

STUDENTS' PERCEPTION OF SAFETY IN THE PHYSICAL ENVIRONMENT
OF A UNIVERSITY CAMPUS: A CASE STUDY ON MIDDLE EAST
TECHNICAL UNIVERSITY

A THESIS SUBMITTED TO
THE GRADUATE SCHOOL OF NATURAL AND APPLIED SCIENCES
OF
MIDDLE EAST TECHNICAL UNIVERSITY

BY

NEGIN FROUGHISAEID

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS
FOR
THE DEGREE OF MASTER OF SCIENCE
IN
ARCHITECTURE

JANUARY 2018

Approval of the thesis:

**STUDENTS' PERCEPTION OF SAFETY IN THE PHYSICAL ENVIRONMENT
OF A UNIVERSITY CAMPUS: A CASE STUDY ON MIDDLE EAST
TECHNICAL UNIVERSITY**

submitted by **NEGIN FROUGHISAEID** in partial fulfillment of the requirements
for the degree of **Master of Science in Architecture Department, Middle East
Technical University** by,

Prof. Dr. Gülbil Dural Ünver _____
Dean, Graduate School of **Natural and Applied Sciences**

Prof. Dr. Fatma Cânâ Bilsel _____
Head of Department, **Architecture**

Prof. Dr. Fatma Cânâ Bilsel _____
Supervisor, **Architecture Department, METU**

Examining Committee Members:

Assoc. Prof. Dr. İnci Basa _____
Architecture Department, METU

Prof. Dr. Fatma Cânâ Bilsel _____
Architecture Department, METU

Prof. Dr. Anlı Ataöv _____
City and regional planning Department, METU

Assoc. Prof. Dr. Bahar Gedikli _____
City and regional planning Department, METU

Assist. Prof. Dr. Yasemin Afacan _____
Interior Architecture Department, Bilkent University

Date: _____



I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced all material and results that are not original to this work.

Name, Last Name: NEGIN FROUGHISAEID

Signature :

ABSTRACT

STUDENTS' PERCEPTION OF SAFETY IN THE PHYSICAL ENVIRONMENT OF A UNIVERSITY CAMPUS: A CASE STUDY ON MIDDLE EAST TECHNICAL UNIVERSITY

Froughisaeid, Negin
M.S., Department of Architecture
Supervisor : Prof. Dr. Fatma Cânâ Bilsel

January 2018, 75 pages

The significance of designing an environment which can provide a great amount of serenity is not ambiguous to an architect and urban designer. Perception of safety refers to the subjective experience and user's level of comfort. What a person perceives is what she/he sees as 'real' and it is this perception of reality that shapes her/his behavior. University campuses are one of the most crucial places in every community. Campuses hold the burden of flourishing capable people for the next generations and are of utmost importance in providing different features besides education, like safety, security, vitality, health, etc. The aim of this research is to find out which design elements influence the user's perception of safety in Middle East Technical University campus, and to what extent do these features affect such a perception. By conducting in-depth interviews with 25 undergraduate and graduate students aged between 20 to 30, who had the experience of living on campus during their studies, an adequate amount of information was collected. Participants were randomly selected from the set of international and native students that met the research criteria. Analysing the data demonstrates the effect of design problems on students' behavior and on their daily routine. In areas with issues such as poor lighting, distant from central areas, absence of other people, dense vegetation and navigation difficulties, students would feel less safe despite the fact that there are very few security issues in that areas according to the official reports.

Keywords: Perception of safety, Environmental psychology, Campus Design features



ÖZ

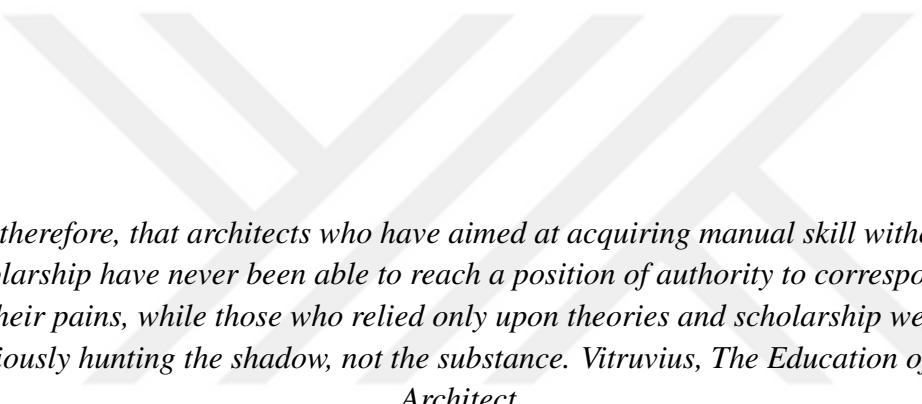
BİR ÜNİVERSİTE KAMPÜSÜNÜN FİZİKSEL ORTAMINDA GÜVENLİK ALGİSİ: ORTA DOĞU TEKNİK ÜNİVERSİTESİ ÖRNEĞİ

Froughisaeid, Negin
Yüksek Lisans, Mimarlık Bölümü
Tez Yöneticisi : Prof. Dr. Fatma Cânâ Bilsel

Ocak 2018 , 75 sayfa

Huzurun hakim olduğu bir ortam tasarlananın önemi bir mimar ve kentsel tasarımcı için muğlak değildir. Güvenlik algısı, öznel deneyim ve kullanıcının konfor seviyesi anlamına gelmektedir. Bir insanın algılsı gerçeği algılama biçimini belirler. Bu araştırmmanın amacı, kampüs ortamının fiziksel özelliklerinin öğrencilerin güvenlik algılarını nasıl etkilediğini ortaya çıkarmaktır. Çalışmada, kampüste yaşama tecrübesine sahip olan 20-30 yaşları arasındaki 25 lisans ve lisansüstü öğrencisiyle derinlemesine görüşmeler yaparak bilgi toplanmıştır. Araştırma kriterlerine uyan uluslararası ve yerli öğrenciler arasından katılımcılar rastgele seçilmiştir. ODTÜ yönetiminden 2009 ve 2017 yılları arasında taciz, hırsızlık ve hayvan saldırularıyla ilgili ilave veriler toplandı. Verilerin analizi, tasarım problemlerinin öğrencilerin algıları ve günlük rutinleri üzerindeki etkisini ortaya koymuştur. Zayıf aydınlatma, kampüs merkezinden uzak bölgeler, yoğun bitki örtüsü ve yürüme zorlukları gibi öğrencilerin, resmi raporlara göre bu alanlarda daha az güvenlik sorunu olmasına rağmen daha az güvende hissettiği ortaya çıkmıştır. Kampüsün belirli bölgelerinde insanların bulunmaması ve ortak kullanılan mekanların olmaması, öğrencilerin Orta Doğu Teknik Üniversitesi kamüsünde güvenlik algısını belirleyen en etkili unsurlardır.

Anahtar Kelimeler: Güvenlik algısı, Çevre psikolojisi, Kampüs tasarım özelliklerı



...therefore, that architects who have aimed at acquiring manual skill without scholarship have never been able to reach a position of authority to correspond to their pains, while those who relied only upon theories and scholarship were obviously hunting the shadow, not the substance. Vitruvius, The Education of The Architect.

ACKNOWLEDGMENTS

First, I would like to express my sincere appreciation to my thesis advisor Prof. Dr. Fatma Cânâ Bilsel for her wise supervision, endless support and encouragement. I am grateful for her for giving me freedom to follow the subjects that I love the most, I learned and enjoyed every step of it. Also, I would like to thank the examining committee members Assoc. Prof. Dr. Inci Basa, Prof. Dr. Anlı Ataöv, Assoc. Prof. Dr. Bahar Gedikli and Assist. Prof. Dr. Yasemin Afacan for allocating their time to investigate my work and providing me with invaluable comments to make this thesis stronger. I would like to thank Prof. Dr. Baykan Günay for sharing priceless information about METU campus with me which was immensely helpful. I would like to share my gratitude to the students who took the time and participated in the interviews.

I would like to thank Sina for his unconditional support and kindness during good and bad days. Also, I am thankful for my friends, Nesa, Homa, Elena, Saba and Kübra who provided warm company and were like family all these years. I also would like to thank Bahman Baqery and Ehsan Zabardast for their friendship and assistance throughout the process.

Last but not least, I would like to dedicate this thesis to the unconditional love and support of my family, my father, Nemat and my mother, Mahrokh who had to bear with my rare visits, my sister, Negar and my brother in law, Alireza who regardless of distance never let me feel alone. I could not have imagined a better upbringing if they were not always there for me.

TABLE OF CONTENTS

ABSTRACT	v
ÖZ	vii
ACKNOWLEDGMENTS	ix
TABLE OF CONTENTS	x
LIST OF FIGURES	xiii
LIST OF ABBREVIATIONS	xvi
CHAPTERS	
1 INTRODUCTION	1
1.1 Introduction	1
1.1.1 Definition of Concepts: Safety, Security, Perception, Crime	5
1.2 Theoretical Framework	6
1.3 Methodology	6
2 PREVIOUS STUDIES ON PERCEPTION OF SAFETY	9
2.1 Perception of Safety Through Time	9
2.2 Perception of Safety in Campus Environments	14
2.3 Perception of Safety and Women	15

2.4	Refuge-Prospect Model	16
3	THE CASE STUDY	17
3.1	Middle East Technical University Campus	17
3.2	Planning and Implementation of METU Campus	18
3.3	METU Campus Today	22
3.3.1	Location	22
3.3.2	Natural Features	22
3.3.3	Functional Zoning and Physical Features	24
4	RESEARCH ON THE PERCEPTION OF SAFETY IN METU CAM- PUS	29
4.1	Process of Interviews	29
4.1.1	Demographics of Interviewees	30
4.2	Quantitative Findings and Analysis of The Interviews	31
4.2.1	Sense of Place	32
4.2.2	Sense of Orientation	33
4.2.3	Control	34
4.2.4	Surveillance	35
4.3	Evaluations of The Results	36
5	CONCLUSION	59
	Bibliography	65

APPENDICES

A	ETHICS COMMITTEE APPROVAL	71
B	CONSENT FORM	73
C	IN-DEPTH INTERVIEW QUESTIONS	75



LIST OF FIGURES

FIGURES

Figure 3.1 Position of METU Campus in Ankara. The map is prepared by the author.	18
Figure 3.2 METU Under Construction. 1960s. Source: The METU Archive. http://ww2.lib.metu.edu.tr/gallery/	19
Figure 3.3 Construction Years of The Buildings. The map is prepared by the author.	21
Figure 3.4 Access to The Campus. The map is prepared by the author.	23
Figure 3.5 Selected land for METU campus. Source: The METU Archive. http://ww2.lib.metu.edu.tr/gallery/	24
Figure 3.6 Natural Features of METU. The map is prepared by the author.	25
Figure 3.7 Early Forestation on The Site. 1960s. Source: The METU Archive. http://ww2.lib.metu.edu.tr/gallery/	26
Figure 3.8 Zonning Based On Function. The map is prepared by the author.	27
Figure 4.1 Age of the interviewees	30
Figure 4.2 Years lived in the campus	31
Figure 4.3 Ability of the participants to differentiate the zones	32
Figure 4.4 Ability of the participants to locate themselves	33
Figure 4.5 Ability of participants to orient themselfe during the first month of entrance to the campus	34
Figure 4.6 Participants' view on signage in campus	34
Figure 4.7 Participants' view on privacy in campus	35
Figure 4.8 Participants' view on sense of isolation in campus	36

Figure 4.9 Participants' view on lighting in campus	36
Figure 4.10 An example of signs in METU campus which is in Turkish. Picture is taken by one of the interviewees.	37
Figure 4.11 Lack of people's presence in the west dormitories area. Picture is taken by one of the interviewees at 7 pm.	39
Figure 4.12 Lack of people's presence in the west dormitories area. Picture is taken by one of the interviewees at 7 pm.	40
Figure 4.13 Lack of people's presence in the west dormitories area. Picture is taken by one of the interviewees at 7 pm.	40
Figure 4.14 An empty road leading to west dormitories at 7 pm. Picture is taken by one of the interviewees	41
Figure 4.15 An empty road leading to west dormitories at 7 pm. Picture is taken by one of the interviewees	41
Figure 4.16 An empty road leading to west dormitories at 7 pm. Picture is taken by one of the interviewees	42
Figure 4.17 Vicinity of Dormitory No. 20 at 7 pm. Picture is taken by one of the interviewees	42
Figure 4.18 Dormitory No. 20 at 7 pm. Picture is taken by one of the interviewees	43
Figure 4.19 Vicinity of Dormitory No. 20 at 7 pm. Picture is taken by one of the interviewees.	43
Figure 4.20 Steep road without sidewalk in METU campus. Picture is taken by an interviewee.	44
Figure 4.21 A road leading to west dormitories. Source: Google Images.	44
Figure 4.22 A road leading to west dormitories. Source: Google Images.	45
Figure 4.23 Dormitory number 20. Source: Google Images.	45
Figure 4.24 A cafe in east dormitories' area of METU campus. Source: Google Images.	46
Figure 4.25 Central shopping center of METU campus. Source: Google Images.	46
Figure 4.26 A cafe in the main academic area of METU campus. Source: Author's personal archive.	47

Figure 4.27 The main pedestrian alley. Source: Author's personal archive.	48
Figure 4.28 The pedestrian's path from KKM to A1 enterance. Picture is taken by one of the interviewees.	49
Figure 4.29 A shortcut in METU campus. Picture is taken by one of the interviewees.	50
Figure 4.30 A shortcut route between the academic zone and recreational area. Picture is taken by one of the interviewees.	51
Figure 4.31 Poor condition of pavements. Picture is taken by one of the interviewees.	51
Figure 4.32 A path between the Faculty of Architecture and Business Administration Department. Picture is taken by one of the interviewees.	52
Figure 4.33 The areas where students perceive the most and the least safe in METU campus. The map is prepared by the author.	53
Figure 4.34 Distribution of theft in METU campus between 2009 and 2016. The map is prepared by the author.	54
Figure 4.35 Distribution of harrassment in METU campus between 2012 and 2017. The map is prepared by the author.	55
Figure 4.36 Distribution of dog attacks in METU campus between 2009 and 2016. The map is prepared by the author.	57
Figure 4.37 Comparison of the data collected from the interviews and official reports. The map is prepared by the author.	58

LIST OF ABBREVIATIONS

CPTED	Crime Prevention Through Environmental Design
KKM	Kültür ve Kongre Merkezi (Cultural and Conventional Center)
METU	Middle East Technical University
MM	Merkez Mühendislik (Faculty of Engineering Headquarters)



CHAPTER 1

INTRODUCTION

1.1 Introduction

Safety is a pivotal concept among the aspects of architectural and urban design. University environments are mostly inhabited by young people. Meanwhile there are also various groups with diverse perceptions among those who use a university campus. The significance of designing an environment which can provide serenity is not ambiguous to architects and urban designers. Maslow came up with a theory for human motivation to corroborate his views on safety. According to him, safety prevails among other basic needs of human beings such as ‘love and belonging’, ‘self esteem’ and ‘self-actualization’.¹ Perception of safety is strongly attributed to different design features of a built space as well as to one person’s cultural, psychological and social backgrounds.

The main motivation of this research is based on the fact that university campuses have a significant place in every community. Young people are individuals who are going to hold significant positions and will define the path a country or a community is going to step in and proceed. Campuses hold the burden of forming the leading people among the next generations and are of utmost importance in providing different features beside education, like safety, ease of access, etc. to make this process more efficient. Moreover, since I am a student myself, I have been involved in various campus environments with different features through the past years. I have had ample chances to experience different aspects of campus features which could facil-

¹ Maslow, A. H. (1943). A theory of human motivation. *Psychological review*, 50(4), 370.

tate the process of this research and result in a comprehensive and effective study in addressing campus design features of merit with focus on perception of safety. The importance of university campus was not ambiguous to developers of METU either. The following quotation by Güven Sargin and Ayşen Savaş affirms this argument:

“The founders were well aware of the fact that the university would have an impact on the social formation of its students in ways beyond the teaching process itself. They believed that a sustainable university would answer in the affirmative and develop with success; otherwise it would create a complete community in itself.”²

A safe learning environment creates a setting in which students trust lecturer, behave positively and feel that learning is not only supported but also nourished.³ As John R. Kleberg the director of student affairs risk assessment at Ohio state university points out:

“Since, in many regards, perception is reality, how students see their living-learning environment is an important element of the academic experience.”⁴

A campus has an environment that has different specifications which are assumed to have advantages and disadvantages in terms of perception of safety by users compared to other public spaces. The aim of this research is to find out what design features influence the user’s perception of safety in a university campus, and to what extent do these features affect such a perception. The significance of perception of safety is not vague since it has been discussed by many architects and urban designers such as Jane Jacobs, Oscar Newman, Jon Lang, Kevin Lynch, Ali Madanipour, and many others.

Ali Madanipour mentions in his book *Design of Urban Space* that there are various psychological and behavioral reactions to crime including distrusting others, avoiding particular places, taking protective action, changing daily activities and participation in collective action.⁵ When an environment does not have adequate qualities for its

² Sargin, G. A., & Savaş, A. (2016). A University is a society’: an environmental history of the METU ‘campus. *The Journal of Architecture*, 21(4), 602-629.

³ Panju, M. (2008). 7 Successful Strategies to Promote Emotional Intelligence in the Classroom. Continuum.

⁴ Campus Safety: Reality and Perception.2004 <http://www.iaclea.org/members/pdfs/0409p18.pdf>

⁵ Madanipour, A. (1996). *Design of urban space: An inquiry into a socio-spatial process*. Chichester: Wiley

users to feel safe, it reduces life quality in different ways. Most of people have the fear of unknown and this applies to many aspects of life. Fear of an anonymous happening causes people to withdraw from urban life, and it has many consequences. Fading presence of people in public places leads to unpopular environments with low vitality which can turn into crime scenes in extreme situations. Co-presence of people who are culturally different, and various social division and irregularity indicated in particular places, all stimulate uncertainty which make the majority of people avoid it.⁶ Therefore lessening uncertainties and unpredictabilities will enhance the sense of safety.

Jon Lang explains safety and security needs of human beings in detail. These two needs, have both physical and psychological components. The psychological dimensions include the fulfillment of the need to have a place in society and affiliation needs. The need for easy communication among people and also for the display of their membership through the use of environmental cues. It is generally assumed that the built environment should be designed such that it can meet the physiological needs of people in terms of anthropometric and ergonomics. However, in his book, Lang emphasizes that the designer should assure that the physiological needs are provided "comfortably".⁷

Comfort is primarily a physiological state, it has also strong psychological aspects. There is considerable variation of comfort among individuals since it has a subjective aspect for psychological and physiological reasons. Psychological comfort also has to do with the feeling of safety and security. In the process of evaluation and design to what extent we want it comfortable needs to be considered. There are two types of safety and security needs that a designer has to be aware of : 1.physiological, 2.psychological. Lang describes these needs in the following format. Physiological need for safety and security is to avoid physical harm. However, psychological need for safety and security brings forth the sense of place, geographically and socially. To attain the first one people need to feel safe from wild animals, criminal assaults, and various types of accidents: household, vehicular, and so on. To achieve the latter, there is a desire to avoid the unexpected, to be in control, to know where one is in

⁶ Lang, J. T. (1994). *Urban design: The American experience*. New York: J. Wiley & Sons.

⁷ *Ibid.*

one's social and physical environment, and not to be afraid of other people and social statuses.⁸ There are of course many different safety demands from different people because of variety of personalities.

Privacy is one of the ingredients of attaining control in order to have peace of mind. Appropriate levels of privacy in an environment give its users the chance to be able to be themselves and act freely from censure and to have opportunities to recede from people and functions. Other elements of having the feeling of being in control are the ability to find out promptly about the location and time and the ability of finding directions easily. The capability of orienting oneself is an indicator of a well-functioning environment which gives a sense of stability and predictability. If there is a high probability for crime and the corresponding fear of it is also high, environmental design can amend safety by lessening the chances for dishonest manners and boosting the perception of safety as Fisher and Nasar argue.⁹

Studies have shown that the perception of safety is related to fear of crime. According to researchers such as Baba, Austin, Ferraro and LaGrange, fear of crime is defined as “negative emotional reactions generated by crime or symbols associated with crime.”^{10,11} Therefore, it is worth pointing out that the possibility of crime taking place is quite a different subject from the sense of fear. While the former can be resolved by taking strict security measures, the latter is a perceptual issue by any individual which can be amended to a great deal by solely combining design features carefully. Moreover, there are other parameters that can affect the perception of safety. Kevin Lynch reflects on a couple of such parameters in his book, *Good City Form*. He defined a good settlement as:

“A good settlement is one in which hazards, poisons and diseases are absent or controlled and fear of encountering them is low.”¹²

These definitions consider the emotional reactions to circumstances that may generate

⁸ *Ibid.*

⁹ Fisher, B. S., & Nasar, J. L. (1992). Fear of crime in relation to three exterior site features: Prospect, refuge, and escape. *Environment and Behavior*, 24(1), 35-65.

¹⁰ Baba, Y., & Austin, D. M. (1989). Neighborhood environmental satisfaction, victimization, and social participation as determinants of perceived neighborhood safety. *Environment and Behavior*, 21(6), 763-780.

¹¹ LaGrange, R. L., & Ferraro, K. F. (1987). The Elderly's Fear of Crime A Critical Examination of the Research. *Research on aging*, 9(3), 372-391.

¹² Lynch, K. (1990). *Good city form*. Cambridge (Mass.): The MIT Press

fear, as well as the psychological evaluation of risk of being victimized, which may rise the feeling of fear as well. With that being said, it is important to recognize the elements and features in a built environment which generate negative feelings and reduce sense of safety.

1.1.1 Definition of Concepts: Safety, Security, Perception, Crime

"Safety" and "Security" are too often used interchangeably. But there is a difference between those two. The Oxford dictionary defines safety as the condition of being protected from or unlikely to cause danger, risk, or injury.¹³ Security is the state of being free from danger or threat.¹⁴ These definitions may look very similar but if we dig a little deeper we can spot the differences. Safety comes from the latin word "Salvus" meaning whole, healthy, uninjured.¹⁵ Security's latin origin is "Securus" meaning apart from danger, being protected, firmly fixed.¹⁶

Safety has both emotional and physical attributes, and that both must be in agreement for safety to be achieved. Think of security as a tool and physical mean to insure the physical aspect of safety. Imagine of security as if it is the umbrella protecting us from rain, we feel safe when we are warm and dry in this situation.¹⁷ Spencer Coursen who is a recognized security expert and threat assessment advisor in United States of America, portrays the relation between safety and security clearly in previous sentence, and he concludes:

"Security therefore is the process of ensuring our safety."¹⁸

Perception as Oxford Dictionary defines is the ability to see, hear, or become aware of something through the senses, the way in which something is regarded, understood or interpreted, intuitive understanding and insight.¹⁹ Crime is a word that is used very often in this research. It is crucial to understand that other than its primal meaning which is 'Illegal activities', an action or activity considered to be evil, shameful, or

¹³ Dictionary, O. E. (2007). Oxford English dictionary online.

¹⁴ *Ibid.*

¹⁵ Harper, D. (2011). Online etymology dictionary. 2001. Available from: www.etymonline.com/index.php.

¹⁶ *Ibid.*

¹⁷ Spencer Coursen. (n.d.). Retrieved January 09, 2017, from <https://safetymadesimple.wordpress.com/>

¹⁸ *Ibid.*

¹⁹ Dictionary, O. E. *Op. Cit.*

wrong can also be referred as crime.²⁰ Therefore, it is not necessarily punishable by law.

1.2 Theoretical Framework

The main focus of this research is developed around spatial, social and psychological concepts; more importantly, this thesis concentrates on the correlation between the afore-mentioned subjects and human beings. Most of the relevant discussion will be built upon the hypotheses elaborated by Kevin Lynch, Jon Lang and Oscar Newman. Jon Lang suggests five concerns in developing a behavioral program to provide for people's safety and security needs, 1.The degree of segregation of incompatible uses, 2.The degree of natural and artificial surveillance of everyday life, 3.The mechanism for attaining the appropriate level of privacy for the behaviors in which we engage, 4.The attainment of a sense of orientation in place and time, 5.A sense of place, social and geographical.²¹

These five will be one of the fundamental references that the future gathered data will be analyzed based on them and in relation with perception of safety. This thesis would also be an analysis of METU campus based on dimensions of performance that Kevin Lynch elaborated in his book Good City Form. The topic of safety is studied in the vitality section of the book. In this chapter Kevin Lynch mentions that a vital environment is a settlement in which hazards, poisons and diseases are absent or controlled and fear of encountering them is low.²²

1.3 Methodology

The overall structure of this thesis contains two of the most preferred qualitative research methods. The methods are : In-depth interview and observation. In order to understand how people truly perceive their environment, face to face interview is a suitable approach. In-depth interviews conducted for this research contain fourteen

²⁰ *Ibid.*

²¹ Lang, J. T. *Op. Cit.*

²² Lynch, K. *Op. Cit.*

open-ended questions with twenty five METU students. The Quota Sampling was used to select interviewees. Participants are undergraduates or master's degree students who have the experience of living in the METU campus. They were selected randomly among local and international students from both genders with the help of author's friends and acquaintances.

The interviews included questions about the respondents' feelings toward his/her surrounding and built environment. An attentive analysis on answers to these questions provides a great amount of information about the impact of the built environment on the way people perceive their setting. The in-depth interview questions were created based on theoretical framework and literature review with attending to the in-depth interview question development methods. In order to interview students, a permission was acquired from METU Ethic Committee (Appendix A). Questions have two sections. The first section is a short questionnaire asking respondents about their age, degree and their length of living on campus as well as their consent for recording the interview (Appendix B). The second section includes fourteen main questions and more detailed inquiries that were made during interview depending on the flow of discussion and probing questions (Appendix C). Students were asked to take pictures of places in the campus on which they have both positive and negative feelings regarding sense of safety and pinpoint the location of the place on a map of the METU campus that previously had been emailed to the respondents.

The selected site, in this case, the Middle East Technical University campus has been classified into three zones. The zones are : the academic zone, the recreational zone and the residential zone. All these areas as well as their connection with each other have been analysed based on the fundamentals of urban design in relation to safety.

Literature search was done on a variety of bibliographical sources, i.e. books, theses, journals, articles and web pages related to perception of safety, safety and security, safety in public places, safety in campuses, METU campus and other related subjects that will be discussed more in previous studies chapter. Further investigation has been conducted using online resources such as METU Library Visual Media Archive and SALT Research.²³

²³ <https://www.archives.saltresearch.org/>

In order to have a complete perspective of the concept of safety in METU campus, data concerning theft, harassment and animal attacks were obtained from the administration of the university. An application was submitted to the Directorate of Internal Services (İç Hizmetler Müdürlüğü) which manages the guards and controls safety and security issues inside the METU campus. The procedure continued in confidence between the General Secretary (Genel Sekreterlik), Legal Consultancy (Hukuk Müşavirliği) and Internal Services of Middle East Technical University. The process of getting a permission to access to the statistics took about 30 business days and data were given in Excel format without any names or students ID number. The information included the gender, place and the date that complaints were made. These information were needed to determine if there is an actual correlation between the perception of safety and places with the most safety incidents.

The method to analyse the data is a theoretical thematic analysis. The theoretical thematic analysis method concentrates on examining the collected data and extracting patterns or themes within data according to the theories. Braun and Clarke explain:

“The process starts when the analyst begins to notice, and look for, patterns of meaning and issues of potential interest in the data – this may be during data collection.”²⁴

By taking these into consideration, various dimensions of perception of safety were matched to the recorded data. These aspects were carefully analysed in the chapter 4 of this thesis.

²⁴ Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. Qualitative research in psychology, 3(2), 77-101.

CHAPTER 2

PREVIOUS STUDIES ON PERCEPTION OF SAFETY

2.1 Perception of Safety Through Time

Throughout the twentieth century, sociologists draw attention to the relation between social behavior and the physical environment and analyzed it vastly. Several researches investigated the influence of social conditions and community features on people in order to understand deviancy and offending behaviors.^{25,26,27} Evolving from this, different hypotheses have delved into the connection amongst wrongdoing and the physical environment, discussing that criminal behavior might be comprehended independently from predominant social conditions.²⁸ These works have pointed out that in order to find the roots of specific sorts of physical settings that accelerate criminal action, particular characteristics of the physical environment can be taken into account.²⁹

For the first time, Jacob suggested this correlation and claimed that the spatial design and architectural form have the capacity to deactivate social cohesions, and disrupt unofficial social control.³⁰ As a result, this gave the premise to expanded chances and occurrence of criminal action. Besides, Newman's seminal study elaborated on this issue inspecting the complexities arising from the constructed structure, social

²⁵ Merton, R. K. (1938). Social structure and anomie. *American sociological review*, 3(5), 672-682.

²⁶ Shaw, C. R., & McKay, H. D. (1942). Juvenile delinquency and urban areas.

²⁷ Schneider, S., & Pearcey, P. (1996). The theory and practice of crime prevention through environmental design: A literature review. Canada Mortgage and Housing Corporation.

²⁸ Petherick, N. (2000). Environmental design and fear: the prospect-refuge model and the university college of the Cariboo campus. *Western Geography*, 10(11), 89-112.

²⁹ *Ibid.*

³⁰ Jacobs, J. (1961). *The death and life of American cities*.

formation as well as unlawful actions.³¹ Oscar Newman proposed the theory of defensible space as a tool of reducing crime in urban areas. This theory focuses on the role of spatial setting in developing spaces with surveillance, physical barriers and difficulty of escaping which are less apt to attract potential criminals.³² His work underlines the connection between architectural design, social conjunction, and crime and developed the theoretical body by proposing design concepts that created “defensible space.”³³ Hence, environmental criminologists and social psychologists have built up various configurations investigating criminal conduct and the procedure of decision-making that underscore the significance of opportunities generated in the physical setting.³⁴ University environments have many characteristics that may attract possible delinquent people and therefore, it can take a fearful ambiance. Foremost, university campuses are filled with young individuals carrying diverse cultures and backgrounds. Also, these students are in an environment without their guardians and have opportunities to move freely which reduces risk and increases chances to a possible offender.³⁵ Moreover, the inharmonious natural features of campus grounds develop a level of uncertainty that later on uplifts fear among the students.³⁶ Along with these, environmental design elements that provoke fear instantly influence individual's behavior and perhaps play a role as a mobility limitation in their daily routines.³⁷

A considerable body of literature exists regarding safety issues and their relation with the built environment. Authors such as Oscar Newman, Jane Jacobs, Kevin Lynch, Jon Lang and Ali Madanipour discuss the significance of creating a physical and mental safe environment and their influence on the quality of everyday life. Their work have been mentioned in the theoretical framework section and will be discussed more throughout the research. Numerous articles published in international journals, focusing on the issue of perception of safety and its relation to built environments. Several research have been conducted on the impact of the built environments on perception of safety and fear of crime in urban neighborhoods such as residential

³¹ Newman, O. (1972). *Defensible space* (p. 264). New York: Macmillan.

³² *Ibid.*

³³ Petherick, N. *Op. Cit.*

³⁴ *Ibid.*

³⁵ Fisher, B. S., & Nasar, J. L. (1992). *Op. Cit.*

³⁶ Kennedy, L. W., & Silverman, R. A. (1985). Perception of social diversity and fear of crime. *Environment and Behavior*, 17(3), 275-295.

³⁷ Petherick, N. *Op. Cit.*

zones, college campuses and city centers. Schweitzer et al. report crime and fear of crime as facts of life and point out that fear itself has more influence on some residents than actual crime and its consequences bring discomfort to many residents leading to imprisoning themselves at their homes.³⁸ This magnifies the importance of understanding people's perception of safety. Isolation of the built environments is one of the characteristics which has a huge impact on this matter. Sense of community and emotional attachment are other elements that are related to the sense of safety and fear of crime. Regarding this matter, there are theories such as broken window theory by James Wilson and George Killing. They state:

“Neighborhoods characterized by signs of neglect and decay such as broken windows, trash accumulation, uncared-for building exteriors are evidence that residents of that area feel vulnerable and have begun to withdraw from community involvement and upkeep. These indicators may serve as a signal to would-be criminals that residents are not likely to respond to criminal activity.”^{39,40}

Although the effect of the built environment on crime and fear of crime has been examined, the difference between perception of crime and actual crime has been neglected since most researchers have not made a distinction between the two.⁴¹ Schweitzer et al. discuss the findings of their research and indicate:

“People living on the blocks which have higher fear of crime tend to be younger with low income and lack a collective sense of community. The results of this study represent that the physical characteristics of the block and the residents are more important than the demographic characteristics of the people living on the block in predicting levels of crime and fear of crime. Although the sense of community among residents is not significantly related to actual rates, it is the most important variable in predicting fear of crime.”⁴²

³⁸ Schweitzer, J. H., Kim, J. W., & Mackin, J. R. (1999, 12). The Impact of the Built Environment on Crime and Fear of Crime in Urban Neighborhoods. *Journal of Urban Technology*, 6(3), 59-73. doi:10.1080/10630739983588

³⁹ *Ibid.*

⁴⁰ Wilson, J. Q., & Kelling, G. L. (1982). Broken windows. *Critical issues in policing: Contemporary readings*, 395-407.

⁴¹ Schweitzer, J. H., *Op. Cit.*

⁴² *Ibid.*

These results show that reducing the crime itself is not enough for lessening fear among people. To ensure perceived safety, developing a built environment which promotes the sense of community and increases the sense of belonging is a key element.

It is now broadly acknowledged that there is a solid connection among the urban design and various types of public behavior. As Associate Professor Kim Dovey pointed out in a conference held in Melbourne regarding safer communities:

“The physical environment cannot cause behavior, but neither is it in any way neutral.”⁴³

As the sociologist Anthony Giddens states, built form ‘structures’ social behavior through a combination of ‘enabling’ and ‘constraining’.⁴⁴ For example, a wall limits movement and provides privacy, however it doesn’t bring on any sort of behavior.⁴⁵ Built form cannot decide anything but it can keep things from occurring or empower them to happen in some places. Designing urban environments are highly effected by safety and peril and it is distinguishable in “The Death and Life of Great American Cities” written by Jane Jacobs. Dovey interprets Jacob’s work as following:

“This was also a critique of modernist planning but it was a broader critique of the ideology which divided the city into zones according to function, destroying the vitality and diversity of street-life together with informal modes of social control.”⁴⁶

To sustain the street-life, Jacob suggested maintaining multi-functional environments which was against some areas that had financial function and were dead after work hours and in the weekends.⁴⁷ There are many points of view to this contention, but the argument about safety was a very successful approach towards controlling anti-social behavior through preserving ‘passive surveillance’ or ‘eyes on street’.⁴⁸ Hillier and

⁴³ Dovey, K. (1998, September). Safety and danger in urban design. In conference Safer Communities: Strategic Directions in Urban Planning. Convened jointly by the Australian Institute of Criminology and the Victorian Community Council Against Violence. Melbourne (pp. 10-11).

⁴⁴ Giddens, A. (1984). The constitution of society: Outline of the theory of structuration. Univ of California Press.

⁴⁵ Dovey, K. *Op. Cit.*

⁴⁶ *Ibid.*

⁴⁷ Jacobs, J. *Op. Cit.*

⁴⁸ Dovey, K. *Op. Cit.*

Hanson explained in their book "The Social Logic of Space":

"strangers police the space, while inhabitants police the strangers."⁴⁹

Surveillance is a significant element that many planners and designers have relied on it as an effective way to increase perception of safety and reduce fear. According to a published paper by Thani et al. which suggests using principles of Crime Prevention through Environmental Design (CPTED) in urban parks, surveillance is the key element to bring back the joy and peace of mind to visitors of urban places.⁵⁰ One of the most recent articles related to this matter written by Ratnayake, discusses the various ingredients that affects university student safety experiences in an Australian regional city. He points out:

"Most research on fear of crime focuses on environmental features, such as graffiti, dilapidated buildings, enclosures, alleys and disorderly areas. Although some studies investigate whether the combination of environmental and social variables create low or high fear environments, little research attempts to understand how social variables, such as the presence of people, gender and physical features, influence sense of safety or how social groups with different ethnic backgrounds, such as international students, experience regional and rural environmental settings."⁵¹

Ratnayake reports in his paper which is about students perception of safety in city areas, while rural and regional communities typically have lower reported cases, many users, including women and international students still considered them as unsafe.⁵²

⁴⁹ Hillier, B., & Hanson, J. (1984). *The social logic of space*, 1984. Cambridge: Press syndicate of the University of Cambridge.

⁵⁰ Thani, S. K. S. O., Hashim, N. H. M., & Ismail, W. H. W. (2016). Surveillance by Design: Assessment Using Principles of Crime Prevention through Environmental Design (CPTED) in Urban Parks. *Procedia-Social and Behavioral Sciences*, 234, 506-514.

⁵¹ Ratnayake, R. (2017). Sense of safety in public spaces: university student safety experiences in an Australian regional city. *Rural Society*, 26(1), 69-84

⁵² *Ibid.*

2.2 Perception of Safety in Campus Environments

The issue of safety has become very popular among scholars around the world specially United States of America due to the different reasons such as increasing rate of sexual assaults, violence, harassment, drug and alcohol abuse, property damage, etc. on campuses. Lighting, vegetation, presence of people, visibility, physical characteristics of built environment, signage, maintenance, isolation and surveillance are the most discussed subjects related to the perception of safety in college campuses.

Safety is a word that is frequently used in daily conversations. However, Waters et al, comment that personal safety is a phrase that lacks clarification and usually is misread. They quote a description regarding perception of safety from Austin et al to assist readers understand the concept. The quote says:

“although fear of crime and perception of safety were separate concepts, they had significant theoretical and empirical commonalities”.⁵³

Waters et al discuss 5 main concerns of University of Glamorgan, UK, using focus groups, questionnaires and virtual reality image processing tools to determine the effect of built environment on students in campus. According to their report, the five elements that are related to campuses and students perception of safety are: Lighting, issues related to the landscape, insufficient security equipment, open access to campus and the transition from campus to local community. In this article, it is mentioned that how above-mentioned factors cause reduction in social presence and visibility, blind spots and concealment chances for possible offenders, lack of aid in case of abuse, inability to control enters and exits of people and reduced protection in non-campus areas.⁵⁴

In another thesis about campus safety and perception of students, Cassandra L. Ratti refers to Loukaitou-Sideris, Anastasia and Camille Fink, another group of researchers who explore the perception of fear and physical elements of an environment. They

⁵³ Austin, D. M., Furr, L. A., & Spine, M. (2002). The effects of neighborhood conditions on perceptions of safety. *Journal of criminal justice*, 30(5), 417-427.

⁵⁴ Waters, J, Neale, RH and Mears, K 2005 Perceptions of Personal Safety in relation to the Physical Environment of University Campuses In: Tulla, K (Ed.), CIB Joint Symposium on Advancing Facilities Management and Construction through Innovation, June 13-16 2005, Helsinki. Facilities Business and its Management, Vol. IV, 230-242. ISBN 952-5004-62-7.

say that people's perception of fear in public environments are highly affected by lighting, isolation, maintenance and presence of others. She analyses the perception of safety in the University of Mary Washington and reports that overall students feel safe in this campus but time of day is a significant influential element in creation of students perception.^{55,56}

2.3 Perception of Safety and Women

Public violence and fear of crime is not an impartial issue regarding gender as it is in most of crime prevention theories.⁵⁷ Many researchers have discovered that women will probably confine their lives because of fear of crime more than men. In Carolyn Whitzman's research on women's safety in public places of Toronto, areas of concern in the city are pinpointed which, not surprisingly, included: "underground garages, public transportation, and parks, as well as factors which made these places seem unsafe; poor lightning, sense of isolation, the existence of hiding spots along a path, the presence of groups of men loitering, etc."⁵⁸

Kristen Day discusses safety and women's fear of sexual assault in her article. She argues that fear of crime and being victimized lead to self-restriction.⁵⁹ In her research, she analyzes two urban college campuses to apprehend what physical features affect women's perception of safety. She wrote:

"Frequently feared places include alleys, tunnels, crevices in building exteriors, isolated stairways, long and narrow entrances or walkways, and parking lots. Physical features emphasize trees and bushes, dumpsters, and insufficient lightning. Other key characteristics include absence of others, isolation, and especially night time."⁶⁰

⁵⁵ Ratti, C. L. (2010). Student perceptions of campus safety at the University of Mary Washington. Unpublished honours thesis), University of Mary Washington, USA.Chicago

⁵⁶ Loukaitou-Sideris, A., & Fink, C. (2009). Addressing women's fear of victimization in transportation settings: A survey of US transit agencies. *Urban Affairs Review*, 44(4), 554-587.

⁵⁷ Whitzman, C. (1992). TAKING BACK PLANNING: PROMOTING WOMEN'S SAFETY IN PUBLIC PLACES—THE TORONTO EXPERIENCE. *Journal of Architectural and Planning Research*, 169-179.

⁵⁸ *Ibid.*

⁵⁹ Fox, G. L. (1977). " Nice girl": Social control of women through a value construct. *Signs: Journal of Women in Culture and Society*, 2(4), 805-817.

⁶⁰ Day, K. (1999). Strangers in the night: women's fear of sexual assault on urban college campuses. *Journal of Architectural and Planning Research*, 289-312.

Counting in this line, it should be mentioned that this thesis is not a gender-based research. However, one of the hypotheses of the research is lower sense of safety in female students in comparison to male students in the campus.

2.4 Refuge-Prospect Model

There are a number of publications which discuss the issue of fear and perception of safety and their relation with the environmental design based on Refuge-Prospect model of Nasar and Fisher. This model which was presented in 1989 at Ohio State University suggests that places where provide hiding spots for potential offenders and give limited sight to victims have the lowest perception of safety.

In their article, Cinar and Cubukcu investigate the relation between crime, fear, and environmental features such as physical incivilities, places that afford concealment, limited prospect, and blocked scape, density and height of trees, shrubs, and walls.⁶¹ Among the main issues that threaten the quality of life, crime and fear become bold. This is due to the fact that crime and fear tend to limit people's activities and deteriorate health.⁶²

Environmental psychologists have more interest on physical environmental variables because they can be controlled and manipulated within the design and planning procedure.⁶³ Cluttered and low quality constructions considered as physical incivilities in an environment that sends messages on the social and physical situations in a district which does nurture fear, yet does not nurture the crime itself.⁶⁴ Cinar and Cubukcu's results showed that the streets of Istanbul which rate as safe provide wider field of view, ease of scape, better upkeep, less concealment opportunities and less and lower shrubs and walls.⁶⁵ Their findings empirically proves the relation between perception of safety or fear of crime and the physical features of the urban environment.

⁶¹ Cinar, E. A., & Cubukcu, E. (2012). The influence of micro scale environmental characteristics on crime and fear. *Procedia-Social and Behavioral Sciences*, 35, 83-88.

⁶² Nasar, J. L., & Jones, K. M. (1997). Landscapes of fear and stress. *Environment and behavior*, 29(3), 291-323.

⁶³ Cinar, E. A., & Cubukcu, E. *Op. Cit.*

⁶⁴ Nasar, J. L., & Fisher, B. (1993). 'Hot spots' of fear and crime: A multi-method investigation. *Journal of environmental psychology*, 13(3), 187-206.

⁶⁵ Cinar, E. A., & Cubukcu, E. *Op. Cit.*

CHAPTER 3

THE CASE STUDY

3.1 Middle East Technical University Cmapus

Middle East Technical University(METU) campus is located in the southwest of Ankara and 5km far from the city center along side the Eskişehir Boulevard (Figure 3.1). METU was established based on United Nation's solution to solve housing and urbanization problems in Turkey and Middle East in 1956, Ankara, Turkey. It's education intially began under the name "Middle East High Technology Institute". A national competition was held in 1962, to obtain the settlement plan of the campus. The winner was expected to prepare plans for building the METU campus. The winners were Altuğ and Behruz Çinici who ensured the formation of a built environment which has unique architectural, aesthetical and technical qualities. The big aspiration was to create the first modern university campus of Turkey through the METU project.⁶⁶

The faculty buildings were arranged around a pedestrian alley. "Alley" has developed as the backbone of the campus connecting educational life to social life. This 1.5 km walkway presents different aspects of modern Turkey with its materials, small parks, monuments, waterfronts, and art. In the general planning, the need for flexibility led to applying a system which afforded a development in several phases.⁶⁷

⁶⁶ Payaslıoğlu, A. T., & Ergin, A. (1996). Türk yükseköğretiminde bir yeniliğin tarihi: barakadan kampusa 1954-1964. Orta Doğu Teknik Üniversitesi.

⁶⁷ *Ibid.*

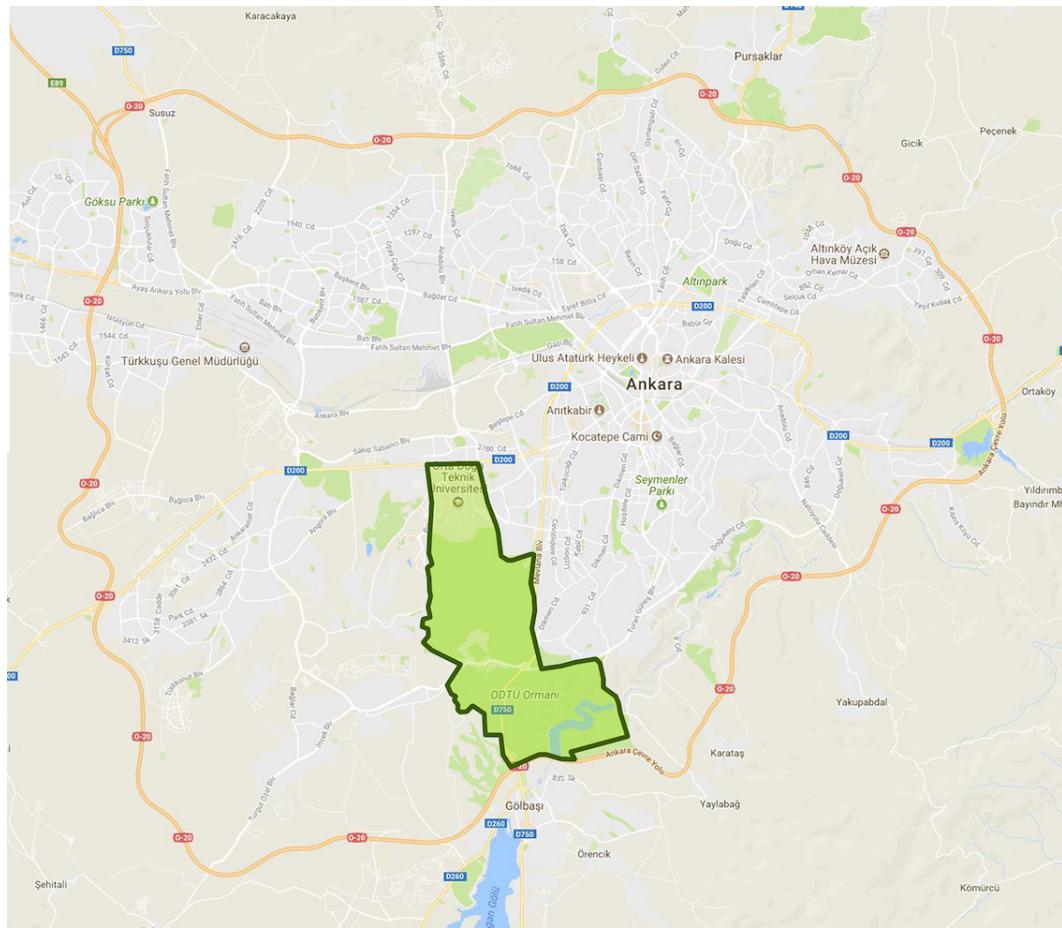


Figure 3.1: Position of METU Campus in Ankara. The map is prepared by the author.

3.2 Planning and Implementation of METU Campus

Looking back at the evidences, the initial plan of METU campus was to create “a university city” which would both influence the society and the planning approach of the country as a whole. These are the main points raised in A-B Çinici’s preliminary campus planning report, in which they explain the relations between campus and itself as well as the city, besides utilities and greenery. The relation of the campus to the city is evident looking at the place of METU. The connections of the campus to the city is facilitated by designating the campus close to Ankara-Eskişehir highway. This in turn makes it possible for the public transportation to frequent the campus from highway.⁶⁸

The academic zone and other areas are distinctive from each other which is an in-

⁶⁸ Akman, S. (2016). Conserving and Managing Modern campus Heritage: “Alley” as the Spine of METU campus, Ankara (Master’s Thesis).

fluence of functionalism. In the next chapter the disadvantages of functional zoning regarding safety will be discussed later in this thesis. The inter-campus design, on the other hand includes roads and pedestrian zones that do not intersect in the academic areas; Instead, the academic area is circled by a ring road and surrounded by parking lots. Therefore, cars can be parked and the ring buses can serve the academic zones. According to the design principles of Çinici's master plan, two parameters were pivotal for the design of vehicular and pedestrian network: destination and time. The academic areas and the pedestrian networks are within 10 minutes walking distance. Therefore, no destination takes more than 20 minutes to get on foot. The pedestrian alley located through the academic zone is 1.5-kilometer length and connects the parking spaces to the academic zone. This very alley is the heart of the social activities and campus life.



Figure 3.2: METU Under Construction. 1960s. Source: The METU Archive.
<http://ww2.lib.metu.edu.tr/gallery/>

President Kemal Kurdaş regarded the construction of the campus as a vital issue. Accompanied by his vision and his characteristics like problem-solving skills and responsible nature, the formation of campus was prompted. Only two days after being sworn in as president, Kurdaş held meetings with different architects and asked for the final plan of three buildings (Faculty of Architecture and two Dorms) until December 1963. The university agreed to cooperate with A-B Çinici's plans for these buildings and he was the main architect of the campus. The construction started quickly on March 12, 1962 and was completed remarkably by the groundbreaking ceremony of Kurdaş for this purpose in October 1963. The first building was completed as planned and the university was moved to Asagi Balgat where the following academic year started in October 1963.⁶⁹ The construction speed was laudable and transferred the image of the university. The construction plan was followed according to Çinici's master plan until 1980. The main method that was followed during the two initial decades (before 1980) of the campus construction was an integrated and deductive approach which was elaborate. After 1980, this method was replaced with an inductive and disintegrated approach.⁷⁰

In the late 1970s, the harmony between administration, architects and the employees started to worsen which yielded a dramatic change in space formation concept of the campus.⁷¹ The preliminary disagreements started in 1977 owing to acceptance of tendering for planning and construction of the new structures.⁷² As a result of the disputes between architects and the university administration, harmony and coherence of the construction activities suffered. The tendering procedure decreased the quality of construction obviously. During this period, Çinici's master plan was left out completely and the construction was carried out by Directorate of Construction and Technical Works. Adding to these problems were the many lawsuits that were filed against METU administration by architects.⁷³

As professor Baykan Günay, former advisor to the president of METU, puts it, the campus developed in an imprompt manner from 1980 and 1990 which was due to the fact that A-B Çinici's master plan was unable to foresee the demands that raised due

⁶⁹ Kurdaş, K. (1998). ODTÜ yıllarım: bir hizmetin hikayesi. Metu Press.

⁷⁰ Akman, S. *Op. Cit.*

⁷¹ *Ibid.*

⁷² *Ibid.*

⁷³ *Ibid.*

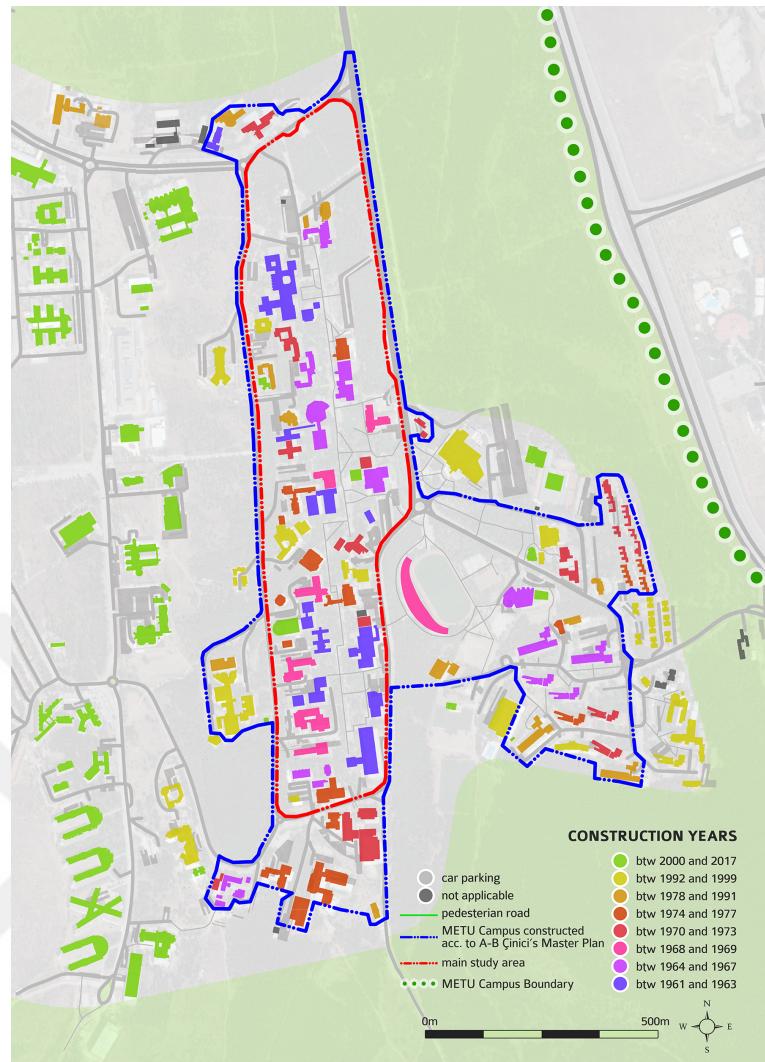


Figure 3.3: Construction Years of The Buildings. The map is prepared by the author.

to the campus growth. The decade of unorganized construction came to an end when the Space Commission (Mekân Komisyonu) was established by President Süha Sevük in order to fulfill the development requirements of METU campus while respecting the spatial concepts of it.⁷⁴

A new plan was developed for METU campus. The recreational zone was linked to the academic core with the Cultural and Conventional Center (KKM) and the Social Building. At the east part of the mentioned area, EBI Shopping Complex was constructed which connects KKM to the existing shopping center designed by Çinici. The Cultural and Conventional Center (KKM) and EBI Shopping Com-

⁷⁴ Nermin Fenmen, ODTÜLÜLER Bulletin 177, "METU Campus and Local Administrations Panel", 177 September 2008, page:7-8. Speakers of the panel are Behruz Çinici, Erhan Karesmen, Baykan Günay, Nimet Özgönül, Erdal Kurttaş, Tarık Şengül

plex constructed by EBI Construction Agency became popular as the new centers of social activities and campus life. The pivotal place that connects the academic and residential zones is the stadium.⁷⁵ The pedestrian alley goes through the heart of many centers for sports and recreational activities, including the stadium, gymnasium, open sports areas such as tennis courts and football fields, Baraka gymnasium and outdoor and indoor swimming pools. The residential areas at the east end of the pedestrian alley include fourteen dormitory buildings, thirty faculty housing units, ten guesthouse blocks and the health center. Of these dormitories and the faculty housing, nine of them are named with numbers which also implies that they were Çinici's original design. The other five dormitories and guesthouses were constructed by EBI Construction Agency.⁷⁶

3.3 METU Campus Today

3.3.1 Location

METU Campus is located at the southwest of Ankara. The campus area includes the university buildings, METU Forest, Eymir Lake and Yalıncak, Koçumbeli, and Ahlatlıbel areas; covering approximately 4500 hectares. At the north of the campus, high-rise business buildings frame the Eskişehir Highway. There are ministry buildings and government agencies and dense residential areas at the east; at the south, the campus meets with Gölbaşı district; the university campuses such as Bilkent Campus and Hacettepe Campus and residential areas neighbor METU campus from the west. METU campus has four main entrances which are A1 and A2 at the north, A4 at the east and A7 at the west (Figure 3.4).

3.3.2 Natural Features

METU Campus's artificially created natural environment is a successful example of reviving an unfavorable land (Figure 3.5). Currently, nature of the METU Campus is

⁷⁵ Uçar, S. (2001). Changing Understandings in the Space Organization of a University Campus: The Middle East Technical University (Doctoral dissertation).

⁷⁶ Akman, S. *Op. Cit.*

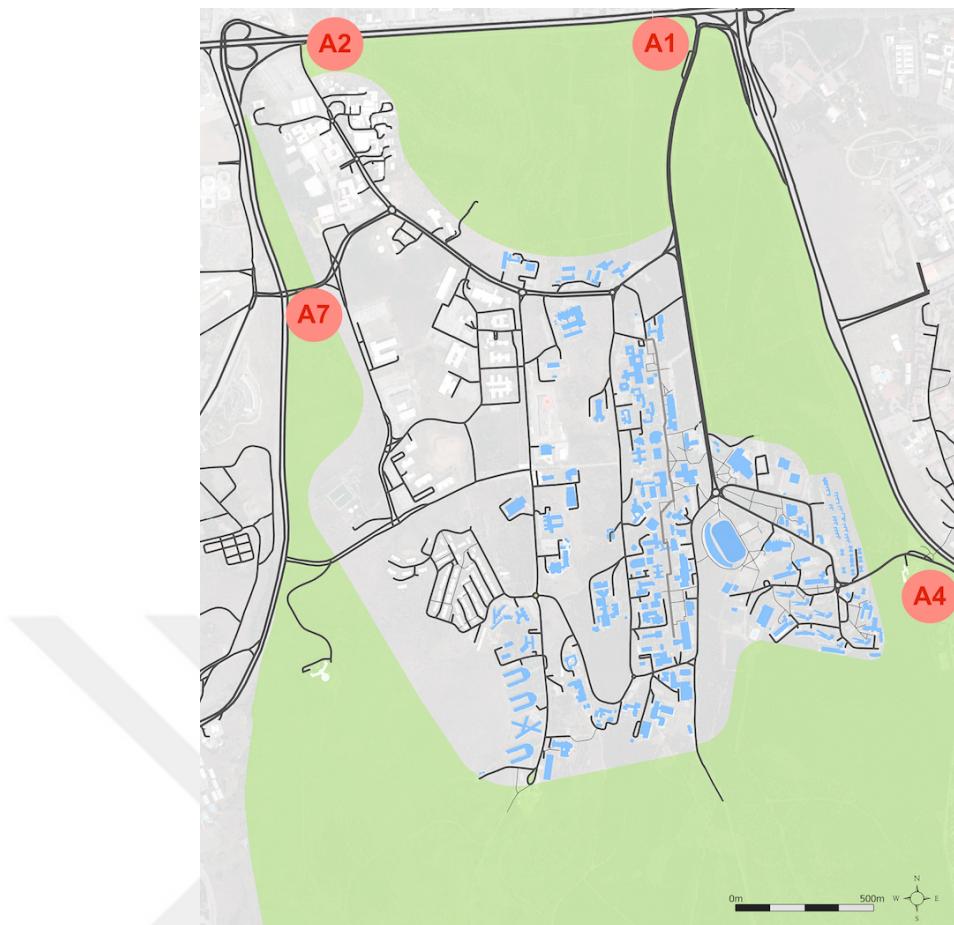


Figure 3.4: Access to The Campus. The map is prepared by the author.

the habitation where the flora and the fauna of Ankara region can survive. As stated by the report provided by METU Nature Club, the campus which is both ecologically and biologically very rich has six various ecological systems, almost 700 plant species, more than 200 bird species, significant number of mammals and abundant invertebrates.⁷⁷

Since 1961, an extraordinary reforestation program has been embraced alongside the constitution of the METU Campus (Figure 3.6). Creating an artificial forest from the very beginning of constructing METU had two major goals. First, Ankara had a heavy air pollution and vegetation was a smart solution to reduce the problem. The second reason was a political strategy to secure campus borders. Based on Turkish law, a forested area cannot be confiscated, therefore reforestation of METU campus

⁷⁷ ODTÜ Doğa Topluluğu (METU Nature Club). (May, 1996). A report on “ METU Conservation of Historical and Natural Values of METU” and brochure retrieved from https://www.metu.edu.tr/system/files/odtunun_dogasi.pdf



Figure 3.5: Selected land for METU campus. Source: The METU Archive.
<http://ww2.lib.metu.edu.tr/gallery/>

protected its territory and integrity. University's department of landscape made appropriate selections of plants for campus land. These detailed and elaborate endeavors won the Aga Khan Prize for METU in 1995.⁷⁸

3.3.3 Functional Zoning and Physical Features

The METU campus contains three significant regions as the academic zone, residential zone and recreational areas (Figure 3.7). Technopolis area has been included to the academic zone due to its close relation with other buildings. However the Technopolis, METU College and service buildings are not included in this study because a little percentage of students have interactions with these areas.

According to Akman, the campus has a figure-ground pattern with fragmented and linear organizational layout.⁷⁹ Buildings attached to Alley holding certain distance

⁷⁸ Re-Forestation Programme of METU | Aga Khan Development Network. (n.d.). Retrieved from <http://www.akdn.org/architecture/project/re-forestation-programme-of-metu>

⁷⁹ Akman, S. *Op. Cit.*

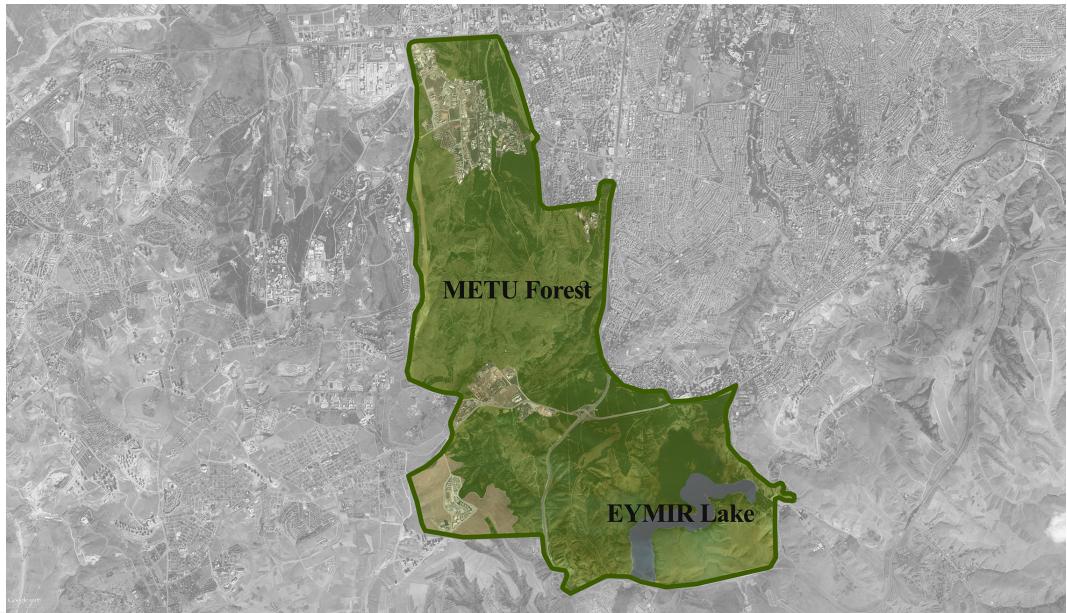


Figure 3.6: Natural Features of METU. The map is prepared by the author.

from the axis. Between these gaps, there are deliberate open spaces maintaining cohesion between buildings and the pedestrian way. A ring road around the academic zone is providing access for vehicles without interrupting the pedestrian that are walking across academic zone. Therefore, it segregates people from traffic. Academic zone includes the faculty buildings, the main library, administration building, school cafeteria and MM (Merkez Mühendislik) building. the Presidency office, the main library and the auditorium (Üçlü Amfi) placed in the heart of the campus in order to serve the entire university.

The residential zone holds several dormitories, faculty housing areas and guest houses. Residential and academic zones connect with recreational services such as sport facilities, shopping centers and restaurants. Sport facilities include a stadium, gymnasium, dance studios, gym, indoor and outdoor swimming pools, football fields, basketball and tennis courts. There are several shops in the shopping center (Çarşı) and grocery stores which meet students needs to a great extend. Restaurant and coffee places are located inside and outside the shopping center, some of which operate till midnight. A health center placed between sport facilities and dormitories near main shopping center. The heights of the majority of buildings differ heights differ between 4m to 17m. However, there are some exceptions such as MM building and administrative



Figure 3.7: Early Forestation on The Site. 1960s. Source: The METU Archive.
<http://ww2.lib.metu.edu.tr/gallery/>

buildings which are over 20m and are perceived as landmarks.⁸⁰

⁸⁰ *Ibid.*

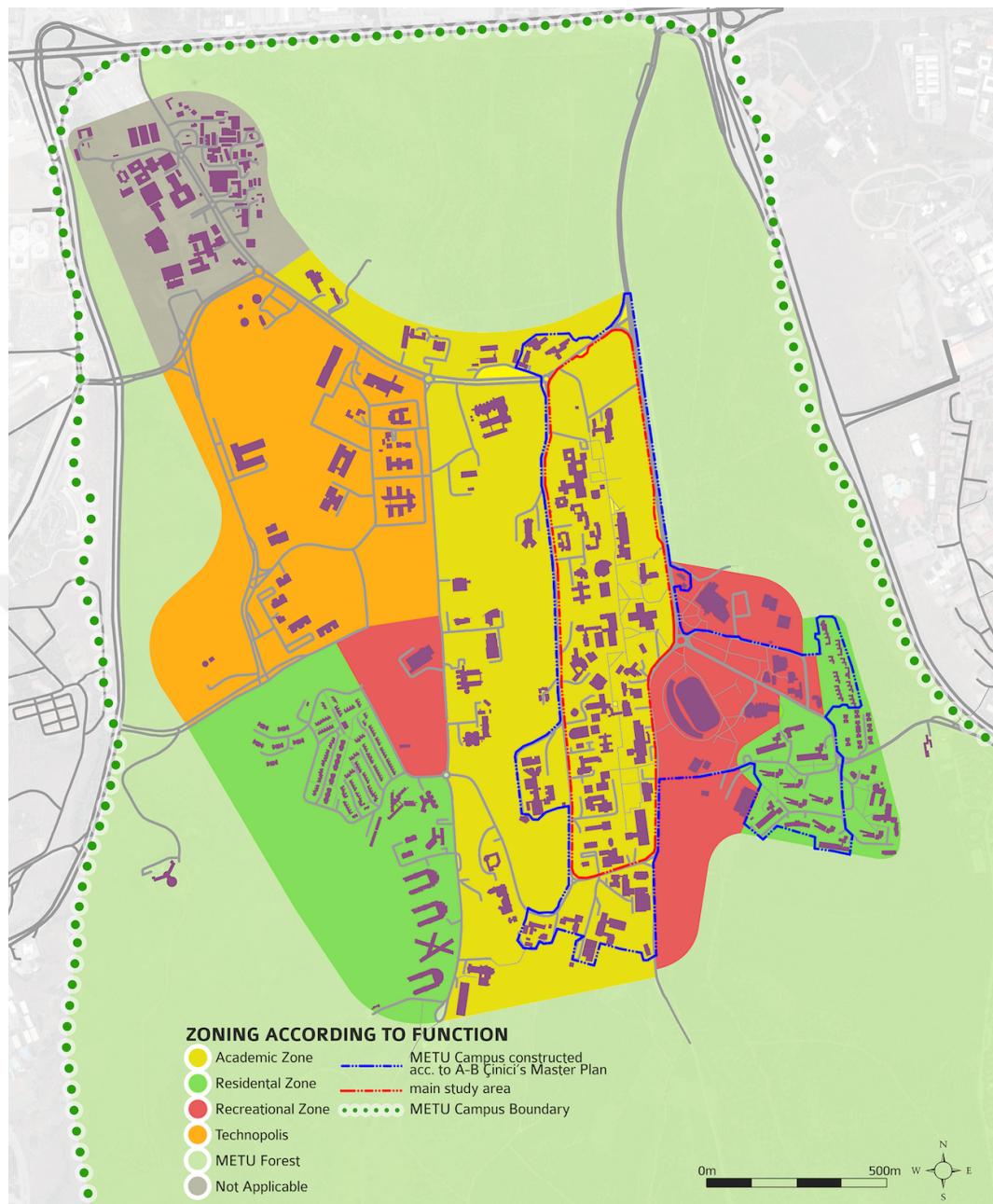


Figure 3.8: Zonning Based On Function. The map is prepared by the author.



CHAPTER 4

RESEARCH ON THE PERCEPTION OF SAFETY IN METU CAMPUS

4.1 Process of Interviews

In order to provide a wholesome picture of students' perception of safety in campus, this study uses in depth interview method with open ended questions. A semi-structured interview enabled the researcher to explore the responses of students and the way they perceive their environment further. Before interviewing students, an approval was acquired from METU Ethic Committee (Appendix A). Students were selected randomly from friends, acquaintances and also complete strangers at coffee places. Interviews took place in June and October of 2017 in the campus. All of interviews were conducted in a coffee house at the central shopping center of campus except one. One interviewee had busy schedule therefore the interview happened at the Faculty of Architecture. The interviews lasted between 30 to 60 minutes.

All participants were informed beforehand about recording the interviews and their consent were obtained (Appendix B). A couple of students did not approve their voice being recorded hence, they declined participation in the interview. The aim of the thesis was not explained to interviewees in order to avoid any orientation and influence on their answers. Interviewees were asked to take pictures of places where they feel safe or unsafe, the photographs could have been pictures of a place, people, atmosphere and whatever that made them feel safe or unsafe. Some of the interviewees sent pictures that will be used in this thesis.

Questions were designed to discover the relations between the students who were interviewed and different characteristics that engender sense of safety such as sense of place, sense of orientation, being in control and surveillance (Appendix C). Questions were categorized as the following: Sense of place: How do you feel about the buildings around you? Can you understand their functions from their facades? How do you feel in specific places on campus (Residential area, Recreational area, Academic area)? Sense of orientation: Can you map your location? How do you feel about finding your way when you are walking in campus? Control: What do you think about privacy on campus? How do you feel about occurrence of unexpected things while walking on campus? What do you feel about being in control of your surrounding? How do you feel about going out of campus at night? Sense of place and orientation are also ingredients of attaining the sense of control. Surveillance: How do you feel about other people around you? Where do you like to go in campus? Where do you feel safer in campus? How do you feel about going out at night in campus? Details about the students who were interviewed are explained in the next section.

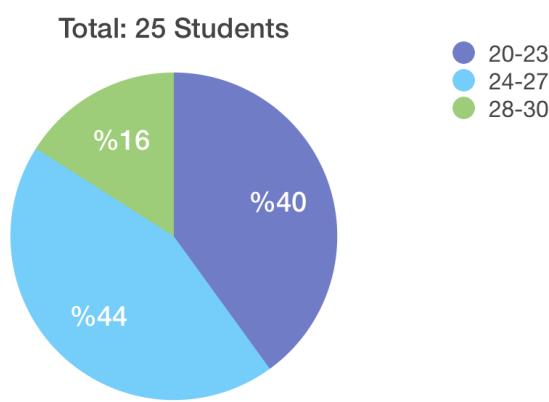


Figure 4.1: Age of the interviewees

4.1.1 Demographics of Interviewees

Out of twenty five students who were interviewed, 10 were male and 15 were female. Majority of the participants consisting 18 people pursuing Master's degree and the remaining 9 were undergraduates. In terms of diversity, 16 were internationals and 9 of the students were locals (Turkish citizens). 10 people were between the ages 20 to

23, 11 people between the ages 24 to 27 and 4 people were between 28 to 30 years old (Figure 4.1). Duration of the students' stay at campus varied between 3 months and 9 years (Figure 4.2). Of all participants, 6 were living in western dormitories, 9 in eastern dormitories in the campus and 10 people had the experience of living in both settlements. Only 2 out of 25 interviewees had vehicles.

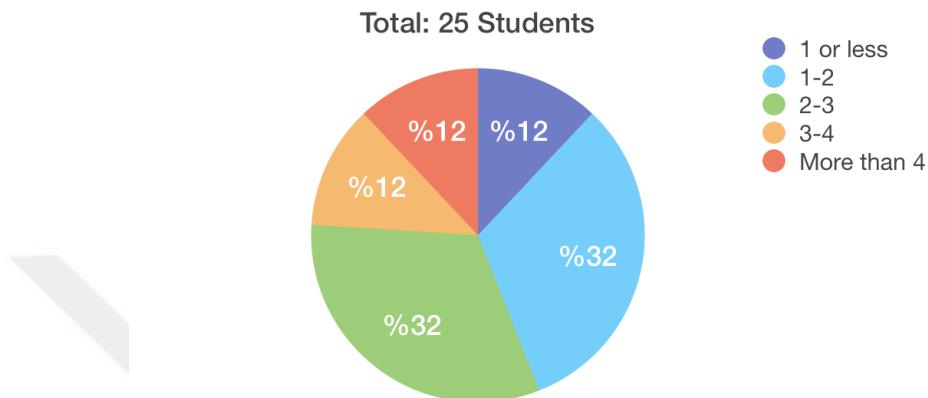


Figure 4.2: Years lived in the campus

4.2 Quantitative Findings and Analysis of The Interviews

As it was stated in the first chapter, a thematic analysis approach is taken in this thesis. By delving into theories and literature, it is safe to say there are many aspects to perception of safety. A number of these dimensions were chosen based on their applicability to this case. Considering physical, spatial and cultural characteristics of the METU campus, a set of dimensions were selected as the most relatable to the campus. This includes sense of place, privacy, control, surveillance, isolation, vitality, signage, sense of community and belonging, emotional attachment, sense of orientation, segregation of incompatible uses and fear of crime and being victimized.

Along with the dimensions such as control, surveillance and sense of place and orientation presented in qualitative and quantitative terms below, there are other factors that affect the perception of safety. Segregation of functions, vitality, sense of community and belonging, and emotional attachment are elements that could not be asked directly from interviewees. Hence, the degree of these features were determined dur-

ing the interviews by considering how students talk about METU campus and their answers to casual questions regarding campus life. During the interviews valuable information were collected which will be discussed separately as following.

There are also other influential features that increase the sense of safety such as security units, panic buttons, etc. These are used in many western universities due to higher rates of drug and alcohol abuse, violence, less strict weapon enforcement laws, borderless campus grounds, etc. Because of cultural and geographical differences, such issues are less relevant and engaging in METU campus.

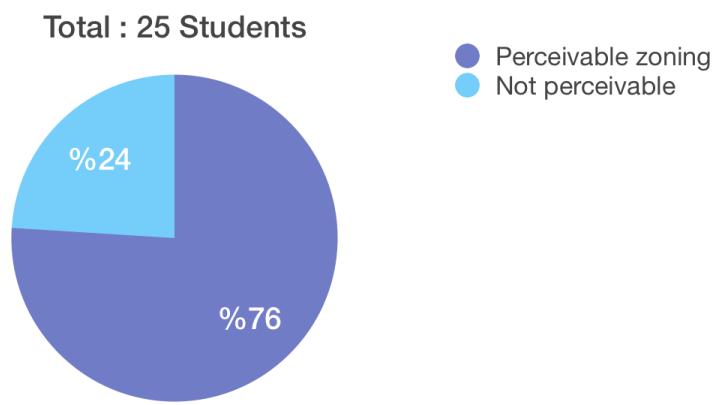


Figure 4.3: Ability of the participants to differentiate the zones

4.2.1 Sense of Place

As Jon Lang puts it, sense of place is achievable when one knows and defines one's place socially and physically. Based on the answers to open ended questions and further discussions with interviewees out of 25 students, 19 people said that different areas in METU campus present different atmospheres. In addition, the academic, residential and recreational areas are distinguishable from each other not only by their buildings but also because of divers sensations that specific zones offer (Figure 4.3). Moreover, 23 students said that they have the ability to locate themselves in the campus and on a map without any map guide or names using familiar objects such as stadium, library and architecture faculty (Figure 4.4). Almost all of the interviewees (24 out of 25 students) declared that the function of the buildings are explicit. For example they can tell if a building is a dorm or a faculty building from its facade and

without seeing its name .

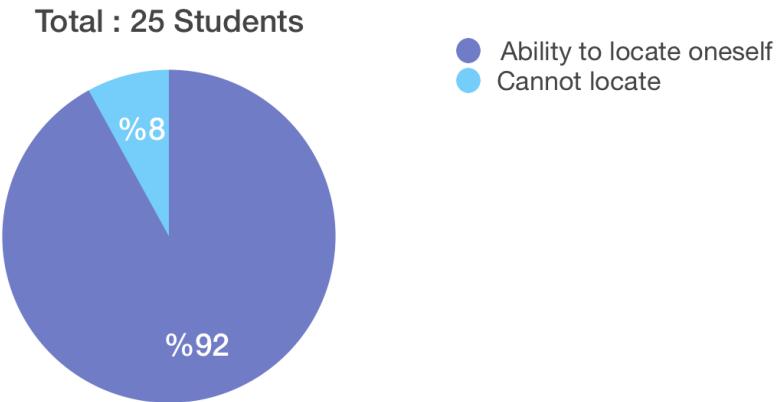


Figure 4.4: Ability of the participants to locate themselves

4.2.2 Sense of Orientation

The ability of way-finding and orienting oneself in space and time are one of the important reasons of feeling in control and safe. A well-functioning environment gives the capability of orienting oneself to its users which indicates a sense of stability and predictability. Participants were asked if they could orient themselves in the campus when they first came to METU. 15 students said it took them a month or more to learn how to navigate in the campus (Figure 4.5). One of the interviewees described her first experience of campus as confusing. She said:

“I thought, am I ever going to learn what is where? Will I ever be able to find my way in this campus?”

In the process of finding their ways in the campus, students noticed that the signs are not that useful, in fact, there are many places that do not have any sign. 19 of the interviewees said that the signage in the campus could have been much more better (Figure 4.6).

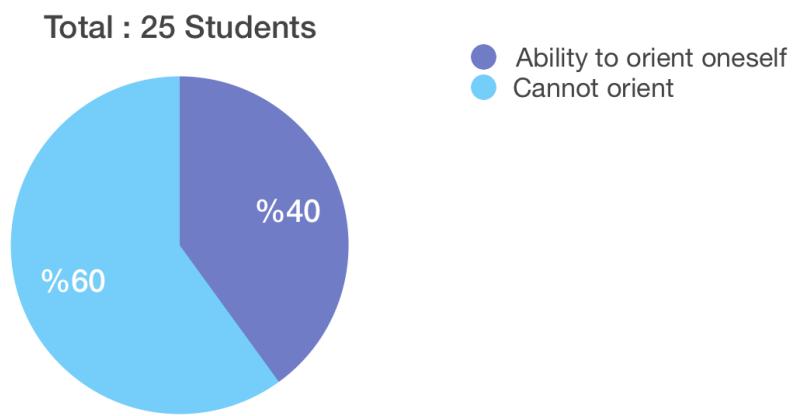


Figure 4.5: Ability of participants to orient themselves during the first month of entrance to the campus

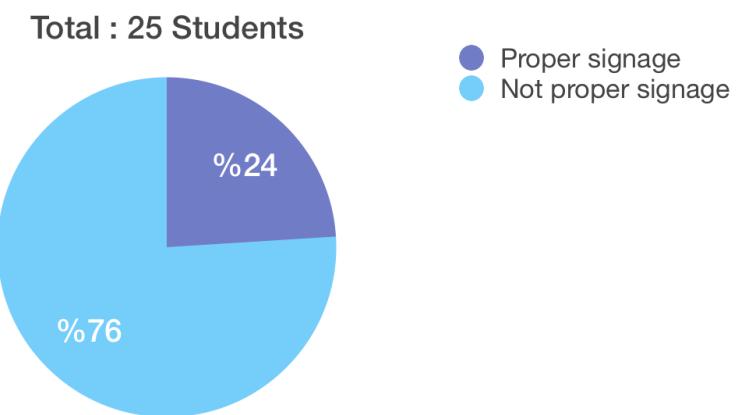


Figure 4.6: Participants' view on signage in campus

4.2.3 Control

Privacy is one of the ingredient of attaining control in order to have peace of mind. According to Lang, appropriate levels of privacy in an environment give its users the chance to be able to be themselves and act free from censure and to have opportunities to recede from people and functions. In a university campus the levels of privacy that could be afforded is limited. Majority of the students who live in METU campus have shared rooms. Therefore, there is no surprise to see that 18 out of 25 students indicate that they are not satisfied with levels of privacy in campus dormitories (Figure 4.7).

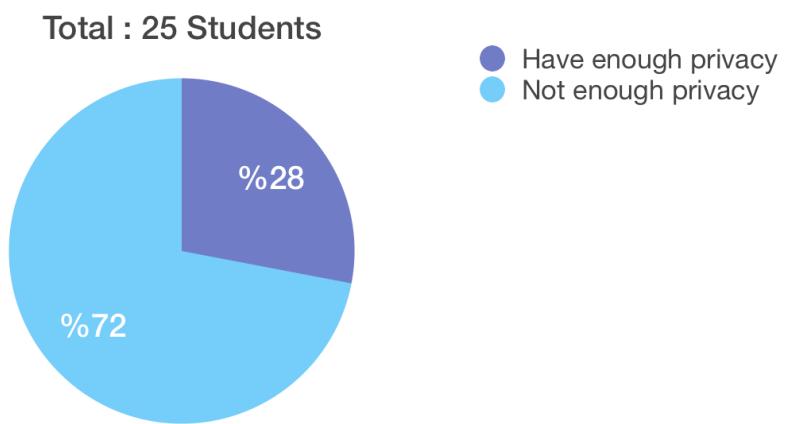


Figure 4.7: Participants' view on privacy in campus

4.2.4 Surveillance

The degree of natural and artificial surveillance is the most significant element of perception of safety in this research. Natural surveillance is connected to various characteristics of a functional environment such as vitality, sense of belonging and sense of community which are components of a safe society. Presence of people in the campus brings comfort to the interviewees. However, isolation is not an unknown fact to students in METU campus. Analysing interviews indicates that 16 out of 25 students feel themselves isolated in campus (Figure 4.8). 13 of these students interviewed, lived in west dormitories.

There are two aspects of isolation related to METU campus. One is the isolation of people in some areas of the campus from the central parts of campus. The other is the detachment of the campus from the city. These will be more discussed at the evaluation section. One component of safety related to surveillance is lighting. While the lighting might be sufficient along the main roads and areas of campus, there are shortcuts and places (distant from central areas) in the campus which have poor or have no lighting at all. Out of 25 interviewees, 16 suggest that the lighting in the campus is problematic (Figure 4.9).

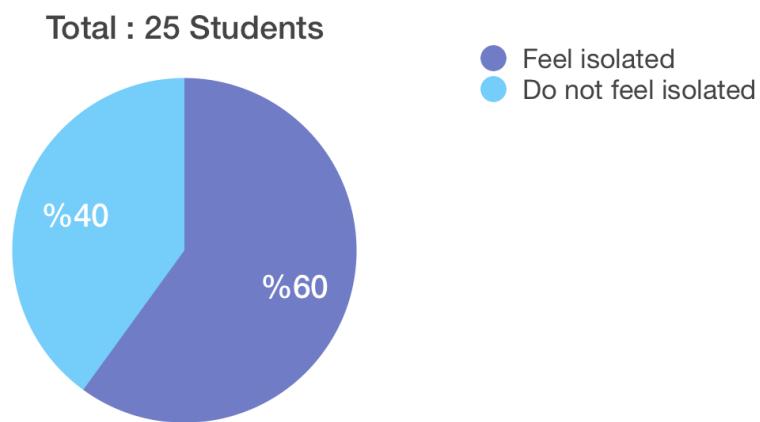


Figure 4.8: Participants' view on sense of isolation in campus

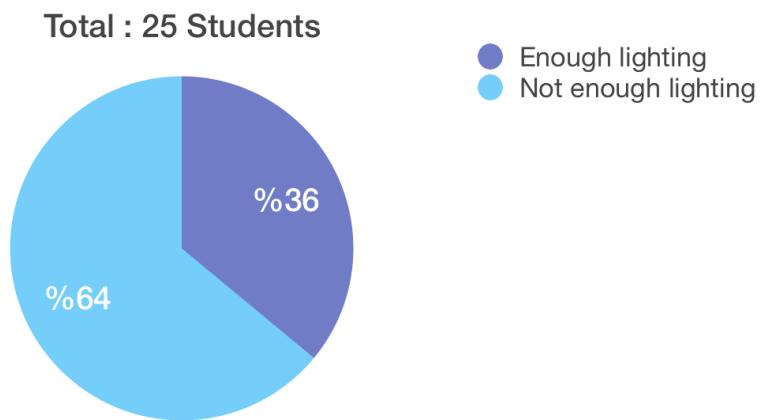


Figure 4.9: Participants' view on lighting in campus

4.3 Evaluations of The Results

All of the interviewees talked very passionately about Middle East Technical University. In their opinion, METU campus is one of the most beautiful campuses in Turkey and vegetation has an important role in their point of view. In spite of their satisfaction with the natural environment of METU campuses from beauty aspects, many comment that because of dense plants and trees they had difficulties to find their way during their first weeks in the campus. One of the participants explained that whenever she got lost she came back to MM building to find her way, because there are no other tall buildings to be used as landmarks and perspectives are limited. Trees

and plants are the main features of the campus that aesthetically satisfies its users but it also provides concealment and narrow field of view. Another student said after 3 years, she still loses her way if she goes to places in the campus where she does not normally go. Many interviewees described the campus as a confusing complex set of roads. An undergraduate student said:

“There are more than one choices to get somewhere in the campus. Sometimes these multiple options create confusion. For example, there are 5 ways to go from point A to point B. Some people know all of them and many students use one or two of those options. Most of the signs are in Turkish and for vehicles (Figure 4.10). For newcomers, this becomes a serious problem. It takes much more time to learn all the ways and differentiate them while proper signage is not provided and in time of a class or an exam it becomes really disturbing for the students.”



Figure 4.10: An example of signs in METU campus which is in Turkish. Picture is taken by one of the interviewees.

This interviewee points out a problem that many students experience in the campus. METU was designed as a walkable campus according to Çinici's plan. However, it got expanded through time and got distant from that principal. As it was explained earlier in the previous chapters, new buildings were added to campus in order to fulfil

new demands. New roads were constructed to connect new structures to old areas. These streets would circle around a vast region without providing shorter alternative routs for pedestrian which caused the generation of erratic inadvertent detours. Students use these shortcuts to reduce the travel time between east and west parts of the campus. These paths are not provided with adequate lighting or signs. Therefore, if one follows the signs in campus which are mainly for vehicles, it will take much longer to traverse between places.

All of the participants described spending time in the central parts of the campus as a comforting and enjoyable experience. A student who has the chance to live in both sides of the campus (east and west dormitories), depicted a picture of what was differentiating east and west parts of campus for her. She said:

“I like crowded places, when I was living in east dormitories I felt really comfortable and safe. The lights at night, cafes that were open until midnight, people that were coming and going all of that made me feel like living in a city center. I didn’t feel like I was living in a campus with boundaries and far from the city center, it made me feel related to people and places. Presence of people plays a significant role in my life. When I was living in east dormitories at central area of the campus, I knew that if I faced a problem for example a dog attack and I shouted for help, there would be plenty of people who would be there or come out of the near cafes or dorms to help me. But I do not feel the same about west dormitories. Now I live in the Research Assistants Guest House the dormitory number 20. There is almost nobody around the dorm, there are no benches to sit outside, everybody is either in their rooms or in the central areas of the campus.”

The interviewee lives in the west part of the METU campus. That part of campus contains several dormitories and houses. Other than a sport center, there is no opportunity to socialize and to engage in an acitivity. Hence, during the day students go to their classes, central areas of campus or inside of their dormitories and this also resumes after work hours. Therefore, segregating the functions becomes problematic for people who live in the west dormitories. She continued:

“Both dormitories are in the same distance to A1 entrance of the campus.

The manner that these paths are being crossed is what makes the difference. The route between east dormitories and A1 entrance is full of people who are walking by or using the services such as restaurants, shopping center or sport facilities. On the other hand, walking between west dormitories and A1 entrance is not a relaxing and joyful experience. Steep roads, dense trees, downscale pavements, poor lighting and the most important of them, the absence of other people makes me feel distressed. I always have this feeling that someone might jump out of the forest so I keep looking behind my back repeatedly. It is not safe at all to walk at nights because the dogs in this area are aggressive, even when I was on my way to my room at 11 pm in a taxi, three dogs jumped and attacked the taxi and it was horrifying. I do not feel belonging and connected to these parts of the campus and my current dormitory at all.”

The following pictures are taken by the interviewee to support her view.



Figure 4.11: Lack of people's presence in the west dormitories area. Picture is taken by one of the interviewees at 7 pm.



Figure 4.12: Lack of people's presence in the west dormitories area. Picture is taken by one of the interviewees at 7 pm.



Figure 4.13: Lack of people's presence in the west dormitories area. Picture is taken by one of the interviewees at 7 pm.



Figure 4.14: An empty road leading to west dormitories at 7 pm. Picture is taken by one of the interviewees .

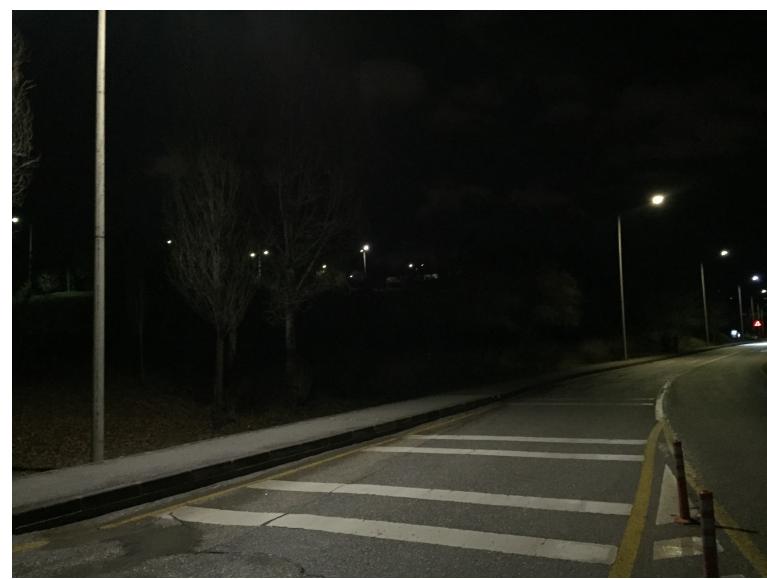


Figure 4.15: An empty road leading to west dormitories at 7 pm. Picture is taken by one of the interviewees .

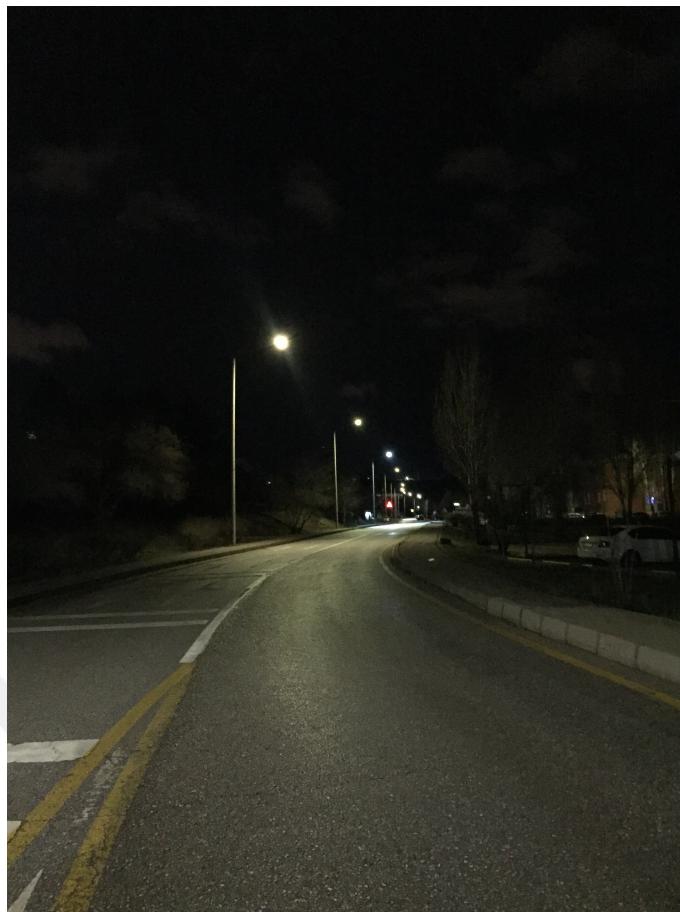


Figure 4.16: An empty road leading to west dormitories at 7 pm. Picture is taken by one of the interviewees .



Figure 4.17: Vicinity of Dormitory No. 20 at 7 pm. Picture is taken by one of the interviewees .



Figure 4.18: Dormitory No. 20 at 7 pm. Picture is taken by one of the interviewees .



Figure 4.19: Vicinity of Dormitory No. 20 at 7 pm. Picture is taken by one of the interviewees.



Figure 4.20: Steep road without sidewalk in METU campus. Picture is taken by an interviewee.

There are also many pictures of these areas in daylight. However the following pictures are not taken by the participants.

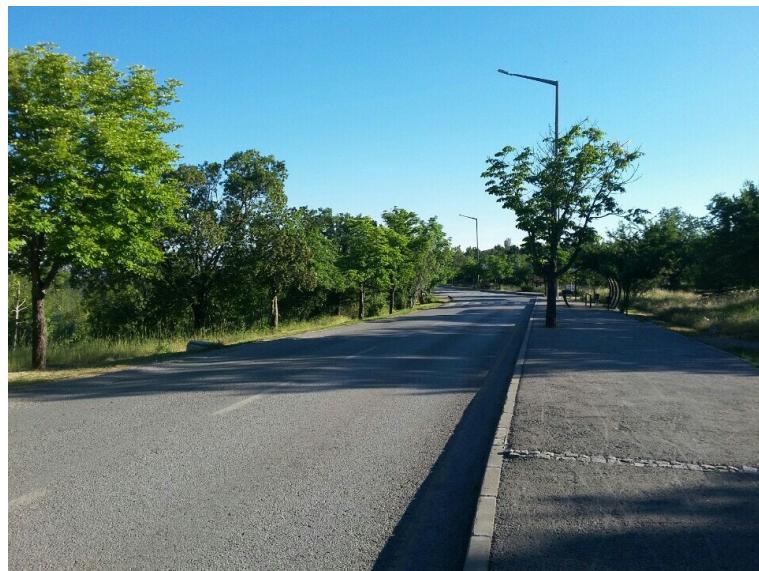


Figure 4.21: A road leading to west dormitories. Source: Google Images.



Figure 4.22: A road leading to west dormitories. Source: Google Images.



Figure 4.23: Dormitory number 20. Source: Google Images.

This interview drew attention to various dimensions of perception of safety: vitality, surveillance, sense of belonging and sense of community. Presence of other students contributes to all these aspects. Absence of people in those parts of the METU campus, dramatically decreases natural surveillance which according to Jane Jacobs, Oscar Newman and Jon Lang is the main ingredient of feeling safe and comfortable. Seeing other people and being seen by others, bring a great amount of safety and security to public places. In addition, students coming together in collective actions increases vitality in the campus. Western dormitories' area is lacking such features.

Without common spaces in those sections of the METU campus, vitality and surveillance are very low. Subsequently, students feel isolated and their need of sense of belonging and community is not fulfilled.

Comparing the pictures that are taken by the interviewee and photographs from the east parts of the campus depicts the huge difference between west and east areas. These pictures are solid proofs of the significant impact of joint action in students perception of safety and levels of comfort. (Figures 4.24, 4.25, 4.26 and 4.27)



Figure 4.24: A cafe in east dormitories' area of METU campus. Source: Google Images.



Figure 4.25: Central shopping center of METU campus. Source: Google Images.



Figure 4.26: A cafe in the main academic area of METU campus. Source: Author's personal archive.

Another student which also had the experience of living in both east and west dormitories expressed similar feelings toward west dormitories. She lived at dormitory number 20 at the time of the interview as well. She explained that the surrounding of this dormitory is very quiet and inactive. A part of this interview is written in the following paragraph:

“I have woken up many times with a sound of someone shrieking and running from the dogs at night or early in the mornings. I feel that the dogs dominate that area and see people as intruders. Unlike these areas the dogs in the east dormitories and central areas are very friendly because they are accustomed to people and crowds. In addition to the problem with the animals, transportation is another issue for me. The rings do not work regularly and I have to walk or hitchhike. Walking is good only for a limited period of time, most of the time it is too cold or too hot to walk and the sidewalks are in bad conditions (Figure 4.31 and 4.32). In the case of hitchhiking, some-

times I had to wait up to 45 minutes for someone to pick me up, and one time the driver was a stranger from out of campus and created an uncomfortable situation for me with inappropriate requests.”



Figure 4.27: The main pedestrian alley. Source: Author’s personal archive.

There are many complaints regarding the cars that come inside the campus. The culture of hitchhiking (Otostop) is very well established between METU students, academics and staff. The number of regular people who come to METU throughout the day are high and unfortunately the majority are not familiar with the concept. This sometimes leads to uncomfortable situations created by the driver. During the process of this thesis, a request was posted in one of the METU students’ social media pages, asking students to share their experiences of theft, dog attacks and harrasment in the campus.

A couple of students, all females, sent private messages about their difficulties while hitchhiking inside the campus. They explained that sometimes they confront improper requests from the drivers. One of the students wrote that she was forced to stay in the car because the driver refused to unlock the doors unless she gives her number

to him. Sadly, these incidents are not rare in the campus and functional strategies need to be applied in order to prevent such experiences. The in-depth interview proceeded with the participant as following:

“Sometimes I want to go out and study outside of my room for a couple of hours but I feel that it does not worth the attempt because for spending 2 hours in the central areas of campus I should spend 1 hour or more to commute. Those times I feel abandoned and lonely, there is no place in my surrounding to go to read a book or gather with my friends. When the weather is pleasant I would take a portable chair outside and sit in the middle of grass for a while but that feels strange because no one is around. The main road from A1 entrance to Culture and Convention Center (KKM) feels like eternity (Figure 4.28). You walk and walk and you are still in the middle of the road.

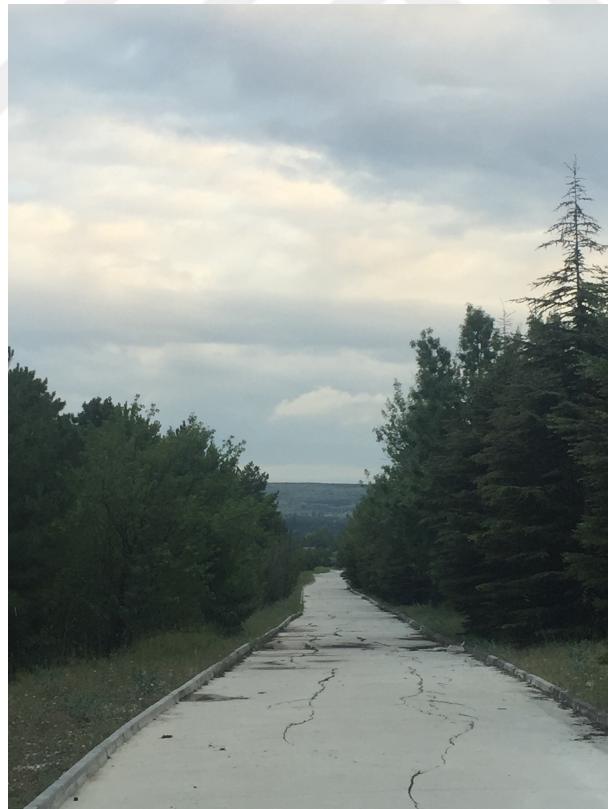


Figure 4.28: The pedestrian's path from KKM to A1 entrance. Picture is taken by one of the interviewees.

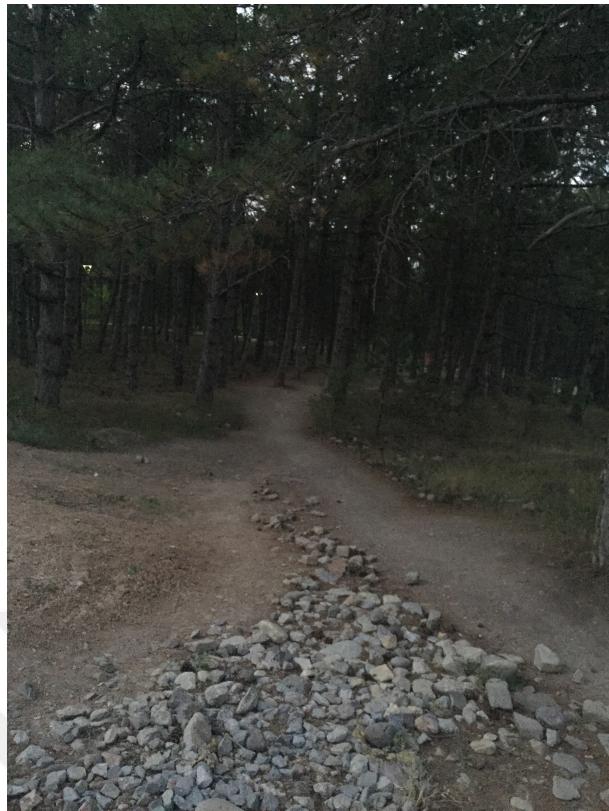


Figure 4.29: A shortcut in METU campus. Picture is taken by one of the interviewees.

The pedestrian ways have been neglected and that makes it hard to walk (Figures 4.31 and 4.32). When I first came to the METU campus and I was following the signs to get to east dormitories and then I realized the signs are for vehicles so I tried to use the shortcuts (Figures 4.29 and 4.30). Then I lost my way and I did not know where I am or how to get to my destination. Eventually I went through the forest I found the dorms but on my way I passed through places that a very few people were there and they were not students or academic staffs and it made me very anxious at that time. The people are very nice and there is mutual understanding and respect between people with different cultures and beliefs which is very comforting and pleasant.”

All of the interviewees who lived in western dormitories express the same feelings towards that zone except one student. Both male and female participants were unsatisfied with the conditions related to common places and transportation. One of the interviewees claimed the same idea of isolation about west dormitories. He said:



Figure 4.30: A shortcut route between the academic zone and recreational area. Picture is taken by one of the interviewees.



Figure 4.31: Poor condition of pavements. Picture is taken by one of the interviewees.

“When I wake up I just want to get out of my room and go someplace with

people around, when I come back I want to run to my room because there is nothing outside. There are no place for socializing and no activity around the dorm.”



Figure 4.32: A path between the Faculty of Architecture and Business Administration Department. Picture is taken by one of the interviewees.

According to interviewees' descriptions of the campus during interviews, places that students felt the most and the least safe has been detected. The road between A1 entrance and KKM, the shortcuts between faculty of architecture and faculty of business administration, The shortcuts between mechanical engineering and the western dormitories and the western dormitories vicinity are the places that the participants felt the most unsafe. Eastern dormitories area, the stadium, the shopping center and the library are the places that the interviewees felt the most safe (Figure 4.33).

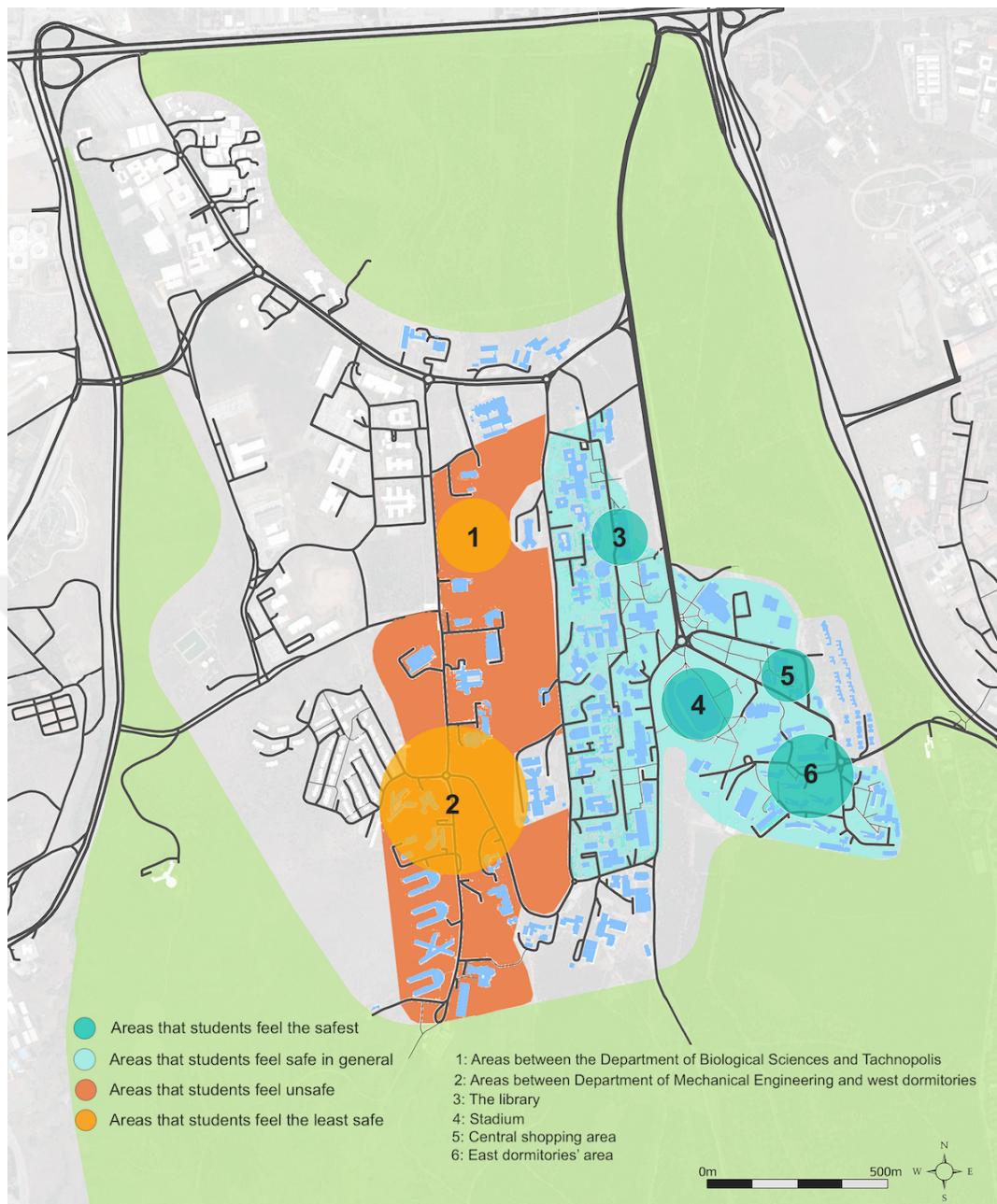


Figure 4.33: The areas where students perceive the most and the least safe in METU campus. The map is prepared by the author.

Looking at those areas that students described as safe, they all share various characteristics such as good lighting, easy access to different facilities and availability of transportation, but there is one quality that stands out the most and that is the presence of other students. Interviewees claim to feel very comfortable and safe in places where activities are happening even after work hours. And it is a result of the idea that if they have a trouble or in case of emergency, there will be someone to help them

or in presence of other people the probability of a misbehavior is low. Places such as west dormitories make students feel isolated and far from community and activities. Lack of places where students could gather and socialize is apparent. Therefore, outside the dormitories are very quiet and apathetic.

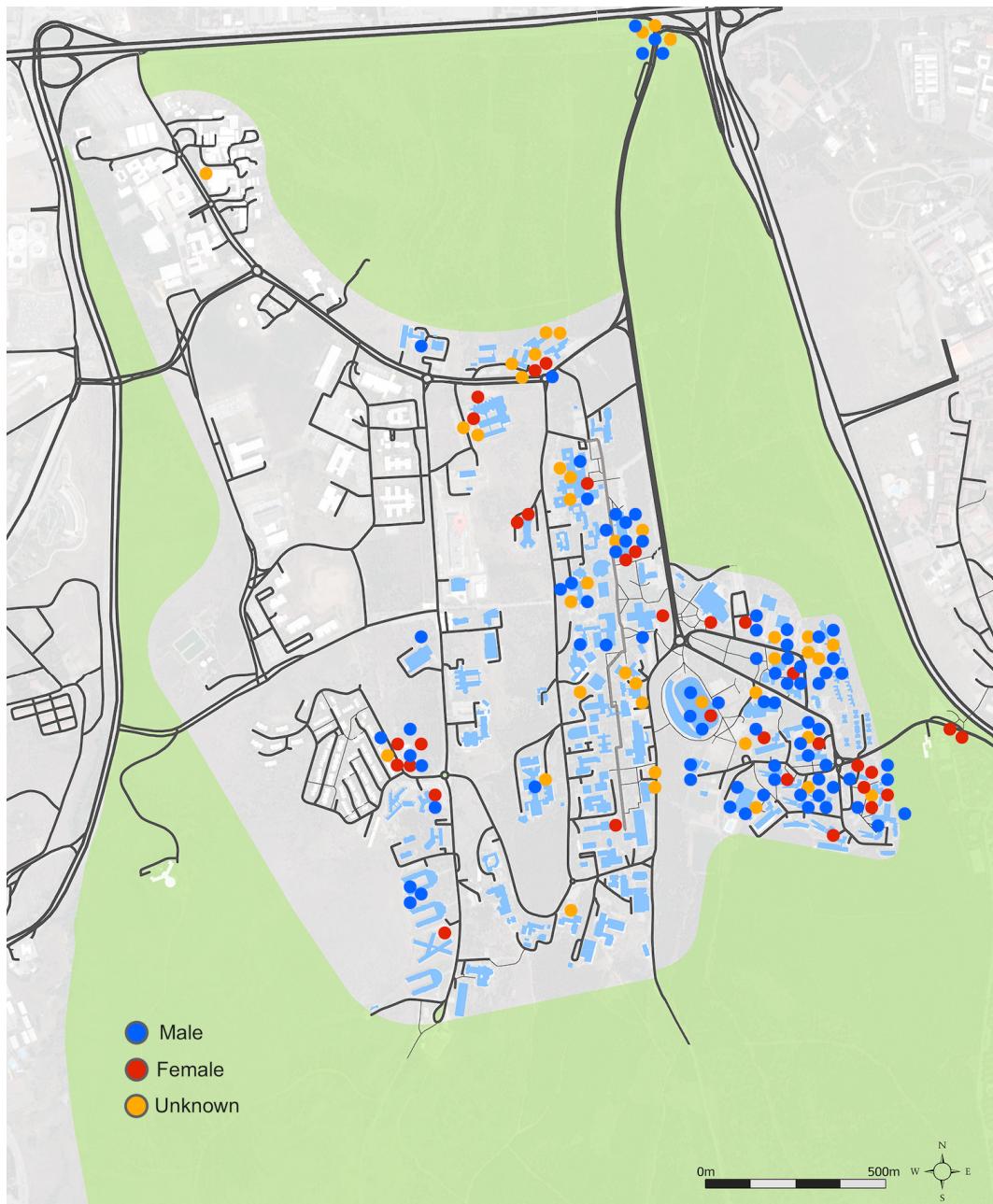


Figure 4.34: Distribution of theft in METU campus between 2009 and 2016. The map is prepared by the author.

To gain a complete perspective of safety in METU campus, data concerning theft, ha-

rassment and animal attacks were obtained from the administration of the university (Rektörlük) and Directorate of Internal Services (İç Hizmetler Müdürlüğü). The information included the gender, place and the date that complaints were made. However, in some cases gender was not specified. The data are collected between the years 2009 and 2016. The information representing harrasment reports were collected between 2012 and 2017 and all the people who filed a complaint were female.

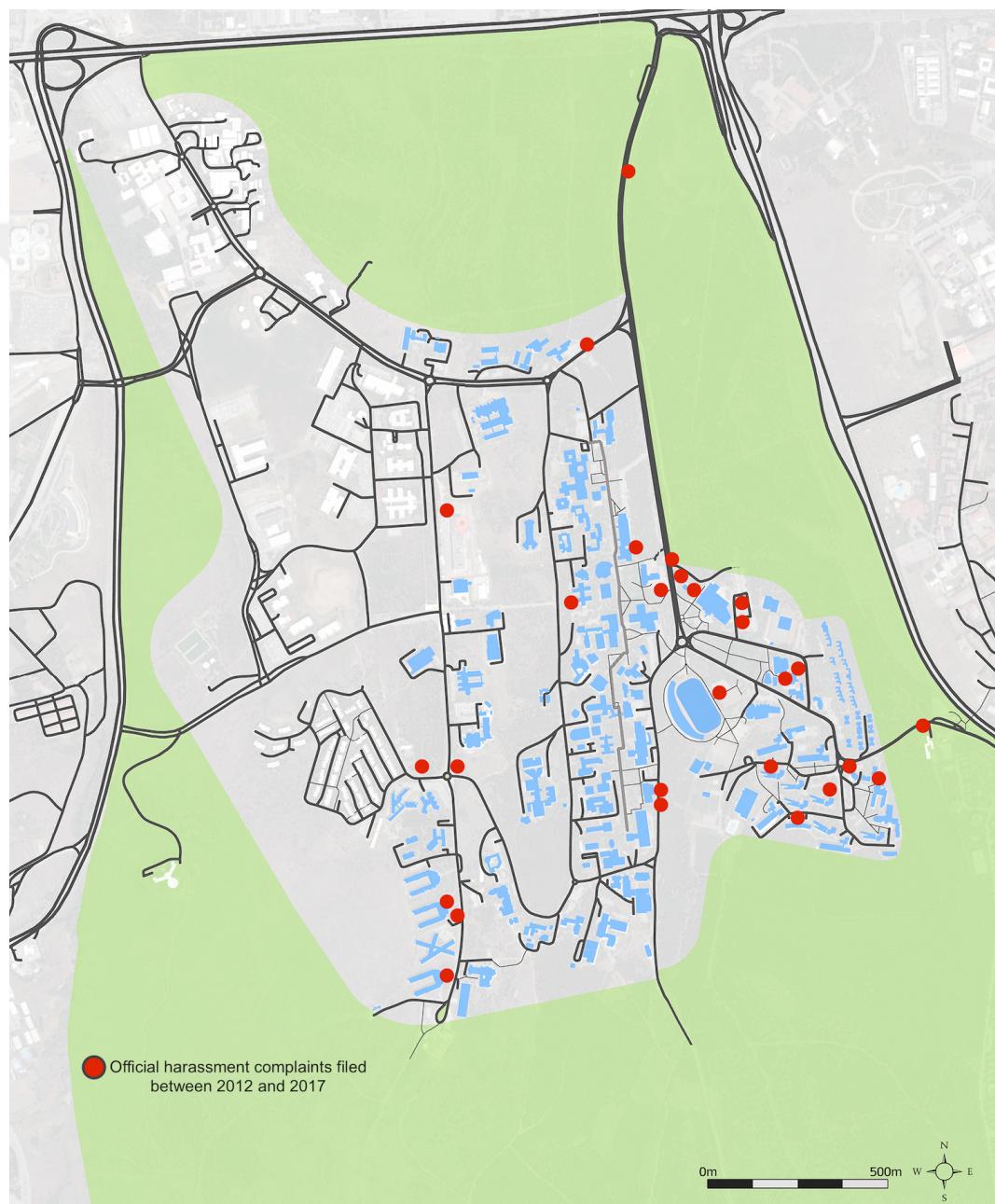


Figure 4.35: Distribution of harrasment in METU campus between 2012 and 2017. The map is prepared by the author.

Figures 4.34, 4.35 and 4.36, demonstrate the official data that were obtained from the administration of METU. Interestingly, areas where most of the incidents happened, are the places where students feel completely safe (Figure 4.37). The comparison of the results of interviews and the official data entirely supports the idea that perception of safety and fear of being in danger are different from actual risks. Assaults, animal attacks and thievery mostly happen in central and crowded parts of the campus. However students feel safe in those places due to the presence of people, transportation and easy access to facilities. Presence of people plays a crucial role in how students perceive their environment. Being around other students elevates the sense of belonging and reinforces natural surveillance. Spaces in the central spot of the campus and eastern dormitories which operate even after work hours, imply a sense of life and vitality. In his book, Kevin Lynch finds vitality as an inseparable element to increase perceivable safety.

The academic area which is considered as a safe zone by the students interviewed, is one of the areas where most of the dog attacks are reports. This could be a result of the segregation of functions. After classes finish and work hours are over, the academic area becomes quiet and empty. According to Jane Jacobs, multi-functional settings bring vitality and natural surveillance in different times of a day. They increase safety and reduce the risk of criminal activities by preventing a dead-spirited environments after work hours. Jane Jacobs' opinion on safety of cities is very valuable because she was not an architect nor an urban designer, her view came from a citizen who looked at new buildings and public spaces not as an architectural projects but environments that people from all backgrounds spend time and socialize. Spaces which have a direct influence on people's life quality.

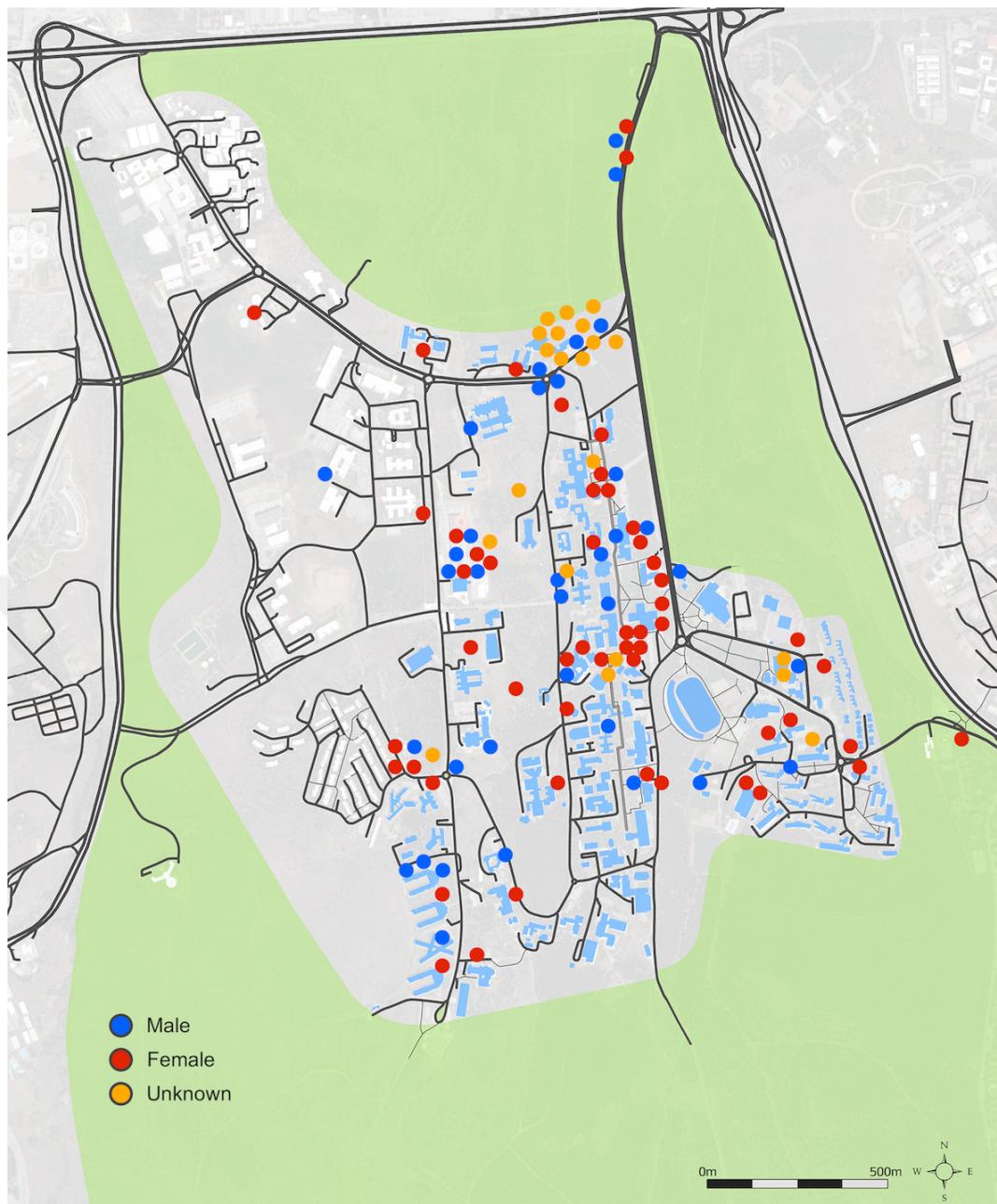


Figure 4.36: Distribution of dog attacks in METU campus between 2009 and 2016.
The map is prepared by the author.



Figure 4.37: Comparison of the data collected from the interviews and official reports.
The map is prepared by the author.

CHAPTER 5

CONCLUSION

A university campus is an urban environment with significant differences from other places. The majority of its users are young adults with remarkable talents and boundless potentials, seeking a right path to their future, aspiring to contribute to society. A campus nurtures and trains its students while providing a safe, lively, facilitated and supervised space to develop not only the students' career and academic images but also their individual and social capabilities.

Architects and urban designers have to be aware of the impact of their designs on people's wellbeing. Because they affect the way people perceive their setting. A behavior is related to the properties of an environment. Through their senses, human beings connect with environment and perceive it. The interaction between people and environment is analogous to a system with inputs and outputs. What an environment offers to its users, will be presented by people's reactions. Therefore, recognizing the influence of built environment on its users should be a priority in every design process.

Middle East Technical University is one of the most venerated campuses in Turkey. In spite of the students' great admiration, many feel unsafe in some parts of the METU campus. Therefore, some questions come to mind, what makes students feel unsafe? Is this feeling related to hazards that actually happen on specific areas? Is it possible to increase perceived safety through being more stringent in design specifications?

In this research, numerous variables such as sense of place, lighting, surveillance, mixed functions, maintenance, natural features, privacy, control, wayfinding, signage,

vitality, emotional attachment and sense of belonging, sense of community and place identity are taken into account. These dimensions have impact on the way students perceive safety. Each and every aforementioned element influences each student separately and in various degrees. Although, it is worth pointing out that many of these characteristics are intertwined with other components and have strong correlations with each other that one cannot be delivered without accomplishing the other.

In order to answer the thesis questions, in-depth interviews were conducted with 25 students who had the experience of living in the METU campus. Based on the data collected from the interviews specific places such as the western dormitories' vicinity, the area between the main academic zone and Technopolis, and the road connecting A1 entrance to KKM were recognized as places where students felt less safe in the campus. Among these, the western dormitories are the places where students felt the most unsafe. Analysing these places and pictures that were taken by the interviewees, clarified a series of problems that caused the reduction of perceived safety by students in that specific areas. The most noticeable issue regarding the perception of safety in the western parts of the METU campus was the absence of other people. Presence of the students in the eastern areas is observable. Interviewees expressed their experiences in the eastern parts of the campus as safe and enjoyable. Shopping centers, restaurants, cafes and other facilities that exist and operate until midnight in those parts bring people together, creating opportunities for socializing. These spaces not only increase vitality in the eastern parts but also provide natural surveillance for the environment. Surveillance is a key feature in creating safe public spaces and has been emphasized many times by scholars such as Jane Jacobs, Oscar Newman and Jon Lang in literature, whereas the western parts of the METU campus lack this quality.

The concern with the western dormitories' area is not solely about the shortage of spaces for recreational purposes. The lack of common places made the interviewees feel isolated, abandoned and detached from the community of the students which caused them to feel dismal, unsatisfied and unsafe. In addition, sense of belonging, sense of community and emotional attachment to their living environment was immensely influenced by this inadequacy. As it was mentioned in chapters 2 and 4 of this thesis, these senses play a significant role in achieving higher levels of perception of safety. However, it might come to mind that if students want to use the facilities

in the eastern parts of the campus they could simply go there. This brings up another issue related to perception of safety in the campus. It was thoroughly discussed in chapter 3 that METU was primarily designed as a walkable campus where students can walk from any point to another in less than approximately 15 minutes and how planning of the campus breakaway from this principle in time. The data collected from the interviews show that participants face different problems while traveling from the western dormitories to the main academic area and to the eastern parts of the campus. Despite the fact that there are ring buses in the campus that operate regularly between 9:00 and 16:50, many interviewees had difficulties going from one side of the campus to the other due to different reasons. There were justifications such as the difficulty in matching their plans with the rings' timetable and much less frequent transportation after work hours and on weekends which made the students seek for alternative options.

Walking from western dormitories to east side of METU or A1 entrance appeared to be problematic to most of the interviewees. Using the main roads takes a lot of time and there are very few paths arranged for walking. They are not well maintained and lighting is not sufficient which lead to creation of random shortcuts by students. These tracks that were developed across the vegetation between western dormitories and main academic area, reduce the commuting time to less than half comparing to the main roads. Hence, students are more willing to use shortcuts, however, the interviewees felt very unsafe using these specially in the winter and after or before work hours. Deficiency of proper pavement, lighting, fear of dog attacks, absence of other students, limited prospect and poor visibility due to vegetation caused students feel unsafe, even though the actual crime rate of these areas are very low.

The METU campus has a very rich natural environment. Dense vegetation creates not only an aesthetically pleasing setting, but also helps with controlling air pollution and preserving the flora and fauna. Despite of all the advantages of natural features of the campus, there are some disadvantages according to the interviewees and their claims are supported by the theories introduced Jon Lang, Ali Madanipour and others. Many students particularly those who live in the western dormitories and use the shortcut paths describe the greenery of those specific areas as unpleasant. Also, newcomers find it troublesome to navigate in the campus because of tall trees and short buildings.

Dense vegetation in the METU campus causes three major issues for the pedestrian. Reduction of visibility, difficulties in orientation and hidden spots are outcomes of abounding vegetation of the campus which make students feel less in control of their surrounding and feel less safe in those areas.

The subject of control in the scale of a public space was not measurable in this study. However, privacy as an element of attaining control was mentioned. Interviewees' level of privacy differed depending on their living arrangements (single or group rooms) and their personality and mostly related to interior of the dormitories which is not in the scope of this research. In general, students who participated in the interviews felt in control of their surrounding, although, not being able to travel in the campus at one's pleasure could convey the sense of uncontrollability.

The results of this study show no significant difference between male and female students regarding the perception of safety and built environment. Male and female interviewees shared mutual concerns about the detachment of the western dormitories from central areas, animal attacks and other problems related to walking in campus. Aforementioned results are also applicable to international and local students.

The outcomes of this research shows that the perception of safety is not achievable by solely taking security measures. Evaluating both in-depth interviews and official reports depict that despite the fact that most of the incidents happen in central and eastern dormitories areas, students feel more safe in those parts where dimensions of surveillance and vitality are strong. Although, the number of dog attacks, robberies and harassment are lower in the vicinity of the western dormitories , the interviewees feel less safe as a result of the absence of other students. This fact is quite expected as people usually link the sense of safety to the presence of other people. The results of this research supports the literature and can be used as another case that prove the theories of Jane Jacobs, Oscar Newman, Kevin Lynch, Jon Lang and Ali Madanipour in the relationship of perception of safety and features of urban design. This study makes a meaningful contribution to the fields such as environmental psychology, environment and behavior studies as well as design of public open spaces.

By taking all the information into consideration, introducing a number of common spots where students can spend time and participate in mutual activities, particularly

in the western parts of the METU campus is highly recommended. Existence of such places will increase the vitality and surveillance in those parts of the campus and diminish the sense of isolation. It will also increase the sense of community and belonging in students. Furthermore, by developing places for joint action in these parts of the campus, more people will go there to use the facilities which will elevate the presence of students in the area as well as the routes that lead there. Subsequently, the perceived safety can be increased in the problematic areas. In addition, to boost the sense of safety, the lighting and maintenance could be improved in the vicinity of the western dormitories specifically in the areas between Refika Aksoy Dormitory and METU Houses along with the shortcut paths and their green surroundings.

Inserting such common spaces should be done carefully and thoughtfully in order to provide students with adequate amount of perception of safety. Since the western parts of the campus have been developed more recently, this can be turned into an opportunity to excel in the design of new built areas which can live up to the expectations of students from the point of human-environment relationships, given the significance of this factor in the quality of people's lives. There are many possible routes to achieve this goal, such as conducting thorough surveys with people who use these areas and focus groups. In addition to this, the fact that METU is a university with valuable databases and reports, it is possible to look closely to data such as, crime rate, social activities, etc. to tailor this information sets to successful and effective design projects. Therefore, this study can play a role in outlining some of these problems as well as some clues toward efficient design of the new areas to sustain a healthy and safe university environment and campus life.



Bibliography

Akman, S. (2016). *Conserving and Managing Modern campus Heritage: “Alley” as the Spine of METU campus, Ankara, (Master’s Thesis)*. Middle East Technical University.

Association, A. L. G., et al. (2008). National heart foundation of australia, planning institute of australia, 2009. *Healthy Spaces and Places: Making it Happen–Integration*—available from: <http://www.healthyplaces.org.au/site/integration.php>.

Austin, D. M., Furr, L. A., & Spine, M. (2002). The effects of neighborhood conditions on perceptions of safety. *Journal of criminal justice*, 30(5), 417–427.

Baba, Y., & Austin, D. M. (1989). Neighborhood environmental satisfaction, victimization, and social participation as determinants of perceived neighborhood safety. *Environment and Behavior*, 21(6), 763–780.

Boyce, C., & Neale, P. (2006). Conducting in-depth interviews: A guide for designing and conducting in-depth interviews for evaluation input.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative research in psychology*, 3(2), 77–101.

Cinar, E. A., & Cubukcu, E. (2012). The influence of micro scale environmental characteristics on crime and fear. *Procedia-Social and Behavioral Sciences*, 35, 83–88.

Cornell, E. H., Sorenson, A., & Mio, T. (2003). Human sense of direction and wayfinding. *Annals of the Association of American Geographers*, 93(2), 399–425.

Coursen, S. (2017). *safetymadesimple*. Retrieved from <https://safetymadesimple.wordpress.com/>

Cross, J. E. (2001). Private property rights versus scenic views: a battle over place attachments. In *12th headwaters conference, western state college*.

Day, K. (1999). Strangers in the night: women’s fear of sexual assault on urban

college campuses. *Journal of Architectural and Planning Research*, 289–312.

Dictionary, O. E. (2007). *Oxford english dictionary online*. JSTOR.

Dovey, K. (1998). Safety and danger in urban design. In *conference safer communities: Strategic directions in urban planning. convened jointly by the australian institute of criminology and the victorian community council against violence. melbourne* (pp. 10–11).

Ellin, N. (1997). Shelter from the storm or form follows fear and vice versa. *Architecture of fear*, 13–45.

Ellin, N. (2003). Fear and city building. *Hedgehog Review*, 5(3), 43–61.

Evans, G. W., & McCoy, J. M. (1998). When buildings don't work: The role of architecture in human health. *Journal of Environmental psychology*, 18(1), 85–94.

Fenmen, N. (2008, sep). METU Campus and Local Administration Panel. *ODTÜLÜLER Bulletin* 177, 7–8.

Fisher, B. S., & Nasar, J. L. (1992). Fear of crime in relation to three exterior site features: Prospect, refuge, and escape. *Environment and Behavior*, 24(1), 35–65.

Fox, G. L. (1977). " nice girl": Social control of women through a value construct. *Signs: Journal of Women in Culture and Society*, 2(4), 805–817.

Giddens, A. (1984). The constitution of society: Outline of the theory of structuration. *Berkeley: U of California P.*

Giuliani, M. V. (1991). Towards an analysis of mental representations of attachment to the home. *Journal of Architectural and Planning Research*, 133–146.

Günay, B. (1999). *Urban design is a public policy*. METU Faculty of Architecture Press.

Günay, B. (2017). *Baykan Günay's Personal Archive*. Ankara.

Harper, D., et al. (2001). *Online etymology dictionary*.

(IACLEA). (2004). *Campus Safety: Reality and Perception. The International Association of Campus Law Enforcement Administrators*. Retrieved from <https://www.iaclea.org/>

Jacobs, J. (1961). *The death and life of great american cities*.

Kennedy, L. W., & Silverman, R. A. (1985). Perception of social diversity and fear of crime. *Environment and Behavior*, 17(3), 275–295.

KUBİLAY, A. B. (2009). *CRIME PREVENTION BY MEANS OF URBAN DESIGN TOOLS: THE CASE OF İSTİKLAL NEIGHBORHOOD*, Ankara, (Master's Thesis). Middle East Technical University.

Kurdaş, K. (1998). *Odtü yollarım: bir hizmetin hikayesi*. Metu Press.

LaGrange, R. L., & Ferraro, K. F. (1987). The elderly's fear of crime: A critical examination of the research. *Research on aging*, 9(3), 372–391.

Lang, J. (1994). *Urban design: the american experience*. John Wiley & Sons.

Loukaitou-Sideris, A., & Fink, C. (2009). Addressing women's fear of victimization in transportation settings: A survey of us transit agencies. *Urban Affairs Review*, 44(4), 554–587.

Lynch, K. (1984). *Good city form*. MIT press.

Mack, N., Woodsong, C., MacQueen, K. M., Guest, G., & Namey, E. (2005). Qualitative research methods: a data collectors field guide.

Madanipour, A. (1996). *Design of urban space: An inquiry into a socio-spatial process*. John Wiley & Son Ltd.

Maslow, A. H. (1943). A theory of human motivation. *Psychological review*, 50(4), 370.

Merton, R. K. (1938). Social structure and anomie. *American sociological review*, 3(5), 672–682.

METU Conservation of Historical and Natural Values of METU. (2013). Retrieved from http://www.metu.edu.tr/system/files/odtunun{_}dogasi.pdf

Najafi, M., & Shariff, M. (2011). The concept of place and sense of place in architectural studies. *International Journal of Human and Social Sciences*, 6(3), 187–193.

Nasar, J. L., & Fisher, B. (1993). 'hot spots' of fear and crime: A multi-method investigation. *Journal of environmental psychology*, 13(3), 187–206.

Nasar, J. L., & Jones, K. M. (1997). Landscapes of fear and stress. *Environment and behavior*, 29(3), 291–323.

Newman, O. (1972). *Defensible space*. Macmillan New York.

Panju, M. (2008). *7 successful strategies to promote emotional intelligence in the classroom*. Continuum.

Payaslıoğlu, A. T., & Ergin, A. (1996). *Türk yükseköğretiminde bir yeniliğin tarihi*:

barakadan kampusa 1954-1964. Orta Doğu Teknik Üniversitesi.

Petherick, N. (2000). Environmental design and fear: the prospect-refuge model and the university college of the cariboo campus. *Western Geography*, 10(11), 89–112.

Rastyapina, O., & Korosteleva, N. (2016). Urban safety development methods. *Procedia Engineering*, 150, 2042–2048.

Ratnayake, R. (2017). Sense of safety in public spaces: university student safety experiences in an australian regional city. *Rural Society*, 26(1), 69–84.

Ratti, C. L. (2010). Student perceptions of campus safety at the university of mary washington. *Unpublished honours thesis*, University of Mary Washington, USA.

Re-Forestation Programme of METU. (1995). Retrieved from <http://www.akdn.org/ar/architecture/project/re-forestation-programme-of-metu>

SALTresearch. (n.d.). *Harika-Kemali Söylemezoglu Archive*. Retrieved from <https://www.archives.saltresearch.org/>

Sargin, G. A., & Savaş, A. (2016). A university is a society': an environmental history of the metu 'campus. *The Journal of Architecture*, 21(4), 602–629.

Schneider, S., & Pearcey, P. (1996). *The theory and practice of crime prevention through environmental design: A literature review*. Canada Mortgage and Housing Corporation.

Schweitzer, J. H., Kim, J. W., & Mackin, J. R. (1999). The impact of the built environment on crime and fear of crime in urban neighborhoods. *Journal of urban technology*, 6(3), 59–73.

Shaw, C. R., & McKay, H. D. (1942). Juvenile delinquency and urban areas.

Thani, S. K. S. O., Hashim, N. H. M., & Ismail, W. H. W. (2016). Surveillance by design: Assessment using principles of crime prevention through environmental design (cpted) in urban parks. *Procedia-Social and Behavioral Sciences*, 234, 506–514.

Uçar, S. (2001). *Changing understandings in the space organization of a university campus: The middle east technical university* (Unpublished doctoral dissertation).

Waters, J., Neale, R., & Mears, K. (n.d.). Perceptions of personal safety in relation to

the physical environment of university campuses.

Whitzman, C. (1992). Taking back planning: Promoting women's safety in public places—the toronto experience. *Journal of Architectural and Planning Research*, 169–179.





APPENDIX A

ETHICS COMMITTEE APPROVAL



DUMLUPIVAR BULVARI 06800
ÇANKAYA/ANKARA/TURKEY
T: +90 312 210 22 91
F: +90 312 210 79 59
ueam@metu.edu.tr

Sayı: 28620816 / 

07 HAZİRAN 2017

Konu: Değerlendirme Sonucu

Gönderen: ODTÜ İnsan Araştırmaları Etik Kurulu (İAEK)

İlgili: İnsan Araştırmaları Etik Kurulu Başvurusu

Sayın Prof. Dr. F. Cânâ BİLSEL;

Danışmanlığını yaptığınız yüksek lisans öğrencisi Negin FROUGHİSAEİD'in "Üniversite Kampüslerinde Güvenlik Algısı ve Tasarım Özellikleri İlişkisi: Orta Doğu Teknik Üniversitesi Örneği" başlıklı araştırması İnsan Araştırmaları Etik Kurulu tarafından uygun görüлerek gerekli onay 2017-FEN-028 protokol numarası ile 07.06.2017 – 30.12.2017 tarihleri arasında geçerli olmak üzere verilmiştir.

Bilgilerinize saygılarımla sunarım.


Prof. Dr. Ayhan SOL

Üye


Prof. Dr. Ş. Halil TURAN

Başkan V


Prof. Dr. Ayhan Gürbüz DEMİR

Üye


Doç. Dr. Yaşa KONDAKÇI

Üye


Doç. Dr. Zana ÇITAK

Üye

BULUNAMADI

Yrd. Doç. Dr. Pınar KAYGAN

Üye

Yrd. Doç. Dr. Emre SELÇUK

Üye

APPENDIX B

CONSENT FORM

Dear Respondent, I am a master of architecture student of Architecture department of Middle East Technical University. I am administering this questionnaire as part of the requirement for in-depth interview to complete my M.ARCH degree and I would want you to assist in responding to the items. Kindly note that you are not obliged to participate but, if you choose to, your honest response to the items would be well appreciated. There are no right or wrong answers and your response will be treated with absolute confidentiality and used for academic purpose only.

Full Name: Age:

E-mail address:

Gender: Male..... Female

Level of education: Major:

Job status:

How long have you been living on campus?

Do you own a vehicle?

In signing this agreement, I hereby acknowledge that I have not been forced in anyway to participate in this interview, that my interview is being recorded, that I have the right to leave the interview anytime I want, that I have read the entire document, that I have signed it knowingly and voluntarily.

Full Name: Signature:



APPENDIX C

IN-DEPTH INTERVIEW QUESTIONS

1. How do you feel in specific places on campus?(Residential area, Recreational area, Academic area)
2. What do you think about privacy on campus?
3. How do you feel about occurrence of unexpected things while walking on campus?
4. What do you feel about being in control of your surrounding?
5. Can you map your location?
6. How do you feel about the buildings around you?
7. Can you understand their functions from their facades?
8. How do you feel about finding your way when you are walking in campus?
9. How do you feel about going out at night in campus?
10. How do you feel about going out of campus at night?
11. How do you feel about other people around you?
12. When do you prefer to go out?
13. Where do you like to go in campus?
14. Where do you feel safer in campus?