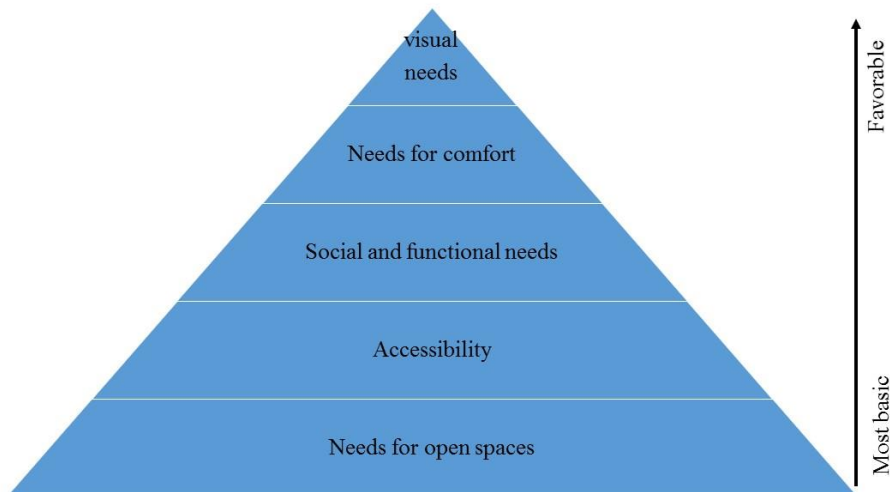
Drawing on an analysis within the broader framework of state and society, a space can be defined as public if it is controlled by the public authorities, concerns the people as a whole, is open or available to the public, and is used or shared by all members of a community (Madanipour, 1999).

According to Lynch, “a space is open if it allow people to act freely. It has no necessary relation to ownership, size, type of use, or landscape character. An open space plan would necessarily be pervaded by the general concept of ‘openness’ to choice, active use and manipulation, view and understanding, access, new perception and experiences”. (Lynch, 1990)

As a definition, public open space is a dynamic space that responses to people’s needs like social activities, meeting, moving, gathering, relaxation and etc. public space is a kind of connection between person life and social life. As Carr et al said, it provides the human being needs about communication to other people (Carr et. al., 1992)

As Maslow (1954) categorized the needs of people by hierarchical ordinary, one of the most important needs is need for open space (Table 3.1).

Table 3.1: The needs of people identified by Maslow (1954)



### **The importance of open spaces:**

According to Lynch (1990), we need open spaces in a city because:

1. It is an area for different purposes, which gives the possibility for different people to choose what they want in order to get satisfied;
2. Open spaces have lower human use comparing to the rest of the city; therefore it's a place for resting and getting relaxed;
3. Best places to meet friends are open spaces where there is a chance of breaking social rules and making new friendships;
4. By going to open spaces we can expand our belief of ourselves and our environment. Open spaces can give us an idea of larger places and landscapes;
5. Open spaces are places which make opportunity for growth and community control.

Another importance of public open space is related to social needs. Public open spaces support people for gathering and meeting each other. There are different types

of public open spaces in the city; some of them are directly related to recreation activities of people, like squares, parks, etc.

As an artist of townscape, Gordon Cullen (1971) had an experience of sequence in urban space. Through his experiences he focused on the sense of place starting from street level. (Cullen, 1971)

As Francis (1987) pointed, there are many effective elements that play vital role on quality of public open spaces:

- Variety of users such as children, adults and elderly
- Variety of activities
- Capability of redesigning, evaluating and improving
- Being comfortable
- Having public accessibility
- Getting opportunities for enjoyment, challenge and discovery
- Having ecological health
- Contribution to economic benefits of the environment community
- Lovable for those who use it or live or work near it
- Feeling safety and security. (Francis, 1987)

### **3.3 Typology of Public Open Spaces**

Although there are various types of public open spaces, streets and squares are two main types of them; streets include “roads, paths, avenues, lanes, boulevards, alleys, malls, etc.” squares involve: “plazas, circuses, piazzas, places, courts, etc.” (Carmona, M et al, 2010).

Different types of public open spaces according to different factors such as function, ownership, location and etc., which are categorized by Helen Woolley (2005) are: domestic urban open spaces, neighborhood urban open spaces and civic urban open spaces. (Table 1) (Woolley, 2005)

Table 3.2: Different types of public open spaces as Helen Woolley (2005) categorized

Types of public open spaces(Helen Woolley)		
Domestic urban open space	Neighborhood urban open spaces	Civic urban open spaces
Housing	Park	Commercial
Private garden	Playgrounds	Plaza
Community gardens	Play fields and sport grounds	Office grounds
	School playground	Hospital grounds
	streets	University campus
	City farms	Roof grounds
	Natural green space	transport

### 3.3.1 Main Types of Public Open Spaces

#### 3.3.1.1 Streets

Streets are considered as communal thoroughfares in a city or a town. They mainly serve circulation, both for vehicular and pedestrian circulation, but have potential as a place to be used for social public open spaces as well. (Oktay, 1990)

As public spaces, streets are areas which deal with many different groups of people apart from families. Comparing to other areas, we can consider streets as communal thoroughfares. As we all know streets are said to be places which along them, besides all the engineering requirements, fast and heavy traffic movements are done.

Listed below, are some important functions of streets: (Moughtin, 2003)

- Social significance and economic function

- The physical form of the streets demonstrates the culture of the people living there.
- Streets are links between buildings and city
- They must be entertaining, conservative and creative.

The role of the street appears when a large population uses the street in different ways. To be short, potential users have a large influence on the life of a street.

Since separation of pedestrian traffic areas from high-speed traffic movements is important, design of pedestrian areas should be carefully done in the streets which are frequently used by citizens.

### **3.3.1.2 Squares**

In comparison to other types of public open spaces, squares or plazas for cities are as atriums for all people in a city.

In general, squares supply environments for work and life of a large population, places to shop, eat, drink, etc. The most vital and attractive squares are those which variety of functions.

The specific functions of squares are as follows (Moughtin, 2003):

- They are natural setting for the major religious and civic buildings, for fine sculpture and fountains;
- They are the focal points for the entertainment and gathering of people;
- They are usually the shopping areas in the city;
- They are spaces around which residential housing is arranged.

- They can be seen to augment a host of urban activities some of the common forms being trade, information, recreation, protection, religion.
- Some of them are clearly the result of democratic usage, other suggest military purpose and the monumentality of government.

Multi-functionality is the most important feature which distinguishes a square from other public open spaces. A square can act as a road, a garden, a park, a theater, etc. Therefore it has both the static and dynamic character.

There are various classifications for squares, among all there are two main influential theories stated by Paul Zucker and Camillo Sitte. Camillo Sitte divided squares into two types; deep type and wide type.

“...whether a plaza is deep or wide usually becomes apparent when the observer stands opposite the major building that dominates the whole lay out”. Bringing together Sitte’s deep and wide type squares, we have a type named ‘enclosed’ type (Moughtin, 2003).

### **3.3.2 Other Types of Public Open Spaces**

Different kinds of public open spaces were classified by Cooper Marcus and Francis (1997), in three main categories:

- Public open spaces that have public management and public accessibility including: neighborhood parks, mini parks, some plaza spaces.
- Public open spaces with private control and public accessibility, including: corporate plazas and college campuses.



- Public open spaces that managed privately but is used for special group of people, including: elderly housing that used for its habitants and staff, day care centers that used for children and staff, hospital that is used for patient, visitors and staff.

Some of the public open spaces which will be discussed in this research are as below:

### **Parks**

As a place of reconciliation, parks are the best choice. A place where earth, water, plants and constructions are tilled in such a way which brings meaning to nature. As a main motive in developing park design, representation of nature played an important role. In order to increase urbanization, developing the city parks are of most importance. Parks are said to be a completion for the city. We can also consider them as an artificial creation of nature and also a court side, which the cultural world of the city guides them. As in the nature the two colors red and green combine to give white, city and nature are combined to produce parks. Taking a look at the history of urban parks, we can recognize that changes in the understanding of the society, extremely influences the relationship of the city and nature. Nowadays, in this relationship city is known as full dynamic i.e., public, timeless, rich in mutuality, animated.

As a replacement for nature in the center of a city, public open spaces are introduced. Actually we may say that they are the green lung of the environment since they produce fresh air and greenery. (Little, 1991)

Nowadays, since more importance is given to environment than before, the smallest pieces of lands are encountered as green spaces, and where ever there is not a possibility to have them, other methods are applied to construct parks. Parks differ in their forms, contents, designs and even names. People normally go to parks because they expect fresh air, a space to breathe clean air, green spaces, etc.

In the old days, country side was close to the city but now because of heavy traffics and urban expansions, access to nature, country sides or sea has decreased. Thus, providing spaces for a release of city is needed. For this, parks can provide such a space for the conflicts of modern life. “Nobody would argue that the parks are as essential as housing or education. Yet they form one of the requirements that is becoming increasingly essential for modern city living” as Whitaker and Browne mentioned. (Whitaker and Browne, 1971)

For a city park, the principle functions are (Atabay, 1989):

- Ecological function
- Urban-aesthetic function
- Symbolic function
- Recreational function

As time has passed on purposes, functions of parks are almost the same; however other things such as locomotion, rural recreation facilities, sport centers, etc. has changed.

Generally we know parks as places for resting, having fresh air and entertainment therefore to be effective these places must not be complicated. As Hultsman (1987)

claims, 'kiss' principle- simple and stupid- is a significant rule in recreation planning and design. That is these plans must be in such a way to raise the experience of the user. Also the design of parks shouldn't be confusing otherwise instead of a place for enjoyment, the park would bring disappointing experiences for visitors.

As Rowley (1992) has mentioned, "the small public gardens which are a feature of many towns and city centers, are a valuable asset, and they make a significant contribution to the quality of urban life. Opportunities to create new public gardens are rare, and we should be making the most of the spaces that already exist".

In brief, for kids, parks have the meaning of a playground, while for youngsters it's a place to meet friends or play sports and for elder people it can be a space to visit and talk with friends, take a nap or even look at younger people. Furthermore, for adults parks can be considered as places to stop for a break from shopping or to have meals under the trees.

### **Neighborhood parks**

Dominantly neighborhood parks are indicated as landscapes with grass, trees, and green areas, often located in residential environments that detailed and furnished for various type of active and passive uses; sport, play, walking as active uses and sitting, sunbathing and resting as passive uses. The location and density of neighborhood can effects on the detail of use.

### **Mini parks**

Small kind of parks, that basically are used for local, pedestrian- orientated are mini parks. Generally they are been used by children and teenagers.

### **Urban plazas**

Urban plazas are hard-surface open spaces which are generally located in a downtown area. Such plazas that developed as a part of high-rise building, generally managed privately but is accessible to the public.

### **Elderly housing outdoor spaces**

These open spaces are for the use of elder people for sitting, gardening, viewing and walking for exclusive activities.

### **Day care open space**

Outdoor play areas of day care centers which are used as play areas, are considered as open spaces generally including hard and soft surfaces, fixed and moveable play instruments.

### **Campus open spaces**

Public open spaces in campus are the hard and soft part of campus landscape that can be used for talking, walking, studying, relaxation, social meeting face to face.

The review of many campuses illustrate that many activities take place in outdoors, if the weather let. Various activities such as outdoor studies, meeting, recreational activity between classes, etc. (Marcus and Francis, 1997). The university campus with wide range of activities with its different halls, sport fields, various special events, not only have been used by students and staff but also have been used by other people from city or region. (Gumprecht, 2007)

The origins of quality on campus “The quality of spatial experience must response to user needs and support functional, convenient, safe, nice, exhilarating experiences of campus users. Fluency between indoor and outdoor spaces, suitability for the realization of student’s activities, variety in use and convenience for every user are

the principles of spatial quality on campus design (Marcus and Francis, 1997, Dober, 2000).” (Hanan, 2013)

Campus open spaces, as the main issue of this research, will be described widely in the next chapter.

### **3.4 Factors Effecting the Use of Public Open Spaces**

Some factors which play a vital role in the use of public open spaces are as follows: Goldsteen and Elliott (1994)

- Fountains and statues as mobile or static elements can increase the attraction of a place.
- Having active and passive areas close to each other, encourages “people watching” in these areas.
- Existence of spaces to place specific transportation vehicles such as: monorails, trolleys, etc.
- In order to have colorful visual details and also interesting patterns redesigning sidewalks and plazas are helpful.
- Decorative stalls and stands for plants, flowers, foods or even educational materials on the open spaces or sidewalks.
- The way of choosing bus shelters, rubbish bins, and benches and also lightning’s to construct an open space with desired characteristics.
- Having covered walks and also pergolas provides shelter in the corresponding areas which gives a different function to that area.
- Archways, shelters and shaded spaces in the sidewalks.
- Building stairways or ramps to provide different levels in order to have better viewing conditions.

- According to the place, equipping the place with bright or controlled compatible signs.
- Fountains of different sizes for different influences equipped with various lightning.
- To reinforce a characteristic of an open space or even a special event, lightings in form of searchlights or strings o bulbs will be useful.
- Various types of plantings and also variety of the above mentioned items which brings a distinction between different neighborhoods.
- Furthermore, according to Marcus and Francis (1997), each open space must satisfy the following:
  - Located in a place where it can be seen by various users and they can have an easy access to it.
  - An open space must show its availability and its mean of use.
  - Have a delightful view inside and outside of it.
  - Have suitable furniture for the activities which take place there.
  - Assure the users that they are safe and secure.
  - Decrease the urban stress and increase physical and psychological health of the users where needed.
  - Equipping the desired needs of the user group of the space. For instance, a therapeutic program in a hospital or an educational program in a day care center.
  - Provide components which users can touch or change such as garden beds is housings, fountains or even sun play in day care, etc.

- Easily and economically constructed under circumstances of that space. For instance a park can't be maintained by concrete even though it is easy and economic.
- Be designed in a way that satisfactory attention has been paid to it as a social place and an expression of visual art, since too much attention or lack of attention may result an inappropriate space.

### **3.4.1 Accessibility and Location**

It is clear that accessibility of an open space is the most important factor.

Open spaces must be easily accessible and close to their users, especially spaces which have daily or weekly use. Also the paths which connect the users to these places must be easily seen and patterned. Another important factor is the relation of the general circulation system.

According to Bentley et al (1985) mentioned in their book, “since places cannot have meanings without connections to other places and a city basically consists of ‘places’ and ‘links’, public use is very much dependent on linkage. In that sense, accessibility seems to be the most essential quality of public urban spaces in creating well used spaces that promote social interaction”.

Importance of accessibility from Rowe (1997) s’ point of view is as follows: “Good civic space, in other words, is accessible and allows expression and an equal sense of belonging to all participants. It is also devoid of suppressive references and encourages unofficial as well as official interpretations of meaning and use.

Furthermore, it reminds individuals of larger sense of responsibility and presents something that could be passed on to subsequent generations”.

### **3.4.2 Natural Factors**

To mention the importance of the existence of urban green, we must notify that apart from its practical uses, it can be considered as a filter for heat, smoke, gas, noise, etc. Scientists have claimed that the existence of green spaces helps purifying the city from the extra carbon dioxide. In providing breathing spaces for the environment, parks play an important role. (Nadel and Oberlander, 1997)

The ecological value, psychological and aesthetic benefits can be considered as important values of an urban green space. If we suppose that the urban world as a suitable living environment for people, functions properly; then in planning a city, either renewing an old one or constructing a new one, we can expect that, the axioms of applied biology and ecology are taken into account. (Shomon, 1971)

As we know, nature is the most important symbolic representation in the landscape architecture and the urban environment. In this regard, Fein also says that “A mere limitation of nature, however successful, is not art, and the purpose to imitate nature, or to produce an effect which shall seem to be natural and interesting, is not sufficient for the duty before us. A scene in nature is made up of various parts; each part has its individual character and its possible idea” (Fein, 1968).

Fragility evaluation and also evaluation of the use of a land must be considered when it is being selected for urbanization. Fragility of a landscape depends on its soil, climate, planting, slope, geology, beauty and wildlife. Destruction of a landscape can



be a result of landslides, extreme soil erosion, flooding, and loss of wildlife and also silting of streams (Laurie, 1975).

### **3.4.3 Environmental Control (Micro Climate)**

Considering various interacting parameters such as wind, solar radiation, water vapor, temperature, climate is a concentration of these variables. Apart from topography, water and vegetation, another major element of the environment is climate. The ideal climate conditions from Laurie's point of view are: clean air, temperature in the 50 to 80 degree Fahrenheit range, humidity between 40 and 75 percent, air which is neither stagnant nor subject to serve prevailing winds, and protection from precipitation. (Laurie, 1975)

Protection against sun and need for shade are the most important elements in hot and sunny regions. As it can be seen in North African and Middle East towns the streets are narrow, in order to protect the sun shine and create shadow.

For the development of a livable microclimate, in the landscape and urban environment, combination of design and planting, and architectural design is needed. Wind, shade, temperature and noise influence the use of outdoor spaces. Actually they are the principle elements of an environmental quality.

According to differences in sunshine and shelter, as indicators of microclimate, we can mention natural vegetation and plants. In this regard, trees also can protect us from winds and sun shine and as a result of that we can consider the temperature of the forests which is higher at night and cooler throughout the day. (Larurie, 1975)

It is clear that outdoor spaces with trees are mostly preferred to those without trees, therefore trees may result better relations between neighbors. Outdoor spaces with trees are more attractive to people, since they can meet their neighbors and also new people and interact with them. (Oktay, 1999)

#### **3.4.4 Physical/Aesthetical Qualities**

When evaluating the quality of an open space, the physical /aesthetical quality can be considered as important factor. We are able to manage and control visual and tactual experiences besides all other sensory qualities. (Laruie, 1975)

Parks and green spaces or generally public open spaces must be equipped with facilities of all kinds for people of all ages. Parks must be designed in such a way that kids, teenagers, families, elderly and disabled people can have the opportunity of enjoying that place. This property of the open space increases the quality of it.

As for the decoration and designing of a public open space, plants can have an important role. In architectural designing, lots of attention has been paid for forms of plants since ancient times. (Laruie, 1975)

About plantings and green areas, according to Oktay (1984), “vegetation plays an important role on formation of open space. Site planning is thought to be the spotting of trees and shrubs on a plan after houses and roads have been located. But site planning is the organization of a system of outdoor space, in which only one of the several materials that may be used is the plant cover. At the site planning scale, groups of plants and the general character of planted areas, rather than individual specimens, are primarily subject to men. Trees, large shrubs, and ground covers are

the basic materials; their growth habits, form and texture are their most interesting features”.

Another important fact about public open spaces is the furniture. For instance there must be benches suitable for adults and children, also some comfortable benches for elderly. Moreover fountains may add attraction to the area.

Another significant element is the lighting in a public open space which should be placed carefully and properly. Actually lightning in such open spaces are used for two main reasons:

- To make the place useful for a longer period of time
- To increase the safety of the place at evening and nights.

Apart from benches and lightning, an important and necessary element of all open spaces is the existence of rubbish bins. Rubbish bins must be located all over the open space especially close to the activity areas.

Another considerable furniture is the multipurpose tables which should be located in public open spaces. Generally they are used for gathering together, picnic, etc. The material of the furniture used in public open spaces such as parks and landscapes are also important. The most general material used is timber, since it is soft and comfortable. Landscape designers believe that using these kind of materials add brings a soft influence into their designs.

## **Chapter 4**

### **THE REVIEW OF TWO CAMPUSES**

#### **4.1 Brief Introduction**

According to this study through investigation of variety as a key factor for responsive open spaces, especially in campus, two university campuses have been selected to review as examples: The University of California campus in Berkeley and the George Mason University campus in Virginia. These examples were considered successful as the visits and observations have proved the maximum use and livability “around the clock”; the availability of documents and visual materials about the campuses was taken into consideration as well when selecting the examples (Interview with Derya Oktay, January 2014).

Thus, in this chapter, the quality of the public open spaces of these two campuses will be investigated in terms of variety.

#### **4.2 The University of California campus in Berkeley**

##### **General information**

The University of California at Berkeley was established in 1868 and its campus which foretasted as a “City of Learning”, was instituted at Berkeley, on San Francisco Bay. Today the University of California at Berkeley with 35,899 students including 25,774 undergraduates and 10,125 graduate students is a world superior public university, with 178 acre of land on campus. (University of California at Berkeley, 2014)

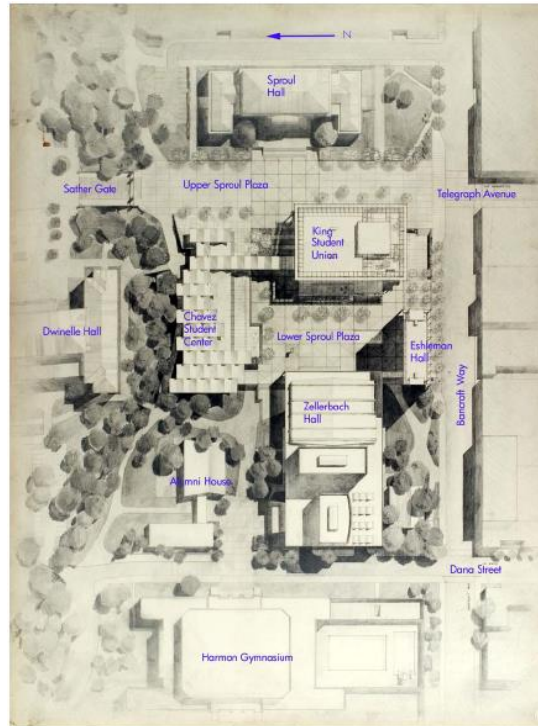


Figure 4.1: Site plan of the University of California campus at Berkeley,  
Source: [WWW.KVPCONSULTING.COM](http://WWW.KVPCONSULTING.COM)

**Main entrance:**

The well designing pedestrian path with two linear trees beside of the way, have made a defined entrance space on University of California campus in Berkeley. (Figure 4.2)



Figure 4.2: The main entrance, University of California campus at Berkeley  
Source: [www.nimalyadey.com](http://www.nimalyadey.com), [www.cp.berkeley.edu](http://www.cp.berkeley.edu),  
[milestogobeforwegetjobs.wordpress.com](http://milestogobeforwegetjobs.wordpress.com)

The Sather Tower is the most famous symbol of the University of California at Berkeley. This tower with 307m height is visible from miles, is third tallest clock tower in the world. It has accessibility with both an elevator and stairs. The Campanile was completed in 1914. There are 38 steps from the highest level of elevator to end point of the tower. This landmark doesn't have access for disable people. The carillonists play brief concerts every day at 7:50 a.m., 12 p.m., and 6 p.m., and longer ones on Sundays at 2 p.m. (Figure 4.3)



Figure4.3: The Sather Tower, University of California campus at Berkeley  
Source: [www.commons.wikimedia.org](http://www.commons.wikimedia.org)

### Lower Sproul Plaza

The success of Lower Sproul Plaza at the University of California campus at Berkeley is related to the location of this area, the main linear pedestrian path caused to have many users, the central open space which used for speeches and gathering. Also the most various use building which are surrounded this area lead to accommodate large number of users. (Figure 4.4) (Figure 4.5) (Figure 4.6)



Figure 4.4: Lower Sproul Plaza, University of California campus at Berkeley  
Source: [knapp-architect.com](http://knapp-architect.com)



Figure 4.5: Lower Sproul Plaza, University of California campus at Berkeley  
Source: [www.verplanckconsulting.com](http://www.verplanckconsulting.com)



Figure 4.6: Lower Sproul Plaza, University of California campus at Berkeley  
Source: [www.sfgate.com](http://www.sfgate.com)

### **Upper Sproul Plaza**

Upper Sproul Plaza, the historic gateway to the University of California, Berkeley. Upper Sproul plaza is bordered from east to the Sproul hall, students and admission services, from the north part lead to Sather Gate that reach to the central campus, and from the South to the Telegraph Avenue and the south campus of University of California at Berkeley. Sproul Hall is located on the top of Upper Sproul Plaza,



stairway conduct to the entrance. Most of the student pass this way to reach the class or Telegraph Avenue. (Figure 4.7) (Figure 4.8)



Figure 4.7: Upper Sproul Plaza, University of California campus at Berkeley  
Source: [envirobeat.com](http://envirobeat.com)



Figure 4.8: Upper Sproul Plaza, University of California campus at Berkeley  
Source: [www.dailycal.org](http://www.dailycal.org)

Some political protests have been happened in this plaza, especially in this stairway. Also Upper Sproul Plaza have tow line of pollarded Plane trees as a characteristic of

the campus of the University of California at Berkeley. Various activities and uses can affect directly or indirectly on campus plaza. Also night activities and existence open cinema play vital role to make here as a sufficient place event in night. Existence open cinema in Sproul Plaza can play social role, especially at night. Other Special activities like political activities, recreational activities and especial events like festival have taken placed in this plaza. (Figure 4.9) (Figure 4.10) (Figure 4.11)



Figure 4.9: Open cinema located in Lower Sproul Plaza, University of California campus at Berkeley

Source: [www.commonswikimedia.org](http://www.commonswikimedia.org)



Figure 4.10: Social activities in Lower Sproul Plaza, University of California campus at Berkeley

Source: [www.newscenter.berkeley.edu](http://www.newscenter.berkeley.edu)



Figure 4.11: Night activities in Lower Sproul Plaza, University of California campus at Berkeley

Source: [www.berkeley.edu](http://www.berkeley.edu)

### **4.3 The George Mason University campus**

#### **General information of George Mason University**

The George Mason University as the Northern Virginia branch have been started in 1957. In 1972, the Board of Visitors of the University of Virginia recommended that the college separate from its parent institution. On April 7, the governor signed the General Assembly legislation that established George Mason University as an independent member of the commonwealth's system of colleges and universities.

(George Mason University, 2014)

The main campus of George Mason University is situated on 677 acres (2.74 km<sup>2</sup>) just south of the city of Fairfax, Virginia in central Fairfax county, approximately 15 miles west of Washington D.C.

#### **Main entrance:**



Figure 4.12: The main entrance of the George Mason University campus  
Source: [math.gmu.edu](http://math.gmu.edu)

### **Variety of forms in public open spaces of George Mason University**

The public open spaces of George Mason University with various kind of forms and landscaping, different kind of furniture and elements such as fountain, natural elements, well design landscaping and pedestrian pavements, natural and unnatural shading elements and clock tower caused to invite and attract the various users including students, families, workers, etc.(Figure 4.13) ( Figure 4.14) ( Figure 4.15)



Figure 4.13: The Sculpture of George Mason, George Mason University campus  
Source: [www.fasttrackteaching.com](http://www.fasttrackteaching.com)



Figure 4.14: The clock tower located in public open space at George Mason University campus

Source: [www.hr.gmu.edu](http://www.hr.gmu.edu)



Figure 4.15: Various forms in public open space, George Mason University campus

Source: [www.fletcher-prince.com](http://www.fletcher-prince.com)

## Variety of activities in George Mason University Campus

Different kind of activities and uses and also especial events such as political activities, charities, food festival, outdoor study, etc. have taken place in public open spaces of George Mason University. (Figure 4.16) (Figure 4.17)



Figure 4.16: Various activities in public open space of George Mason University  
Source: [www.atriumcampus.com](http://www.atriumcampus.com)



Figure 4.17: Various activities in public open space of George Mason University  
Source: [www.asianfortuneneews.com](http://www.asianfortuneneews.com)

#### **4.4 Conclusion of the Chapter**

Observation on many public open spaces in different campuses shows that large number of students and other users are attracted to and enjoy the public open spaces of campuses with wide range of variety.

In these two examples which have investigated in terms of variety, the University of California campus at Berkeley and the George Mason University campus in Virginia, in conveying the quality of public open spaces from point of variety, has been result that the three factors of variety such as variety of forms, variety of uses and variety of users play vital roles.

## **Chapter 5**

### **CASE STUDY: THE EASTERN MEDITERRANEAN UNIVERSITY CAMPUS IN FAMAGUSTA**

#### **5.1 Brief Introduction**

In this chapter, the quality of public open spaces of Eastern Mediterranean University campus will be analyzed in terms of variety. The methodology of this study is based on qualitative and quantitative survey, site observation and students' evaluation.

The methodology of this study is based on qualitative and quantitative survey, on site observation, and students' evaluations measured through a questionnaire.

In this context, the map of public open spaces of EMU campus will be given to 100 randomly selected students, and they will be asked about their most preferred public open spaces. In this chapter, the most preferred public open space and the least preferred public open space will be conveyed and studied in terms of variety of uses, variety of users and variety of forms.

#### **5.2 General Information about Eastern Mediterranean University campus**

##### **5.2.1 History of EMU**

In 1979 the emergence of the institute of Higher Technology caused to starting the establishment of the Eastern Mediterranean University. This institute had started by education for 105 students in 3 departments including: Civil Engineering, Electrical



Engineering and Mechanical Engineering. The most important goal of this institute was to growing the intermediate workforce (the main purpose of this institute was fostering an intermediate workforce along an engineer and technician)

In 1985, the government decided to change this institute and improve as a university that is called “Eastern Mediterranean University”. Therefore, Eastern Mediterranean University Campus was made in 2200 acre area (strategic Plan of EMU, 2012)

### 5.2.2 Location of EMU Campus

The Eastern Mediterranean University campus is located in second largest city of Turkish Republic of North Cyprus, Famagusta, with a population of approximately 40,000 people. The distances of EMU campus from central part of the city is around 5 Km, while the distance between emu campus and walled city of Famagusta is approximately 10 Km. (Figure 5.1) (Figure 5.2)



Figure 5.1: Location of Famagusta in the island of Cyprus (Google earth)

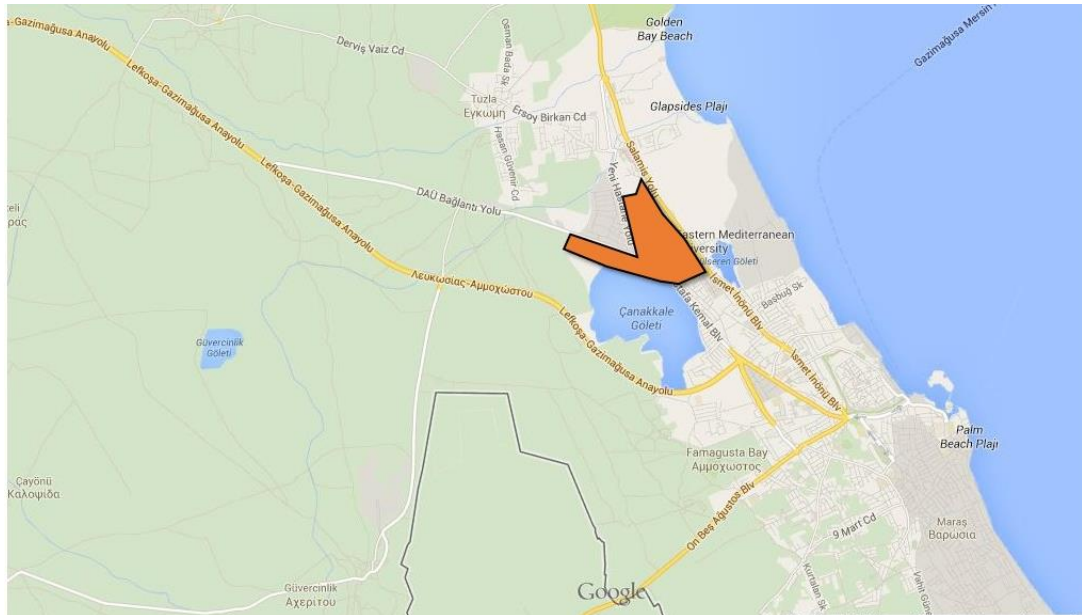


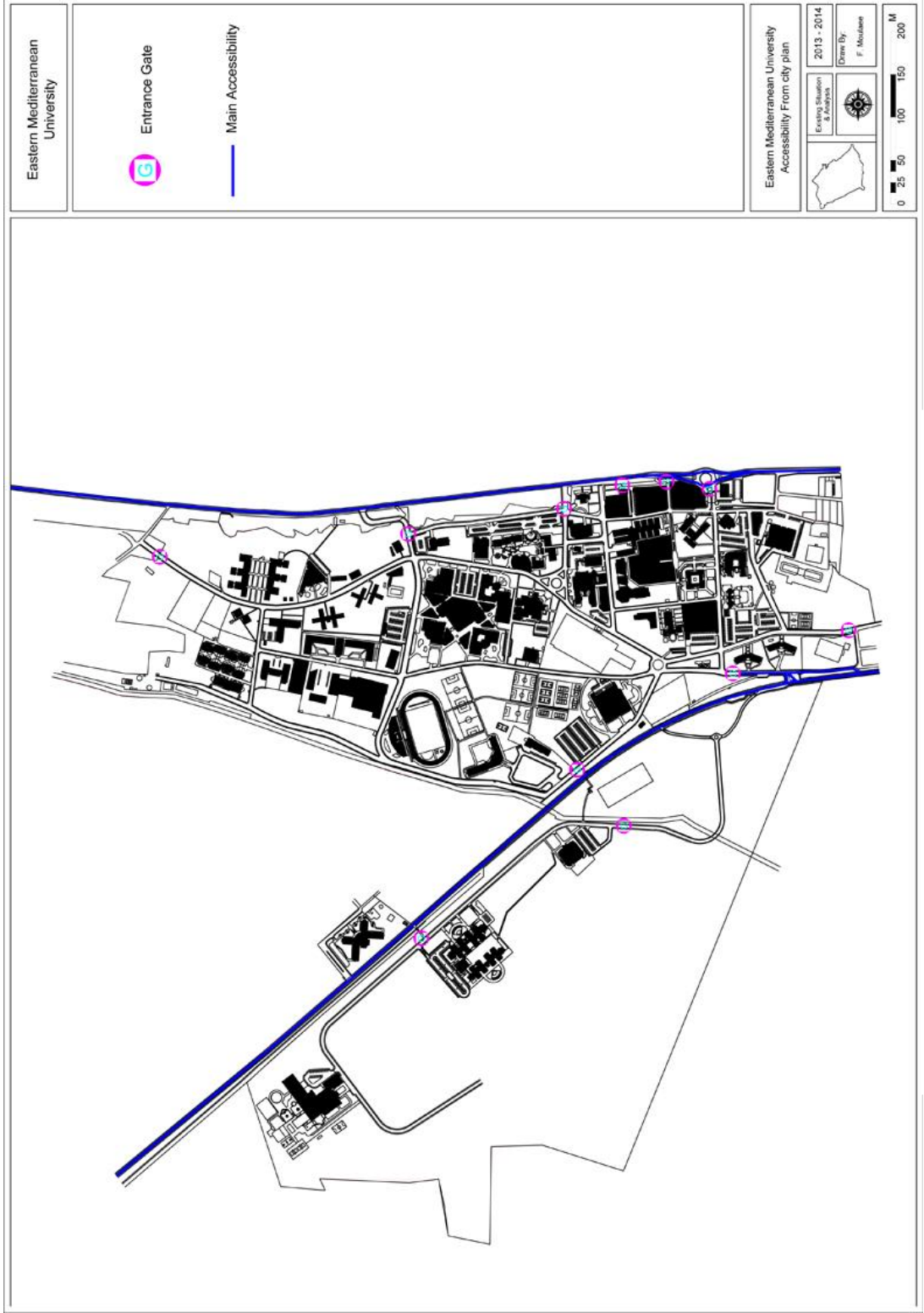
Figure 5.2: Location of Eastern Mediterranean University in the Famagusta, North Cyprus (Google map)

Famagusta is a coastal city in the east of North Cyprus, and EMU is an international university with 16089 students including 13201 international and 2888 native students from 85 different countries, located in Famagusta.

Also Eastern Mediterranean University has 49 faculties and departments including: Faculty of Business and Economics, Faculty of Arts and Science, Faculty of Architecture, Faculty of Communication, Faculty of Law, Faculty of Education, Faculty of Health Science, Faculty of Pharmacy, Faculty of Engineering, Faculty of Medicine and Faculty of Tourism. Also there are two schools containing IT School and School of Foreign Languages in EMU campus, besides 10 dormitories to settle the students inside the campus. (Strategic plan of EMU, 2012)

The Eastern Mediterranean University campus is placed between two main roads of Famagusta city, one of them Salamis road and another one Lefkosa road. EMU campus is divided into two parts by Lefkosa road; the main part of EMU campus is

the Northern part, by considering the density of faculties, dormitories, other buildings and public open spaces in it, while the southern part has lower density of buildings but more vacant land that leads to have good opportunity for development in future. This study focuses on the northern part of EMU campus, as the main section of the campus. (map5.1)



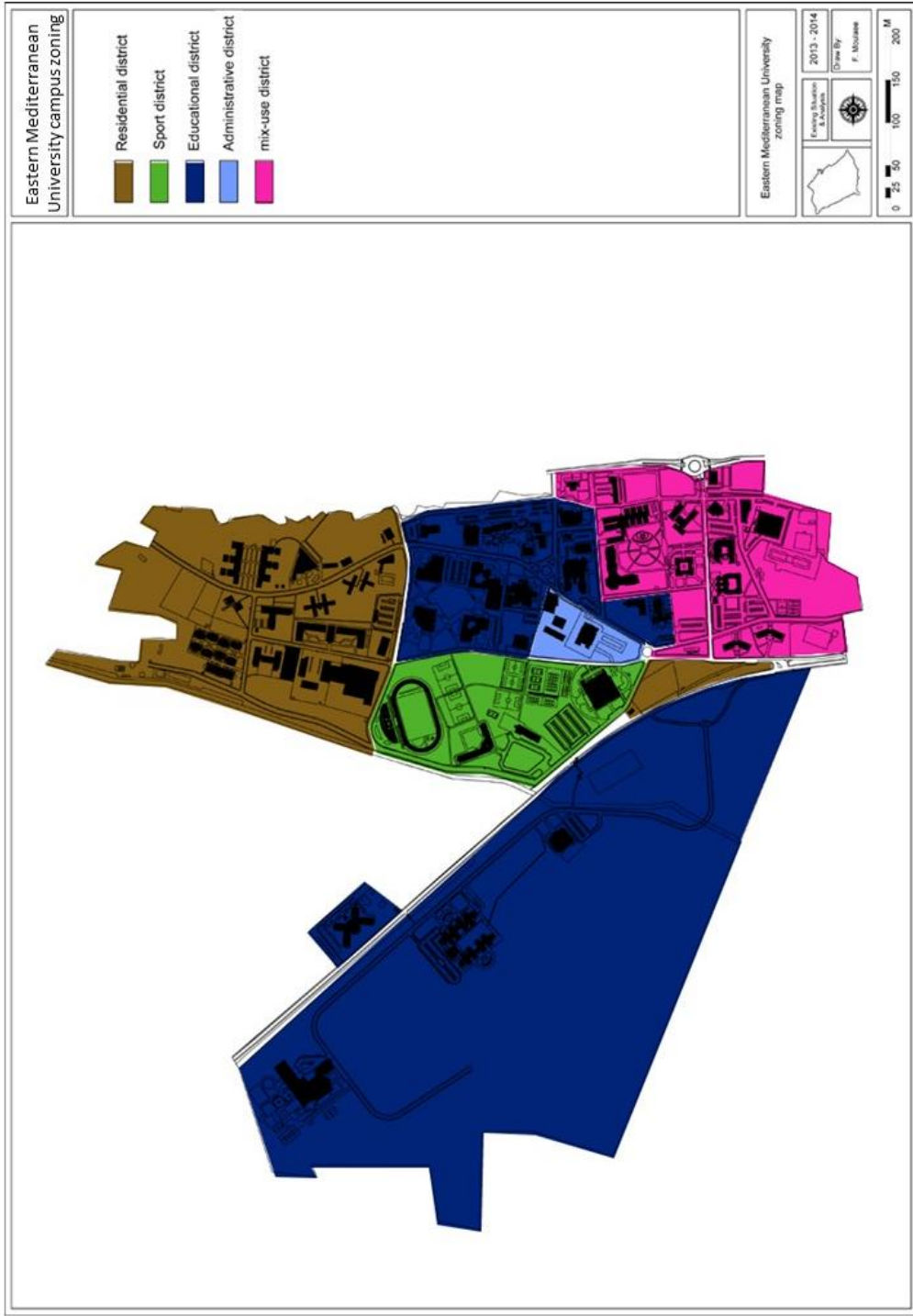
Map 5.1: The map of EMU campus

## **5.3 Investigation of public open spaces on Eastern Mediterranean University campus, in terms of variety**

### **5.3.1 On-Site Observation**

According to the dispersion of the buildings in the campus and considering their functions, the northern part which is the main part includes five zones. (Map 5.2)

These five zones include Educational districts, Residential districts, Sport districts, Administrative districts and Mixed-use districts that contain Administrative buildings, Educational buildings, Dormitory buildings and infrastructure facilities. The location of different districts in northern part of EMU campus has significant role in legibility of this part.



Map 5.2: EMU campus zoning map

According to above definition and site observation of EMU campus, there are many public open spaces in EMU campus environment that are located in different areas such as: dormitories districts, faculties' area, around administrative buildings and in/around public areas. In this regard, four kind of public open spaces, as categorized in figure 5.3, exist in EMU campus.

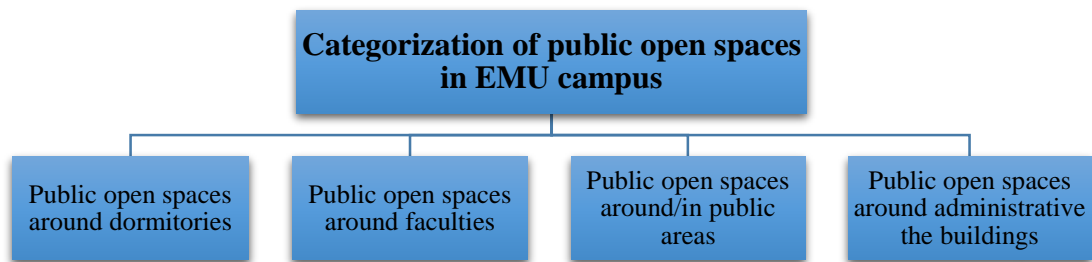


Figure 5.3: EMU campus public open spaces classification

#### **Public open spaces around dormitories:**

As has been stated in pervious part, one of the categories of public open spaces in EMU campus is the dormitory districts. These open spaces which are placed around dormitories contain green areas with some furniture, lighting, trash bin, and other different urban elements for social activities. (Figure 5.4) (Figure 5.5)



Figure 5.4: Districts of dormitories



Figure 5.5: Public open spaces around dormitories

**Public open spaces around faculties:**

Another classification of public open spaces in EMU campus environment are the open spaces located around faculties. Students use these spaces for outdoor studying, sitting, eating, talking, etc. (Figure 5.6) (Figure 5.7)



Figure 5.6: District of faculties





Figure 5.7: District of faculties

### **Public open spaces around/in public areas**

As mentioned in this category, another class of public open spaces in EMU campus environments are the areas located in or around public areas like library districts, or mixed-use buildings districts. (Figure 5.8) (Figure 5.9)



Figure 5.8: Public open spaces in Atatürk square



Figure 5.9: Public open spaces around general library of EMU

**Public open spaces around administrative buildings:**

Some public open spaces of EMU campus are located around administrative buildings, with some benches and furniture, have used for students and other users during the official time. (Figure 5.10) (Figure 5.11)



Figure 5.10: Public open spaces around registration office



Figure 5.11: Public open spaces around accounting office

As mentioned in literature review, the students use public open spaces of their university campus for various goals such as meeting, resting, outdoor studying, dating and etc. between the classes or after that. Eastern Mediterranean University is not of an exception. The students enjoy the different kinds of public open spaces in EMU campus environment at different times.

This research investigates the role of variety in selected public open spaces which are located in educational, mixed-use and administrative zones.

## **5.4 User Survey**

### **5.4.1 Methodology**

The methodology of the case study analysis is based on both qualitative and quantitative survey. The information achieved for this survey, were collected through a structured questionnaire which examined selected open spaces on EMU campus. According to investigate of the effects of variety on quality of public open spaces of EMU campus, the map of selected public open spaces of the EMU campus were given to 100 of students randomly. The most and the least preferred public open space were selected to convey by close-ended questionnaire by students.

### **5.4.2 Samples**

The survey was conducted among public open spaces on EMU campus using a multistage sampling procedure. In this regard, two public open spaces have been selected among many public open spaces in specified district, by respondent idea which asked; which public open spaces do you mostly prefer to go. 100 students with different ages ranging from less than 19 to above 40 years old were selected randomly among 16089 of total number of students from Turkish Cypriot, Iranian, Nigerian, Turkish and other nationalities.

### **5.4.3 Measure**

To achieve accurate information and results, the type of questions of the questionnaire were based on close ended rating scale questions which are submitted to respondent as paper-and-pencil questionnaire.

## **5.5 Result of the Survey**

In this research, 100 students of EMU have been selected randomly for first part of questionnaire.

In the first part of this survey the map of selected public open spaces of EMU has been given to students, and asked them to specify which open space they prefer to use more than others. (Map 5.3)

The results obtained from 100 students are shown by the graph below. According to the answers of the main question, it can be recognized that the most preferred public open space of EMU campus is the Atatürk square. (Figure 5.11)

The results illustrate that Atatürk square with 17% is the most preferred public open space of EMU campus, while the public open space that has been located between the four Engineering Departments with just 1% is the least preferred public open space of EMU campus. (Figure 5.12)

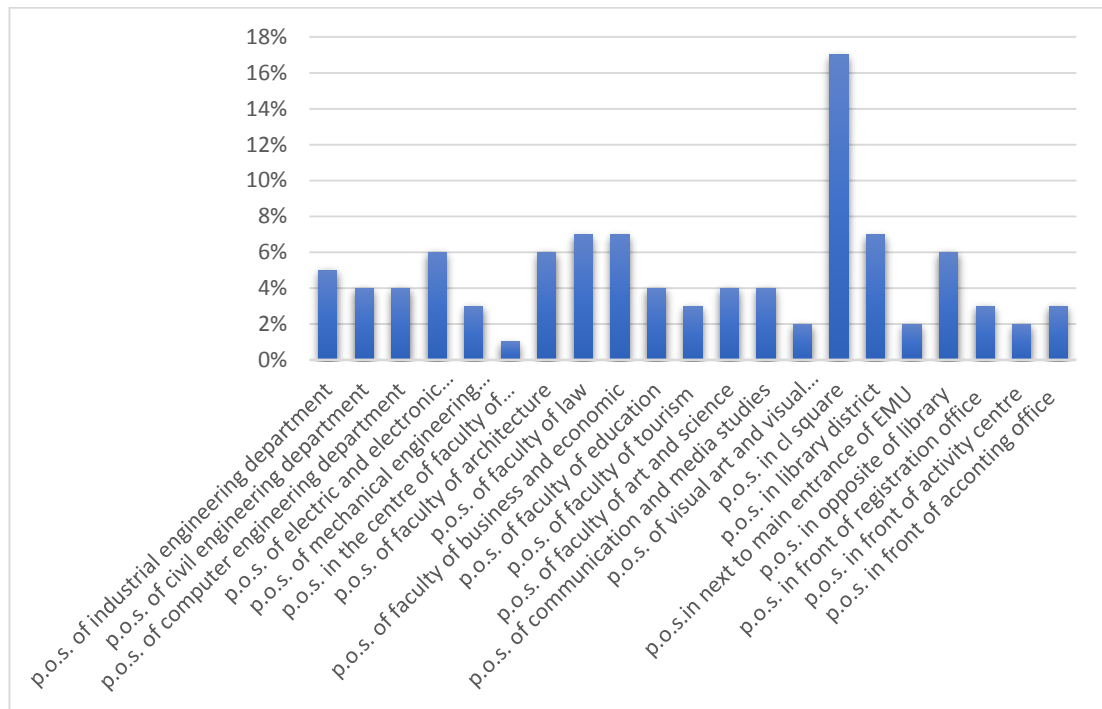


Figure 5.12: The results of students' evaluation of selective public open space of EMU campus



Map 5.3: Map of selected public open spaces in EMU campus

### **The list of selected public open spaces of EMU campus**

1. Public open space in the district of Industrial Engineering Department
2. Public open space in the district of Civil Engineering Department
3. Public open space in the district of Computer Engineering Department
4. Public open space in the district of Electric and Electronic Engineering Department
5. Public open space in the district of Mechanical Engineering Department
6. Public open spaces in the centre of Faculty of Engineering
7. Public open space in the district of Faculty of Architecture
8. Public open spaces in the district of Faculty of Law
9. Public open space in the district of Faculty of Business and Economic
10. Public open space in the district of Faculty of Education
11. Public open space in the district of Faculty of Tourism
12. Public open space in the district of Faculty of Art and Science
13. Public open space in the district of Communication and Media Studies
14. Public open space in the district of Department of Visual art and Visual Communication Design
15. Public open spaces in the Atatürk square
16. Public open spaces in the General Library district
17. Public open spaces next to the main entrance of EMU
18. Public open space located opposite of the Library
19. Public open space located in front of the Registration Office
20. Public open space located in front of the Activity Centre
21. Public open space located in front of the Accounting Office

In the next step of this research, the most preferred public open space and also the least preferred public open space of EMU campus will be evaluated by the factor of variety, as a key factor of responsive public open spaces.

**A research on the effect of variety, as a key to responsive environments, on Atatürk square**

Atatürk square which has been selected by most of the students, as the most preferred public open space, is located in mixed-use district of Eastern Mediterranean University, surrounded by different buildings such as the general library of EMU, CL building, department of Mechanical Engineering and school of Computing and Technology. (Map 5.4)





Map 5.4: Map of Atatürk square in EMU campus

### **Variety of users in Atatürk square**

As mentioned in chapter 2, various users bring opportunity to public open spaces through improving the ability of social life. In this regard, the variety of users in Atatürk square, has been illustrated in table 5.1.

Although the most users of Atatürk square are students, but families, workers, university staff, couples, and even athletes are using Atatürk square as well. Students' parents have come for special events, also some families have been using this area for different activities like walking, walking the dogs and etc. Some of the workers and business men have used this area to make appointment and work meetings. (Table 5.1) (Figure 5.13)

Table 5.1: Atatürk square variety of users

<b>Variety of users</b>	<b>Very low</b>	<b>Low</b>	<b>Normal</b>	<b>High</b>	<b>Very high</b>
<b>Families</b>	52 %	31 %	15 %	2 %	0 %
<b>Workers</b>	17 %	58 %	23 %	3 %	0 %
<b>Students</b>	0 %	0 %	1 %	3%	96 %
<b>University Staff</b>	13 %	21 %	62 %	4 %	0 %

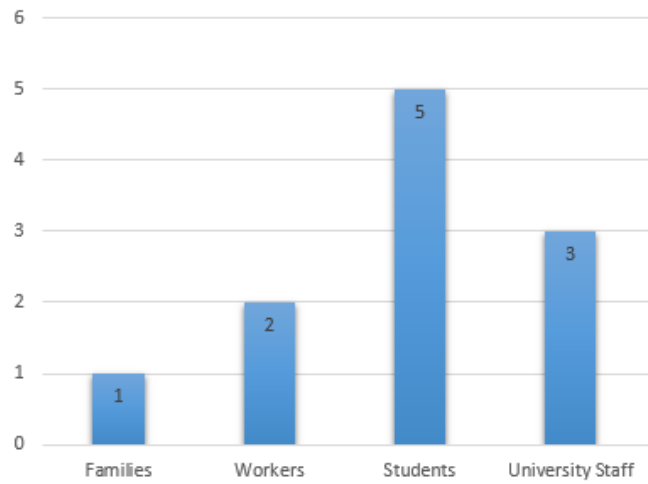


Figure 5.13: Atatürk square variety of users

**Variety of uses:**

Students spend their time by doing different activities in/around the Atatürk square. Different uses and activities attract and invite the students to this space as well as various buildings with various activities located around the Atatürk square. (Figure 5.20) (Map 5.5) (Table 5.2)

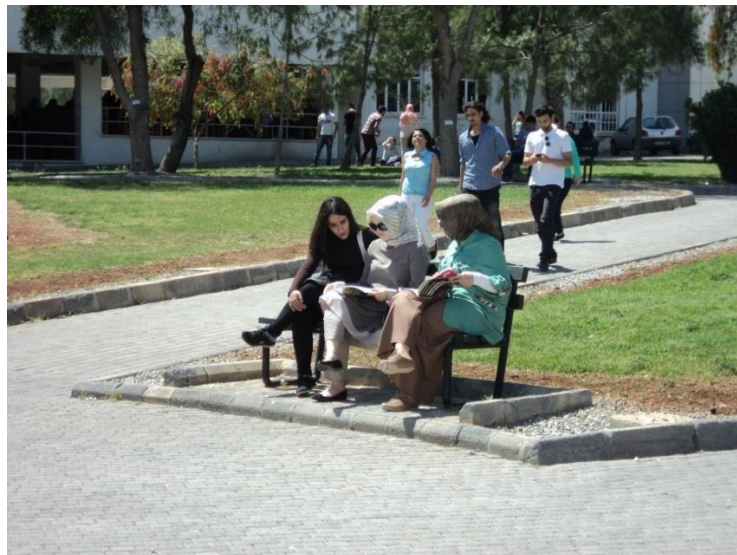


Figure 5.14: Various uses and activities take place in Atatürk square



Figure 5.15: Social activities in Atatürk square

One of the main important buildings located here, is the Central Lecture hall building, including many class rooms, main lecture hall and some offices. The students in different levels and different degrees in bachelor, master and also PHD have been using this building. Two semi open spaces underside the CL building play important role as a strength point of this public open space. These two semi open spaces which have some shopping, cafés and restaurants have been used by students, between the classes or in their free time. The CL café, Deniz Plaza shop, Turkcell centre services and café Gloria Jeans are located in one of those semi open spaces; another semi open space has two big cafés and restaurants which are used by many students. In these two semi open spaces underside the CL building, students make appointments together for eating, sitting together, playing game, dating, etc. (Figure 5.16) (figure 5.17)



Figure 5.16: Cafes and restaurants located in semi open space on the ground floor of CL building



Figure 5.17: Cafes, restaurants and shops located in semi open space on the ground floor of CL building

In another corner of Atatürk square, as a public service building, the general library of EMU is located which also affects the vitality of Atatürk square. Students from different departments choose library for individual or group study, therefore students prefer to go to public open spaces close to the library to have a short break. (Figure 5.18) (Figure 5.19) (Figure 5.20)



Figure 5.18: The general library of EMU, one corner of Atatürk square



Figure 5.19: Group outdoor study in Atatürk square

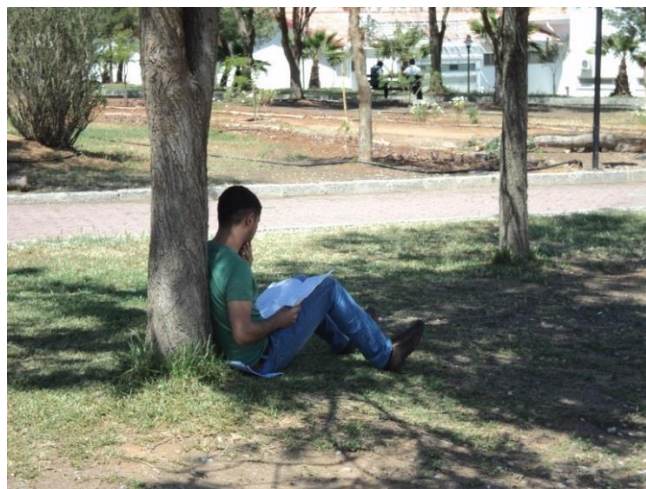


Figure 5.20: Individual outdoor study in Atatürk square

Two departments exist in another part of the Atatürk square, the department of Mechanical Engineering and the School of Computing and Technology. Although these two departments have relation and effects on Atatürk square, but since their main entrance are located in another side, the effect of these two department are not as much as the general library and Atatürk building.

Taking a look at the night activities of Atatürk square, since after 7:00 pm, all cafes, restaurants and shops in Atatürk square are closed, also the official time of EMU is finished, this area becomes very silent and quiet, especially in comparison with its daily activities. In some situations, special events have taken place in Atatürk square such as: welcoming party for new students, concert and etc.

When it was asked from the students that which reason bring you here, some male respondents answered that we come here for girl watching.

Existence of mosque in another corner of Atatürk square leads to religious activities in this area. Since some of the students of emu are Muslims, they pray every day in this mosque. They also have special pray on Fridays, which after that they talk about political, social, religious and etc. problems of all around the world.

According to some observation, some demonstrates in line with protest which have been coordinated by radical students and general people, have been started from the Atatürk square as a starting point.

Table 5.2: Atatürk square variety of uses

Variety of uses	Very low	Low	Normal	High	Very high
<b>Official</b>	85 %	10 %	3%	1%	1%
<b>Educational</b>	0 %	0 %	3 %	89 %	8 %
<b>Public service</b>	2 %	6 %	82 %	8 %	2 %
<b>Shopping</b>	0 %	0 %	3 %	91 %	6 %
<b>Special events</b>	1 %	4 %	6%	79 %	10 %
<b>Exhibitions</b>	68 %	25 %	7 %	0%	0 %
<b>Walking</b>	0 %	1 %	5 %	18 %	76 %
<b>Sitting</b>	0 %	0 %	2 %	15 %	93 %
<b>Eating</b>	0 %	0 %	13 %	84 %	3 %
<b>Girl watching</b>	9 %	13 %	53 %	16 %	8 %
<b>Religious Activity</b>	8 %	11 %	60 %	12 %	9
<b>Political Activity</b>	2 %	3 %	10 %	78 %	7 %
<b>Night Activity</b>	7 %	85 %	4 %	3 %	1 %
<b>Outdoor study</b>	2 %	1 %	5 %	85 %	7 %

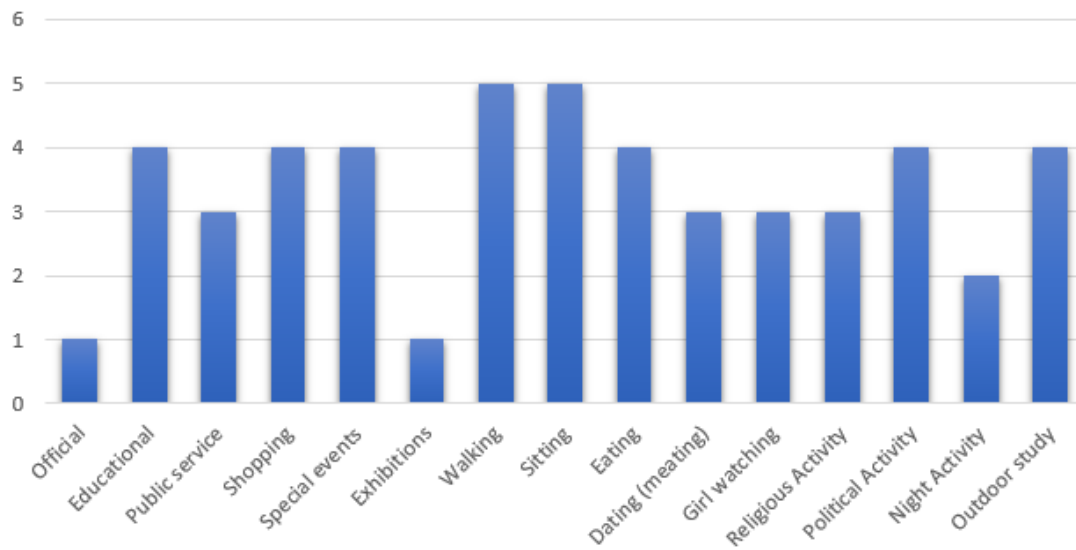


Figure 5.21: Atatürk square variety of uses



### **Variety of forms**

As mentioned in chapter 2 about variety of forms, legibility and accessibility in centre and around of the open spaces have had effect on its success.

The Atatürk square that is located in mixed-use district of EMU campus is a good connection between different zones of EMU campus.

As shown in Map 5.5 users can have access to this area from different pedestrian paths. According to the location of the Atatürk square which is close to two bus stations of EMU, public transportation access is also affordable for users. There isn't any car access to this public open space, except one which is as used for especial events.

The buildings located around the Atatürk square have different heights. The CL building is directly connected to the Atatürk square but the General library and other two departments' entrances are located on the other side.

There aren't various colors in facade of buildings located around the Atatürk square. Although these public open space have a wide landscape, but many pedestrian paths between green areas give opportunity to users to have an easy access and turn around the space.

The well designed landscape in the Atatürk square open space encourage the students to have outdoor studies, if the weather permits them. Even students sit in the grass and study both individually or as a group. Existence of the trees in the Atatürk square, not only prevents the air pollution but also provides shade for users. Likewise

trees, grass, flowers and also different natural elements have positive effects directly on the visual quality of this area.



Map 5.5: Accessibility map of Atatürk square in EMU campus

The landscape design of the Atatürk square also improve the legibility of this area. In one side of the Atatürk square on the landscape, the logo of Eastern Mediterranean University, stand by “EMU”, has been marked in landscape with sand and grass in the middle, on the other side of the Atatürk square the sculpture of Ataturk is placed on a vertical metal element, which makes an image in users’ mind to remind the space. (Figure 5.22) (Figure 5.23)

The radial form of the landscape, with central point attract and invite people inside, and also gives them an opportunity to find their way easily.



Figure 5.22: The monumental art of Atatürk square

Table 5.3: Atatürk square's variety of form

Variety of form	Very low	Low	Normal	High	Very high
<b>Legibility</b>	1 %	3 %	6 %	82 %	8 %
<b>Harmony between Building</b>	21 %	59%	15 %	4 %	1 %
<b>Building Form</b>	7 %	31%	58 %	3 %	1 %
<b>Size &amp; Shape of P.O.S.</b>	1%	4%	18 %	68 %	9%
<b>Public transportation Accessibility</b>	2 %	3 %	6 %	85 %	4 %
<b>Vehicle Accessibility</b>	21 %	59%	12 %	6 %	4 %
<b>Pedestrian Accessibility</b>	0 %	1 %	3 %	12 %	84 %
<b>Bike Accessibility</b>	14 %	62%	10 %	2 %	2 %
<b>Disable Accessibility</b>	11 %	71%	13 %	5 %	0 %
<b>Landscaping Design</b>	4 %	14%	64 %	12 %	6 %
<b>Natural</b>	3 %	9 %	35 %	45 %	8 %
<b>Art (Fountain, sculpture, etc.)</b>	18 %	76%	5 %	1 %	0 %
<b>Furniture</b>	6 %	8 %	58 %	23 %	5 %
<b>Shading elements</b>	10 %	4 %	36 %	43 %	7 %

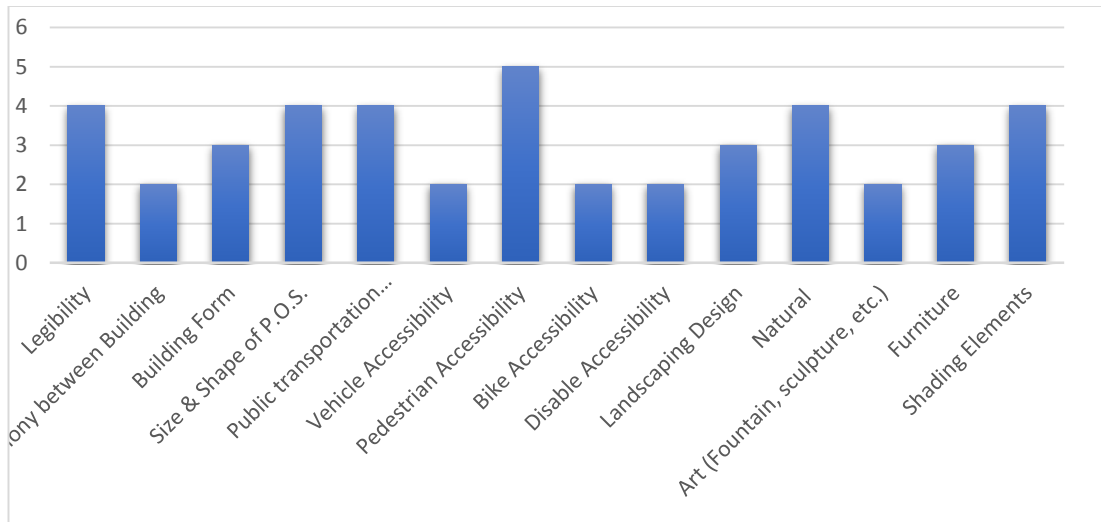


Figure 5.23: Atatürk square's variety of form

**Investigation the effect of variety, as a key to responsive environments, on public open space that is located between the four engineering departments**

As it can be seen in map 5.6 the public open space of the EMU campus that is located between the four Engineering Departments – Computer Engineering Department, Civil Engineering Department, Industrial Engineering Department and Electric and Electronic Engineering Department – is another part of this survey as a least preferred public open space which has a low level of variety of activities and uses.



Map 5.6: Map of P.O.S between the four Engineering Department in EMU campus

### Variety of users:

Although this public open space of the EMU campus, has been located between the four Engineering Departments with a wide range of students, workers and university staff, we cannot see many users in this area. Even couples rarely use this area. (Table 5.4) (Figure 5.24)

Table 5.4: Variety of users in public open spaces between the four Engineering Departments

Variety of users	Very low	Low	Normal	High	Very high
<b>Families</b>	99 %	1 %	0 %	0 %	0 %
<b>Workers</b>	99 %	1 %	0 %	0 %	0 %
<b>Students</b>	3 %	96 %	1 %	0 %	0 %
<b>University Staff</b>	99 %	1 %	0 %	0 %	0 %

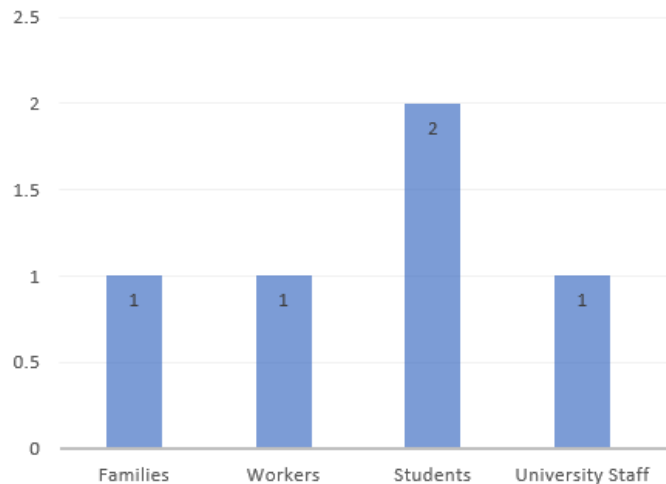


Figure 5.24: Variety of users in public open spaces between the four Engineering Departments

### Variety of uses

The four educational buildings located within the boundaries of this public open spaces: are the Computer Engineering Department, Industrial Engineering Department, Civil Engineering Department and the Electric and Electronic Engineering Department. In the ground floor of each department, there is one café



which has been selected by students for eating, sitting, playing, meeting and study together.

Although each department has special events and ceremonies, but the events haven't taken place in this public open space.

However, well designed landscaping and also comfortable pavement has been shown in this public open space, but students have not be shown here for walking. Student have used the paths only for passing away. Also, according to table 5.5 even the other activities such as sitting, eating, dating, girl watching, etc. have rarely been done here.

Table 5.5: Variety of uses in public open spaces between the four Engineering Departments

Variety of uses	Very low	Low	Normal	High	Very high
<b>Official</b>	100 %	0 %	0 %	0 %	0 %
<b>Educational</b>	0 %	0 %	1 %	4 %	95 %
<b>Public service</b>	98 %	2 %	0 %	0 %	0 %
<b>Shopping</b>	96 %	3 %	1 %	0 %	0 %
<b>Special events</b>	100 %	0 %	0 %	0 %	0 %
<b>Exhibitions</b>	98 %	2 %	0 %	0 %	0 %
<b>Walking</b>	1 %	2 %	4 %	87 %	5 %
<b>Sitting</b>	2 %	95 %	3 %	0 %	0 %
<b>Eating</b>	100 %	0 %	0 %	0 %	0 %
<b>Dating (meeting)</b>	7 %	89 %	3 %	1 %	0 %
<b>Girl watching</b>	96 %	3 %	1 %	0 %	0 %
<b>Religious Activity</b>	100 %	0 %	0 %	0 %	0 %
<b>Political Activity</b>	98 %	2 %	0 %	0 %	0 %
<b>Night Activity</b>	97 %	2 %	1 %	0 %	0 %
<b>Outdoor study</b>	19 %	68 %	10 %	2 %	1 %

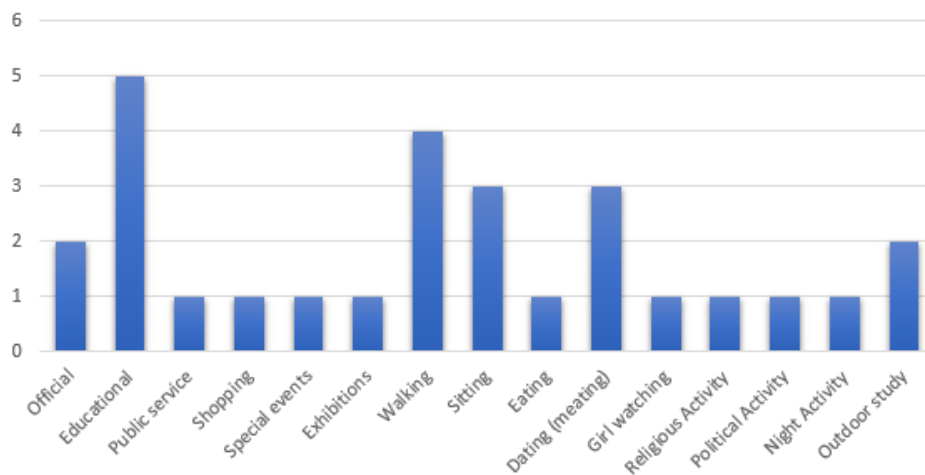


Figure 5.25: Variety of users in public open spaces between the Engineering Departments

### Variety of forms

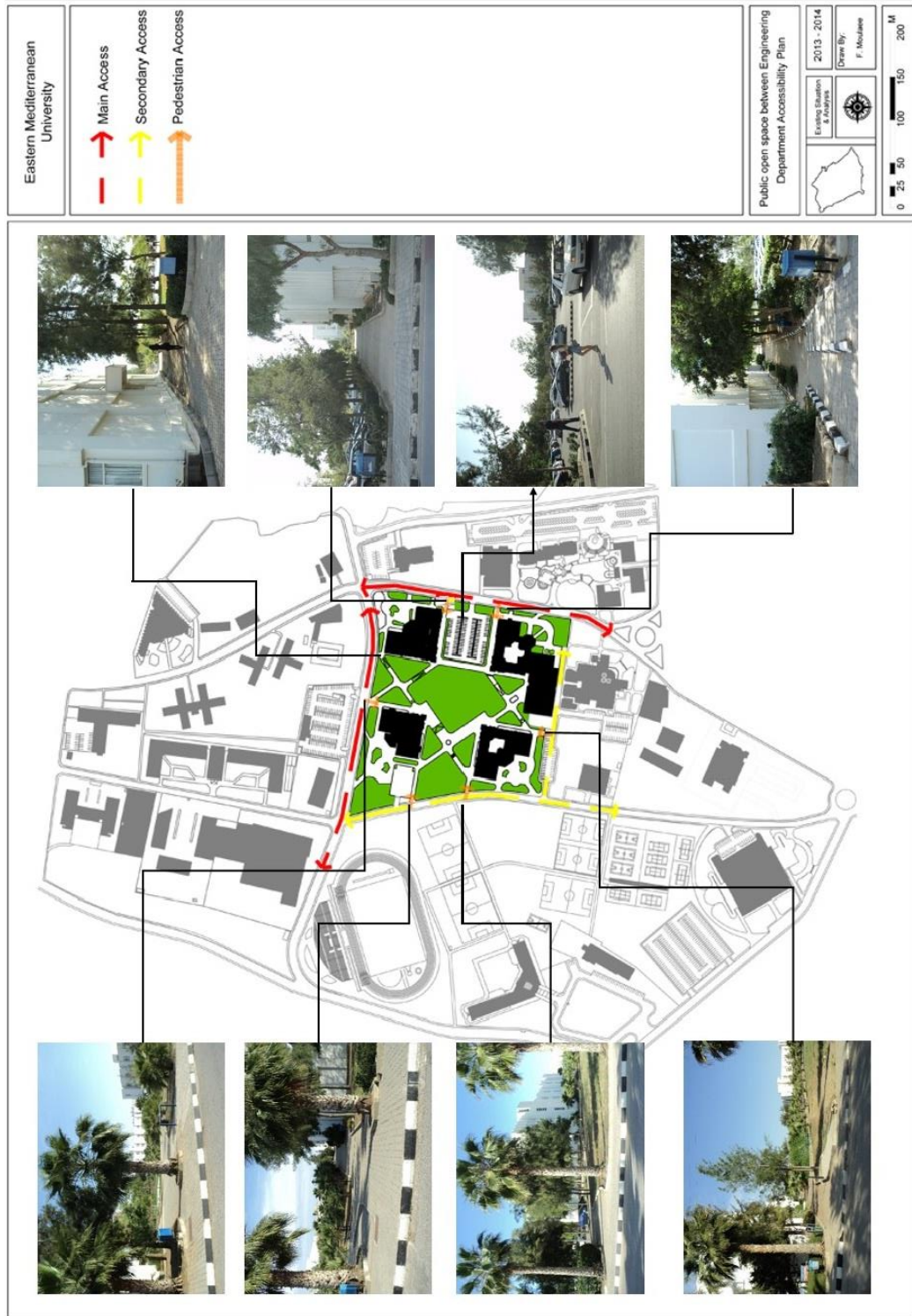
The public open space that is located between the Engineering Departments, situated in the end of the educational zone in EMU campus, is close to sport and residential

zones and has a clear pedestrian accessibility from different sides. (Figure 5.26)  
(Map 5.7)



Figure 5.26: Landscape design in public open spaces between the four Engineering Department

Also, one of the bus stations of public transportation system of EMU is located in front of the Civil Engineering Department building, which gives users good access to this area. The car park area located in one side of this public open space, between Civil Engineering and Computer Engineering Departments, give opportunity to users to have easy access to this public open space.



Map 5.7: Accessibility map of public open space between the Engineering Department in EMU campus

Location of four buildings in the four corners of this public open space, and also the space between buildings let users to have an easy access. As mentioned above each department has one café in its underside, but because the cafes are located in the outer edge of this space, users do not come to the centre of this area.

Although harmony between buildings by same height and shape in this open space exist, but lack of variety of forms and shapes of the buildings in this open space decreases the attraction of the open space. (Figure 5.27)



Figure 5.27: Landscape design in public open spaces between the four Engineering Department

The landscape of this public open space is well designed, but there aren't various types of designs and materials for pavements and green areas; also lack of art elements like sculpture, fountain etc. are obviously clear. (Figure 5.28)

Table 5.6: Variety of form in public open spaces between the four Engineering Departments

Variety of form	Very low	Low	Normal	High	Very high
<b>Legibility</b>	1 %s	2 %	7 %	79 %	11 %
<b>Harmony between Building</b>	0 %	1 %	4 %	13 %	82 %
<b>Building Form</b>	1 %	3 %	12 %	69 %	15 %
<b>Size &amp; Shape of P.O.S.</b>	3 %	4 %	83 %	6 %	4 %
<b>Public transportation Accessibility</b>	2 %	5 %	8 %	8 %	79 %
<b>Vehicle Accessibility</b>	0 %	0 %	1 %	5 %	94 %
<b>Pedestrian Accessibility</b>	0 %	1 %	0 %	12 %	87 %
<b>Bike Accessibility</b>	3 %	5 %	10 %	64 %	18 %
<b>Disable Accessibility</b>	2 %	6 %	76 %	14 %	2 %
<b>Landscaping Design</b>	6 %	7 %	71 %	9 %	7 %
<b>Natural</b>	1 %	3 %	6 %	83 %	7 %
<b>Art (Fountain, sculpture, etc.)</b>	80 %	13 %	6 %	0 %	1 %
<b>Furniture</b>	10 %	85 %	5 %	0 %	0 %
<b>Shading Elements</b>	4 %	63 %	28 %	3 %	2 %

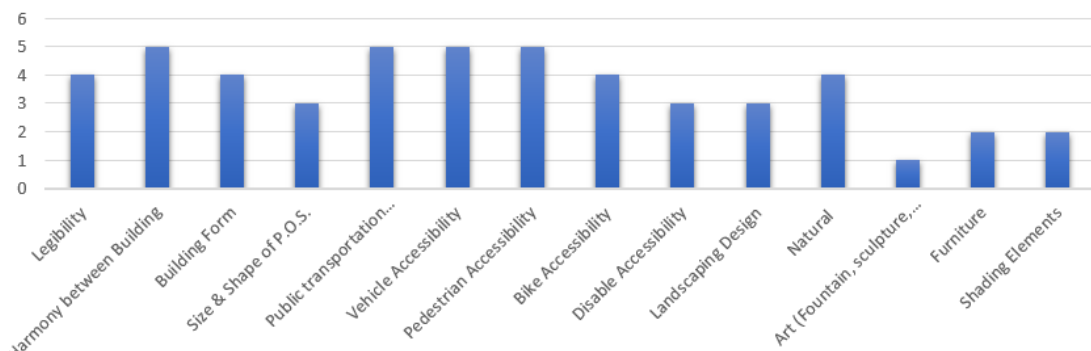


Figure 5.28: Variety of form in public open spaces between the four Engineering Departments



Figure 5.29: Landscape design in public open spaces between the four Engineering Departments

## 5.6 Interpretation of the Data Collection

According to the explanation in chapter 2, about variety, as Bentley et al (1985) mentioned in their book, *Responsive Environments*, variety is a quality key in designing efficient public spaces, likewise a place with variety of uses and activities with various kinds of buildings and forms can appeal and support various people in various times with various reasons. So the three dimensions of variety –variety of forms, uses and users – are inseparable.

The Atatürk square, between different buildings with different functions, has a high level of vitality in EMU campus environment.

The Atatürk square, as a connection between different buildings and open spaces, is the centre point of attention of the EMU campus. Various users ranging from students to workers and university staff from different levels of education and different cultures have used this area for various reasons.

One of the most important reasons in attracting more users is existence of users, because of the fact that most of the people prefer to go to the areas with wide range of vitality.

The most important reason of successfulness of Atatürk square is not only the variety of users, but also the variety of activities. Existence of different shops underside of CL building such as Deniz Plaza as a book shop and copy centre in the EMU campus, and also the TURKCELL service for responding people about communication service, in one hand, and existence of an ATM and one café for eating and drinking with outdoor spaces for sitting, meeting and studying together on the other hand and also the café Gloria Jeans as a café shop here, invites a high number of people to this place and affords them with various range of their needs. Also two big cafes exist in another side of CL Building underside. The existence of these two semi open spaces underside of CL building causes an improvement in the vitality of the Atatürk square. One of the main important effective factors is being the shopping area, and containing cafes with wide number of unfixed benches. Two pedestrian accesses of Atatürk square are located in these two semi-open spaces, which let people pass away and lead to vitality during the day, but after 7:00 pm – closing time of these shops – this part of Atatürk square is silent.

The general library of EMU is located in another side of the Atatürk square. During the working hours of the library -between 9:30 am to 10:30 pm- the area around the library that has a direct connection to Atatürk square have many users. Various students are using the library for borrowing books and individual or group study during the working hours of library. The students use the public open spaces around



the library to take a breath between studies. Since library is located in one corner of the Atatürk square, most of the students prefer to go to the public open spaces of Atatürk square for resting, eating, drinking, sitting etc. Existence of one café in proximity of library that is related to Atatürk square, also effects the vitality of this area.

The small mosque (praying room) is located in another side of Atatürk square, which is covered by educational buildings on the backside. In the winter the prayers pray inside, but in summer they pray outside, under the shade elements. The existence of the mosque (praying room) here as a different activity in campus open space, has given variety of uses and users to the Atatürk square. Various Muslim students and staff come here averagely 4 times a day for praying. They pray a special pray on Fridays which makes it more crowded. After praying, one person talks about different topics such as politics, religion, economics etc. of all around the world.

Since users can attract other users, various kinds of activities invite various people, and various people in the public open space lead to vitality of the space and attract other users.

The sculpture of Ataturk which is placed on a metal element and the existence of a water element which is located in this side can help people for legibility of the side. Another public open space that has been discussed in this study is the space located between the four engineering departments – Civil, Electronic and Electric, Computer and Industrial – with less level of variety of activities, users and uses. Since these three factors of variety are like chain, each of them is directly related to the other

one. The lack of variety of activities and uses in the public open space located between the four Engineering Departments has resulted less preference of this space by users which leads to a low vitality and as we know a public open space without vitality can't attract users.

One of the main important issues that affect the quality of this public open space is the formation of landscape. Although the car parking, that is located between the Civil engineering and the Computer Engineering Departments, gives opportunity to users to see the space from outside and attract them to come inside, but the design of landscape behind the car parking with the wide green area without any division, path or pedestrian pavement, provides less walkability and legibility. In addition, since most of the users in campus open spaces are students, and students usually use the public open spaces for taking a rest, eating or drinking, sitting together, etc., hence the students of these four departments prefer to go to the canteen of their own department to take a short rest, and also the other students from other departments select the public open space close to their own department. Lack of variety of suitable furniture including fixed and unfixed benches, lighting, shade elements etc. are other issues that students have not been attracted to come to this area.

### **5.7 Problems and opportunities**

In order to investigate the role of variety on the successful public open spaces in Eastern Mediterranean University campus, 100 random respondents were selected to evaluate the public open spaces considering the three factors of variety; variety of forms, uses and users. This investigation resulted that among all the public open spaces in the EMU campus, the Atatürk square has the highest rate and the public

open space located between the four Engineering Departments has the lowest rate among others.

Existence of different activities in the same area in Atatürk square leads to an attraction of a large number of users. Two semi open spaces, which are located underside of CL building, with some cafes, restaurants and shops invites many students and various users to this area. Also existence of the general library of EMU in one corner of Atatürk square is a strength point of this public open space, which brings large number of students from all over the campus environment here. In another language, general library of EMU plays an effective role in the improvement of the vitality of the Atatürk square. The form of landscape, with various pedestrian paths between various green spaces gives opportunity to users to walk on legible area, and have feasible access to other parts of both inner and outer space in the Atatürk square. The monumental sculpture of Ataturk together with another art element in one side of the Atatürk square in one hand and the logo of EMU, which is designed in the landscape by stone and grass, in another hand, not only effect on the identity of the space and make memorable spaces in the users minds, but also let users to have more legible space. The well - designed landscape in the Atatürk square with various kinds of natural elements like trees, flowers, grass etc. make an enjoyable space for students to have an ideal outdoor individual or group study. Although this open space has large number of users for outdoor studies and activities, but lack of variety of shade elements forces them to use side areas more than centre.

Although during the day, the Atatürk square has high level of activities, but after working hours when the lectures are finished and the shops, cafes, restaurants, and the library are closed, the Atatürk square has a very low level of night activities.

Another public open space in the EMU campus located between four engineering departments, has an appropriate location not only between these four departments but also in the campus environment. This public open space with proximity to the different zones of campus environment is a good connection between educational, residential and sport zones. Existence of four departments around of this public open space makes here as a defined enclosure space.

Although the wide landscaping of this public open space between the four Engineering Departments is one of the opportunities of this space, but having an unorganized landscape with inappropriate division is one of the main reasons that make here illegible. Except four educational buildings around this area, there isn't any other function here.

## **5.8 Conclusion of chapter**

According to the research of the key factor of variety on public open spaces of EMU campus, two public open spaces of EMU have been selected. The results which are collected from user surveys' evaluation and site observation, also considering the three factors of variety –variety of uses, variety of users and variety of forms – show that the Atatürk square with wide range of functions such as different shops, educational buildings, public services, and other activities like sitting, meeting, dating, etc. with variety of forms and shapes attracts various range of users such as

students, workers, university staff and etc. which is known as one of the successful public open spaces in EMU.

While another public open space that has been investigated in this research, which is located between the four Engineering Departments, with lack of variety of uses and activities, couldn't attract and invite various users inside. Also lack of various organized landscaping and formation of this space makes this space illegible.

## Chapter 6

### CONCLUSION AND RECOMMENDATION

The investigation of variety on public open spaces illustrates that variety plays a main role as a quality factor of sufficient public open spaces. In this regard, in 1985 Bentley et al mentioned that variety is a quality factor in designing responsive environments likewise a place with variety of uses and activities with various kinds of buildings and forms can appeal and support various people in various times with various reasons.

In this regard, according to the main problems of this research about lack of variety of uses and activities especially after work hours in the Eastern Mediterranean University campus public open spaces, the map of selected public open spaces has been given to the students of EMU to select the most preferred public open space.

In a correlation between these two main parts of this study, variety and public open spaces, and also considering about importance of campus open spaces, the results show that Atatürk square is the most preferred of the students, while the public open space that is located between the four Engineering Departments is the least preferred of the students.

Also, in based on main question of this study about how variety can effects on quality of public open spaces. Also according to three main factors of variety

including: variety of uses, users and forms, these two public open spaces of EMU have been evaluated.

The results about site observation and user survey have shown that the variety of uses and activities around the Atatürk square caused to attract and invite the various users to this area. Also variety of forms caused to make legible space for users. In another part, the public open space that is located between the four Engineering Departments which has low level in variety of uses and activities with low level of variety of forms have not been attractive and affordable for students and other users.

First, these three factors of variety – variety of uses, variety of users and variety of forms – are like the three loops of one chain that they have been effected directly and indirectly to each other. (Figure 6.1)

The public open space with wide range of activities and uses can support different users with various needs, also public open spaces that have variety of forms and shapes can attract users to come and stay in it.

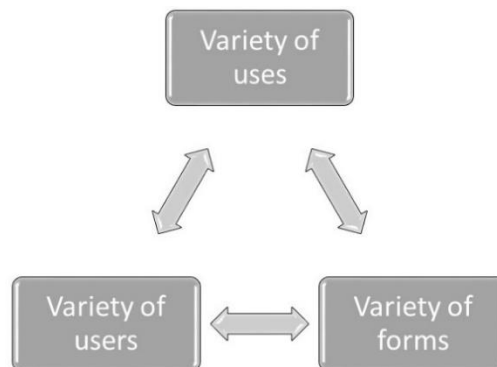


Figure 6.1: Correlation between variety's factors

Second, the variety of uses and the variety of forms not only have effected on attract and support the users but also make the public open space with wide range of vitality. Also variety of users in public open spaces encourage other users to come and enjoy the space and improve the social activities.

Third, the well-designed of landscaping with variety of forms and functions can improve the legibility of the space, and legibility give users to have opportunity to walk easy in the space and feeling comfortable to find different part of public open space.

According to observation, evaluation and investigation of Atatürk square and the public open space that is located between the four Engineering Departments, also through the problems and opportunities that have been obtained, this study purpose some recommendations to achieve the more ideal public open spaces:

**Recommendations through improving Atatürk square open space:**

- Improve shading elements (naturally or unnaturally)
- Increase the time working of shops, restaurants and cafes till 12:00 pm.
- Increase the number of benches ( fixed and unfixed)

**Recommendations through improving the public open space that is located between the four Engineering Departments:**

- Increase the outdoor activities by creating the shops, cafes and restaurants
- Change the design of landscape by dividing the large part to different small part
- Improve the natural elements
- Improve the shading elements ( naturally and unnaturally)



- Create the art elements
- Define the entrances
- Increase the number of benches ( fixed and infixed )
- Improve the inner legibility by organize the landscape
- Create the outdoor study
- Improve the lighting elements
- Improve the night activities

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## **APPENDICES**

## Appendix A: Questionnaire 1

**This questionnaire survey is conducted by Seyedeh Farnaz Moulaei candidate of M.S. in Urban Design program in the Department of Architecture, according to her Master Thesis under the supervision of Prof. Dr. Derya Oktay.**

---

**Age:**

Less than 19     20-24     25-29     30-34     35-39     40 and over

**Sex:**    Male     Female

**Nationality:** .....

Which faculty do you study in? .....

---

Attached map, which has been given to you, shows the selected public open spaces in EMU campus.

Would you please specify the public open space that almost you prefer going there? (select just one)

**The list of public open spaces of EMU campus:**

- 1. Public open space in district of industrial engineering department
- 2. Public open space in district of civil engineering department
- 3. Public open space in district of computer engineering department
- 4. Public open space in district of electric and electronic engineering department
- 5. Public open space in district of mechanical engineering department
- 6. Public open spaces in the centre of faculty of engineering
- 7. Public open space in district of faculty of architecture
- 8. Public open spaces in district of faculty of law
- 9. Public open space in district of faculty of business and economic
- 10. Public open space in district of faculty of education
- 11. Public open space in district of faculty of tourism

- 12. Public open space in district of faculty of art and science
- 13. Public open space in district of communication and media studies
- 14. Public open space in district of department of visual art and visual communication design
- 15. Public open spaces in cl square
- 16. Public open spaces in library district
- 17. Public open spaces in next to main entrance of EMU
- 18. Public open space located opposite of library
- 19. Public open space located in front of registration office
- 20. Public open space located in front of activity centre
- 21. Public open space located in front of accounting office



Campus Public Open Spaces Key Plan



Eastern Mediterranean  
& Analysis

2013 - 2014

Drawn By:  
P. Moussas



## Appendix B: questionnaire 2

- English sample:

### Questionnaire 2

This questionnaire survey is conducted by Seyedeh Farnaz Moulaei candidate of M.S. in Urban Design program in the Department of Architecture, according to her Master Thesis under the supervision of Prof. Dr. Derya Oktay.

---

Age:

Less than 19  20-24  25-29  30-34  35-39  40 and over

Sex: Male  Female

Nationality: .....

Which faculty do you study in? .....

---

How you can evaluate the variety users in Ataturk square, according to below table?

Variety of users	Very low	Low	Normal	High	Very high
Families					
Workers					
Students					
University Staff					

How you can evaluate the variety of uses in Ataturk square, according to below table?

Variety of uses	Very low	Low	Normal	High	Very high
Official					
Educational					
Public service					
Shopping					
Special events					
Exhibitions					
Walking					
Sitting					
Eating					
Dating (meeting)					
Girl watching					
Religious Activity					
Political Activity					
Night Activity					
Outdoor study					

How you can evaluate the variety of forms in Ataturk square, according to below table?

Variety of form	Very low	Low	Normal	High	Very high
Legibility					
Harmony between Building Building Form					
Size & Shape of P.O.S.					
Public transportation Accessibility					
Vehicle Accessibility					
Pedestrian Accessibility					
Bike Accessibility					
Disable Accessibility					
Landscaping Design					
Natural					
Art (Fountain, sculpture, etc.) Furniture					
Shading elements					

How you can evaluate the variety of users in the public open space that is located between the four Engineering Departments, according to below table?

<b>Variety of users</b>	Very low	Low	Normal	High	Very high
Families					
Workers					
Students					
University Staff					



How you can evaluate the variety of uses in the public open space that is located between the four Engineering Departments, according to below table?

<b>Variety of uses</b>	Very low	Low	Normal	High	Very high
Official					
Educational					
Public service					
Shopping					
Special events					
Exhibitions					
Walking					
Sitting					
Eating					
Dating (meeting)					
Girl watching					
Religious Activity					
Political Activity					
Night Activity					
Outdoor study					

How you can evaluate the variety of uses in the public open space that is located between the four Engineering Departments, according to below table?

Variety of form	Very low	Low	Normal	High	Very high
Legibility					
Harmony between Building Building Form					
Size & Shape of P.O.S.					
Public transportation Accessibility					
Vehicle Accessibility					
Pedestrian Accessibility					
Bike Accessibility					
Disable Accessibility					
Landscaping Design					
Natural					
Art (Fountain, sculpture, etc.) Furniture					
Shading elements					

- Turkish sample:

## 2. Anket

Bu anket Mimarlık Bölümü Kentsel Tasarım programında, Yüksek Lisans adayı Seyedeh Farnaz Moulaei tarafından Prof Dr Derya Oktay gözetimi altında Yüksek Lisans Tezine göre yürütülmüştür.

Yaş:

19'dan küçük  20-24  25-29  30-34  35-39  40 ve üzeri

Cinsiyet: Erkek  Kadın

Milliyet: .....

Eğitim aldığınız fakülte: .....

Aşağıdaki tabloya göre, CL meydanında kullanıcıların çeşitliğini nasıl değerlendirebilirsiniz?

Kullanıcıların Çeşitliği	Çok düşük	Düşük	Normal	Yüksek	Çok Yüksek
Aileler					
İşçiler					
Öğrenciler					
Üniversite Personel					

Aşağıdaki tabloya göre, CL meydanında kullanımların çeşitliğini nasıl değerlendirebilirsiniz?

Kullanımların Çeşitliğini	Çok düşük	Düşük	Normal	Yüksek	Çok Yüksek
Resmi					
Eğitimle İlgili					
Kamu Hizmeti					
Alışveriş					
Özel etkinlikler					
Sergiler					
Yürüyüş					
Oturma					
Yemek Yeme					
Görüşmek					
Kız İzlemek					
Dinsel Etkinlik					
Siyasi Faaliyet					
Gece Etkinliği					
Açık çalışma					

Aşağıdaki tabloya göre, CL meydanında formaların çeşitliğini nasıl değerlendirebilirsiniz?

Formaların Çeşitliğini	Çok düşük	Düşük	Normal	Yüksek	Çok Yüksek
Okunabilirlik					
Binalar arasındaki uyum					
Bina Formu					
Halka açık alanların Boyut ve Şekli					
Toplu taşıma Erişilebilirlik					
Araç Erişilebilirlik					
Yaya Erişilebilirlik					
Bisiklet Erişilebilirlik					
Engelli Erişilebilirlik					
Peyzaj Tasarım					
Doğal					
Sanat (Çeşme, heykel, vb)					
Mobilya					
Gölgeleme Elemanları					

Aşağıdaki tabloya göre, dört mühendislik bölümleri arasında yer alan kamusal açık alanda kullanıcıların çeşitliğini nasıl değerlendirebilirsiniz?

Kullanıcıların Çeşitliği	Çok düşük	Düşük	Normal	Yüksek	Çok Yüksek
Aileler					
İşçiler					
Öğrenciler					
Üniversite Personel					

Aşağıdaki tabloya göre, CL meydanında kullanımların çeşitliğini nasıl değerlendirebilirsiniz?

Kullanımların Çeşitliğini	Çok düşük	Düşük	Normal	Yüksek	Çok Yüksek
Resmi					
Eğitimle İlgili					
Kamu Hizmeti					
Alışveriş					
Özel etkinlikler					
Sergiler					
Yürüyüş					
Oturma					
Yemek Yeme					
Görüşmek					
Kız İzlemek					
Dinsel Etkinlik					
Siyasi Faaliyet					
Gece Etkinliği					
Açık çalışma					

Aşağıdaki tabloya göre, dört mühendislik bölümleri arasında yer alan kamusal açık alanda formaların çeşitliğini nasıl değerlendirebilirsiniz?

Formaların Çeşitliğini	Çok düşük	Düşük	Normal	Yüksek	Çok Yüksek
Okunabilirlik					
Binalar arasındaki uyum					
Bina Formu					
Halka açık alanların Boyut ve Şekli					
Toplu taşıma Erişilebilirlik					
Araç Erişilebilirlik					
Yaya Erişilebilirlik					
Bisiklet Erişilebilirlik					
Engelli Erişilebilirlik					
Peyzaj Tasarım					
Doğal					
Sanat (Çeşme, heykel, vb)					
Mobilya					
Gölgeleme Elemanları					



