HOW OUT-OF-CLASSROOM ACTIVITY AREAS AND SURROUNDING LAND USES AFFECT STUDENTS' FEELINGS ABOUT COMING SCHOOL?: CASES IN IZMIR

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ABSTRACT

HOW OUT-OF-CLASSROOM ACTIVITY AREAS AND SURROUNDING LAND USES AFFECT STUDENTS' FEELINGS ABOUT COMING SCHOOL?: CASES IN IZMIR

The research examines the factors affecting the positive feelings of 10 to 15-years-old secondary school students about coming to school. The effects of out-of-classroom activity areas, such as the school garden, and the use of land around the school, such as parks and other public green areas, on the physical and mental health of students are proved in the literature. However, no research was found on the effects of these areas, in addition to different out-of-classroom activity areas and land use around the school, on the positive feelings of students about coming to school. In this thesis, the factors affecting positive feelings about coming to school were determined based on the factors affecting school engagement, academic achievement, school climate, and regular attendance, which are important parts of positive feelings about coming to school. These factors are considered as social and physical factors. Social factors are grouped as individual, parental, house, and household characteristics. Physical characteristics include out-of-classroom activity areas, and land uses around the school. At the same time, children's perceptions of these areas and their expectations from these areas were also examined. The aim of this study is to determine the relationship between students' positive feelings about coming to school and the variety of out-of-classroom activity areas and land uses around the school. This thesis was developed by about 10-15-year-old secondary school students in four secondary schools in four neighborhoods in Konak and Karabağlar / İzmir. It offers field observations and user surveys. As a result, it develops suggestions and strategies for the location selection of schools and the physical design of out-of-classroom activity areas.

Key Words: *Out-of-Classroom Activity Areas, Land Uses Around the School, Location Selection of Schools.*

ÖZET

DERSLİK DIŞI AKTİVİTE ALANLARI VE ÇEVRE ARAZİ KULLANIMLARI ÖĞRENCİLERİN OKULA GELMEYE DAİR DUYGULARINI NASIL ETKİLİYOR?: İZMİR ÖRNEKLERİ

Araştırma 10-15 yaşındaki ortaokul öğrencilerinin okula gelme ile ilgili olumlu duygularını etkileyen faktörleri incelemektedir. Okul bahçesi gibi derslik dışı aktivite alanları ve park, diğer kentsel yeşil alanlar gibi okul çevresindeki arazi kullanımlarının öğrencilerin fiziksel ve zihinsel sağlıklarına etkisi kanıtlanmıştır. Fakat bu alanların ve buna ek olarak farklı derslik dışı aktivite alanları ve okul çevresindeki arazi kullanımlarının öğrencilerin okula gelmeye dair olumlu duygularına olan etkisine dair bir araştırmaya rastlanmamıştır. Bu tezde okula gelmeye dair olumlu duyguların önemli bir parçası olan okula bağlılık, akademik başarı, okul iklimi ve okula düzenli katılımı etkileyen etkenler üzerinden yola çıkarak okula gelmeye dair olumlu duygulara etki eden faktörleri saptamıştır. Bu faktörleri sosyal ve fiziksel faktörler olarak ele almıştır. Sosyal faktörler bireysel, ebeveyn, ev ve ev halkının karakteristik özellikleri olarak gruplandırılmıştır. Fiziksel özellikler ise derslik dışı aktivite alanları ve okul çevresindeki arazi kullanımları olarak ele alınmıştır. Aynı zamanda çocukların bu alanlara dair algıları ve bu alanlardan beklentileri de incelenmiştir. Bu çalışmanın amacı, öğrencilerin okula gelmeye ilişkin olumlu duyguları ile okul içi sınıf dışındaki etkinlik alanlarının ve okul çevresindeki arazi kullanımları çeşitliliği arasındaki ilişkiyi belirlemektir. Bu tez Konak ve Karabağlar / İzmir'de dört mahallenin dört ortaokulunda 10-15 yaş ortaöğretim öğrencileri hakkında geliştirilmiştir. Alan gözlemleri ve kullanıcı anketleri sunmaktadır. Sonuç olarak, okulların yer seçimi ve derslik dışı aktivite alanlarının fiziksel tasarımına dair öneri ve stratejiler geliştirmektedir.

Anahtar Kelimeler: Ortaokullar, Derslik Dışı Aktivite Alanları, Okul Çevresindeki Arazi Kullanımları, Okulların Yer Seçimi

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CHAPTER 1

INTRODUCTION

Schools are the places where students spend the most time outside of their homes. In addition to receiving education in these areas, they interact with their friends and develop themselves physically, socially, and mentally. Thus, the role of school areas in a student's life is important. Considering the importance of the school in the lives of students, we can say that the physical characteristics of the school are also very important for the students, as they spend most of the day at school. Therefore, the variety and quality of the out-of-classroom activity areas in schools become important in the educational process for students' development (Lockheed and Verspoor 1991). We cannot overlook the environment while evaluating the opportunities provided by schools. Alongside the school's offerings, the neighborhood where the school is located and the physical, social, and economic structure of this neighborhood are important factors in the educational process (Beere and Kingham 2017).

When considering students' educational experiences, it is important to consider various factors such as academic achievement, school engagement, school climate, and regular attendance. An important condition for academic achievement and school engagement is that students come to school regularly. If students come to school regularly, academic achievement and school engagement will to be high (Wang and Holcombe 2010; Wang and Eccles 2013; Finn and Rock 1997). It is well known that for students to attend school regularly, they need to be motivated and have a high level of school engagement. However, there is a lack of research regarding the impact of the variety of out-of-classroom activity areas in schools and the influence of the surrounding land use on students' positive feelings about coming to school.

The aim of this study is to determine the relationships between the students' positive feelings about coming to school and the variety of out-of-classroom activity areas in and the land uses around the school. While doing this, this thesis examines students' spatial perceptions about the school's out-of-classroom activity areas of the school and land uses around the school. Therefore, it is important for the study that the out-of-classroom activity areas and the around of the land use of the schools have variety. In

addition to this variety, the individual differences between the students and the social environment in the school, the socioeconomic characteristics of the environment in which the student lives, and parental characteristics are important for study. The target group for this study comprises students aged 10 to 15. This is because children in this age range begin to think logically, make realistic drawings, and comprehend two- and three-dimensional expression methods (Perkins 2002).

The study discusses, particularly, the school gardens as of the out-of-classroom activity areas, that students can access without permission during and outside the lesson. School gardens are areas where students can socialize (Funnell et al. 1997), play games, and improve their physical (Boldemann et al. 2006 as cited in Eminel Kutay 2019), social (Funnell et al. 1997), and mental health (Moore 1997). Eating places, parks, and other public green areas where students can socialize around the school and spend time with their friends are also discussed.

1.1 Problem Definition

This thesis examines social and physical factors that affect positive feelings about coming to school of students in the case of four schools in of four neighborhoods in Karabağlar and Konak in İzmir. This thesis examines a school that has out-of-classroom activity areas and land use around the school. In Turkey, the out-of-classroom activity areas in schools are determined in the "Eğitim Binaları için Minimum Tasarım Standartları Rehberi" as the school garden, library, multipurpose hall, conference hall, place of workshop, sports field, canteen, cafeteria, science and technology laboratory, art and music classrooms (Eğitim Binaları için Minimum Tasarım Standartları Rehberi 2015). The literature argues that the absence of such out-of-classroom activity areas in schools negatively affects the learning process (Kurniawan et al. 2018). In the literature, the school garden is the most studied out-of-classroom activity area. In addition to the learning environment, school gardens should be areas that contribute to the students' mental, physical, and spiritual development of students (Aksoy 2021). School gardens are planned to support students' physical activities, increase their interaction with nature, ensure active learning, and impact on their social development (Dyment et al. 2009).

School gardens increase students' communication, reduce bad habits, and create an effective learning environment (Funnell et al. 1997). In addition, the quality of the school

garden is also important. Trees and grass areas in schools reduce the mental fatigue of the individual and enable them to focus on the academy (Lin and Van Stan 2020). It has been found that academic achievement is better in schools with more trees (Kweon et al.2017).

The neighborhood where the school is located and the physical, social and economic structure of this neighborhood are important in the education process of students (Beere and Kingham 2017). While the presence of eating places such as cafes, patisseries, tea houses, and internet cafes around the school causes students to become alienated from the school and decrease their interest in lessons (Çiloğlu 2006), public green areas that students can actively use (Lin & Stan, 2020) support students' physical activities (Kweon et al. 2017) provide them with a relaxing environment that reduces their stress (Lin and Stan 2020).

There is no study in the literature that specifically focuses on "positive feelings about coming to school", which is an important factor for students' academic achievement and school engagement. As students' engagement in school increases, their academic achievement increases, and school attendance increases. Attendance at school regularly and participation in academic activities positively affect student motivation (Wang and Holcombe 2010). Considering all these, this study examines the effects of out-of-classroom activity areas, land uses around the school, and individual, parental, house, and household characteristics on students' positive feelings about coming to school. It aims to develop suggestions and strategies by evaluating these effects according to location selection and environmental planning.

1.2 Aim of the Study

The aim of this study is to examine whether there are relationships between the positive feelings of students (the ages of 10-15) about coming to school and the variety of land use around the school and out-of-classroom activity areas in their school and, if so, to determine the characteristics of these relationships.

Additionally, we will determine the individual characteristics of students, the effects of parental characteristics, and house, and household characteristics. The study aims to develop suggestions and strategies for the structural design, location selection, and environmental planning of secondary schools based on the study results. Figure 1 shows the factors affecting academic achievement and positive feelings about coming to school.
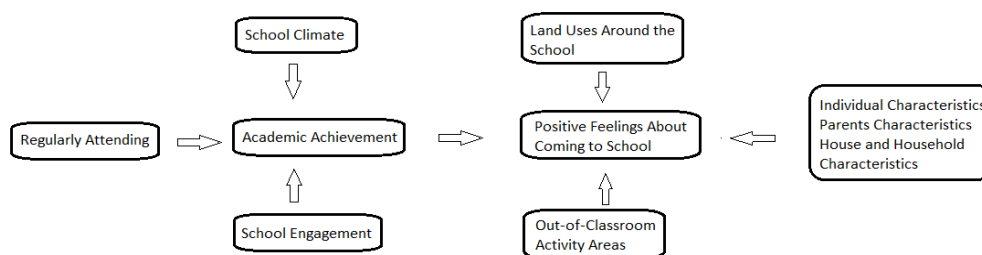
Figure 1: Factors Affecting Academic Achievement and the Positive Feelings About Coming to School

In accordance with this aim, the following questions will guide this research about the factors shaping students' positive feelings about coming to school:

Questions and Hypothesis:

Individual Characteristics and Parental Characteristics:

- How do the socio-economic status of the parents and the gender of the students affect their positive feelings about coming to school?
    - Girls have more positive feelings about coming to school than boys.
    - As parents' income increases, their children's positive feelings about coming to school increase.
    - As parents' education level increases, their children's positive feelings about coming to school increase.
    - Students with private rooms have more positive feelings about coming to school.

Out-of-Classroom Activity Areas:

- How does the number variety of out-of-classroom activity areas affect students' positive feelings about coming to school?
    - As the OCAA variety of the school increases, students' positive feelings about coming to school increase.
    - The presence of other public green areas in the school garden positively affect the students' positive feelings about coming to school.

- How does the frequency of use of the school garden affect students' positive feelings about coming to school?
  - o As the frequency of use of the school garden increases, students' positive feelings about coming to school increase.
- How do the out-of-classroom activity areas that students enjoy during and outside the lessons affect their positive feelings about coming to school?
  - o As the areas that students enjoy using during the lesson increase, their positive feelings about coming to school increase.
  - o As the areas that students enjoy using outside the lesson increase, their positive feelings about coming to school increase.

Land Uses Around the School:

- How does the number various of land uses (such as libraris, internet cafés, eating places, parks, and other public green areas) around the school affect students' positive feelings about coming to school?
  - o Students who have a library and internet cafe around their school have more positive feelings about coming to school.
  - o The increase in the number of parks and green areas around the school increases the positive feelings about coming to school.
  - o The increase in the number of eating places around the school reduces the positive feelings about coming to school.
- How does the school's location in a neighborhood with a high number of commercial land use affect students' positive feelings about coming to school?
  - o The high number of commercial uses in the school environment decreases positive feelings about coming to school.
- According to students' perceptions, if there is noise around the school, how does this affect their positive feelings about coming to school?
  - o According to students' perceptions, if there is noise around the school, noise around the school decreases positive feelings about coming to school.

1.3 Methodology and Study Site

With this study, students who are in secondary school around 10-15 ages in Şehit Fethi Bey Secondary School and Kemal Atatürk Secondary School in Konak in İzmir, Şehit Muhtar Mete Secondary School, and Cemil Meriç Secondary School in Karabağlar in İzmir are examined to investigate the factors that affect those students' positive feelings about coming to school. Within this context, three methods are employed to examine these factors. First, to examine the immediate built environment of the schools, site observations are employed. Then, the effects of out-of-classroom activity areas, land uses around the school and student, parental, house and household characteristics were examined with descriptive and regression analyses.

1.4 Structure of the Study

This thesis examines the factors affecting the positive feelings about coming to school of secondary school students in the sample of four schools in four neighborhoods in Konak and Karabağlar / İzmir.

Chapter 2 consists of a literature review. Students' spatial perceptions of schools, the place of schools in their lives, learning processes, and academic achievements are explained. Then, the social and physical factors affecting the positive feelings about coming to school are examined. Social factors consist of the individual characteristics of students and the socio-economic characteristics of parents. Physical factors are divided into out-of-classroom activity areas and land use around the school. In addition, due to the importance of school gardens in the literature, school gardens are also discussed. Location selection of schools, eating places, and parks and other public green areas were also emphasized.

Chapter 3 methodology includes specifying the data analysis methods used and explaining the study site. The data were analyzed under two headings as social environment data and built environment data.

Chapter 4 includes the social results of the descriptive analysis. It consists of individual, parental, house and household characteristics headings.

Chapter 5 contains the physical results of the descriptive analysis. The variety, awareness, purpose of use, enjoyable places and expectations of out-of-classroom activity areas were examined. As in the literature review, the school garden is also discussed.

Chapter 6 contains the physical results of the descriptive analysis. The variety, awareness, purpose of use, enjoyable places and expectations of land uses around the school were examined. As in the literature review, eating places, parks and public green areas are also discussed.

Chapter 7 includes regression analysis (linear regression and ordered logistic regression) and descriptive analysis of questions that directly challenge positive feelings about coming to school.

Chapter 8 is the last chapter. This section includes various planning suggestions and suggestions to encourage students' positive feelings about coming to school. It presents these suggestions by considering the expectations of the students and their physical/social characteristics.

CHAPTER 2

LITERATURE REVIEW

2.1 Student's Spatial Perceptions about Schools Areas as a Factor in the Learning Process

The literature review starts by explaining the place of school in students' lives and their spatial perceptions. In order to emphasize the importance of the schools' location, environment, and out-of-classroom activity areas of the schools in terms of planning and design, the location selection of the schools is mentioned. After that, it explains the concepts of students' motivation to learn in the learning process and academic achievement, which is an evaluation of the process.

The effect of these definitions on positive feelings about coming to school is examined by explaining the definitions of school engagement and school climate, which are associated with academic achievement. Then, considering the importance of regular attendance at school in the learning process, we will try to determine the students' positive feelings about coming to school and the differences that affect positive feelings about coming to school based on the factors that affect academic achievement. We will examine these differences under three headings:

- o Students' individual characteristics
- o Socio-economic characteristics of parents
- o Variety of out-of-classroom areas and land uses around the school.

Table 1 shows that if we look at the list of articles in YÖKTEZ on the topics we will focus on, only 19 of the 649 articles are related to the field of city and regional planning. The articles are mostly from the field of education and training. We can assume that there are not many studies on this subject in city and regional planning.

Table 1: Article Search in YÖKTEZ

Keyword	Subject	Number of Article
School Environment	Education and Training	45
	Interior Architecture and Decoration	6
	Public health	1
	Sport	1
	City and Regional Planning	1
	Psychology	2
	Landscape architecture	1
	Accidents	1
	Nursing	1
	Public administration	1
Desire/willingness/positive feelings to go/come to school	-	0
School absenteeism	Education and Training	3
Student motivation for Academic Achievement	Education and Training	24
	Tourism	1
	Psychology	1
	Architecture	1
	Public health	1
	Business	1
	Science and technology	2
	Health Education	1
Achievement/Academic/Learning motivation	Education and Training	136
	Sport	19
	Psychology	6
	Business	5
	Statistics	1
	Interior Architecture and Decoration	1
	Public health	1
	Tourism	1
	Health institutions management	1
	Social services	1
	Museology	1
	Nursing	1
Student Achievement/Engagement	Education and Training	180
	Computer and control	1
	Chemical	1
	Maths	6
	Fine Arts	1
	Music	1
	Sociology	1
	Business	1
	Technical Education	1
	Information and document management	1
	Geography	1
	Psychology	1

(Cont. on the next page)

(Table 1. Cont.)

	Education and Training	3
	Interior Architecture and Decoration	8
	Psychology	1
	City and Regional Planning	3
Spatial perception	Ear Nose Throat	4
	Architecture	9
	Sociology	1
	Landscape architecture	1
	Fine Arts	3
	Computer and control	1
	Architecture	3
Environmental Psychology	Interior Design and Decoration	1
	City and Regional Planning	2
	Education and Training	6
	Business	1
	Public administration	1
	City and Regional Planning	4
Environmental Perception	Geography	1
	Environmental engineering	1
	Landscape architecture	1
	Economy	1
	Interior Architecture and Decoration	1
Perception of School Garden	-	0
Eating Services/Food Outlets	**-**	0
	Architecture	1
School garden	Landscape architecture	8
	Education and Training	6
School Effectiveness	Education and Training	36
	Education and Training	1
	Architecture	6
	City and Regional Planning	11
	Public administration	1
Green space	Landscape architecture	55
	Public relations	1
	Geodesy and photogrammetry	2
	Agriculture	1
	Political science	1
	Environmental engineering	2

2.1.1 Students' Spatial Perceptions of Their School and Its School Garden

Perception can be defined as the interpretating of the information obtained by the sense organs and the reflecting of this interpretation (Dinçer 1998). Even if the sense of

sight is emphasized while focusing on the perception of space, perception is related to all senses. Perception builds the bridge between space and humans. The components that makeup space affect the individual's perception of space (Yılmaz 2006). The perception process is two-staged. The first stage is the sensory process, which is based on our senses, and the second stage is the mental process, which is based on knowledge. The sensory process is the process by which we experience space. It is a mental process in which a person constantly remembers past experiences with the information that remains in mind (Lang 1987 as cited in Geçgin 2015).

Spatial perceptions are formed in childhood. The spatial relations that the child first grasps can be listed as proximity, separation, order, surroundings, and continuity (Piaget and Inhelder 1964). From the moment they are born, children are influenced by their environment and begin to perceive it (Itoh 1999). Spatial perception emerges when the child establishes a connection between himself/herself and space. The child starts this connection by becoming aware of himself/herself. In the development of the child's spatial perceptions, the role of the school is great besides the home (Read et al. 1999). Because the child spends most of the day at school. The spatial perceptions of children growing up in isolation in uniform schools will be quite different from those in non-uniform schools (Şener 2006). At this point, we can emphasize the importance of the diversity of the school's facilities and out-of-classroom activity areas. Children's spatial perception develops as they perceive themselves as individuals. Children who see themselves as individuals can also mentally define their surroundings. We cannot expect the spatial perception of a child, whose spatial and individual perceptions are not yet developed, to develop (Piaget and Inhelder 1967).

Children's interactions with the space in daily life and their experience of the space may differ from other users. Children interact with the physical environment. They explore and experience the physical environment through curiosity. These experiences and explores lead to the formation of spatial perceptions. Children's spatial perception is shaped according to the physical characteristics of these areas (Türel and Gür 2019). The perceptions of children between the ages of 11 and 12 are dependent on the time they spend in the space and their experiences. The transmission of spatial perceptions changes with time and experience. Children over the age of 16, on the other hand, can describe places where they do not spend much time and have little experience by making realistic drawings (Çevirayak 2019). According to Türel and Gür (2019), children in the 7-12 age group can comprehend two- and three-dimensional expression methods by making

realistic drawings. After 12 years of age, the child begins to understand Euclidean relations and the three-dimensional expression technique. Children's perception of space is related to how much space subconsciously affects them and how they define it.

In the Kağıthane study conducted by Türel (2017), the spatial perceptions of the students about the schools where they spend the most time in daily life after home are examined. In this study, it is revealed that the area that students remember the most at school is the area where they spend the most time. Students often prefer school gardens to socialize. It has been observed that children play in designed or undesigned areas in the school garden. The opportunities offered by the school garden have caused the students to have a strong perception of the outdoors.

In addition, in the example of Eskişehir by Kurt (2016), the importance of the size of the school garden and having different types of facilities was emphasized. It is seen that the student plays an important role in knowing themselves and the learning environment. The school garden is emphasized in the drawings made by the children in their spatial perception of the garden. Social actions and activities are highlighted here. In addition, natural elements are found in the drawings of the garden. This shows that school gardens need more green areas and natural elements.

Tamoutseli and Polyzaou (2010) investigated the effects of gender and age on children's perceptions of their school garden in Greece. As a result of the research, it seen that the children perceived the school gardens as a natural habitat, and there were differences in perception according to age and gender.

As a result, this thesis will also focus on school gardens because of the importance of the spatial perception of school gardens in schools where students spend most of the day. The variation in the physical characteristics of the schools and the school environment causes the spatial perceptions of children to differ. Considering the place of schools in children's lives and the development process of children's perceptions of space, the target group of this study was children between the ages of 10 and 15. The children aged 10-15 identified in this study are the secondary school education level. We expect the spatial perceptions of children in this age group to differ from those in the 10-12 and 13-15 age groups. At the same time, we expect it to change in terms of motivation, academic achievement, school engagement, and positive feelings about coming to school, which are associated with the learning process. The literature review will an explanation of these learning process concepts.

The handling of environmental psychology together with the subject of education dates back to the end of the 1950s. However, this issue has not been adequately addressed in the literature. Studies on school building and environmental psychology were conducted by education experts. Educators tend to ignore two important points regarding the educational process: First, schools provide a physical environment, and secondly, this physical environment has an impact on students' behavior and education program. Environmental psychology can contribute to improving education by addressing these two issues. Regardless of the educational purpose, the effect of the physical environment on knowledge transfer, achievement and the cognitive development of children should be investigated. Studies on school noise have come to the fore in the field of environmental psychology. School noise is examined under two headings: noise produced by aircraft and surface traffic, defined as external noise, and noise produced by the daily activities of teachers and students, defined as internal noise (Rivlin and Weinstein, 1984). Studies on noise have shown that the academic achievement of students in schools with external noise is lower (MacCarthy 1975). Research by Cohen et al. (1980) found that noise causes distraction.

As a result, the noise in the school is discussed in the subject of environmental psychology. In this thesis, the noise environment that students are exposed to will be evaluated.

2.1.2 The Place of Schools in Students' Lives

In this section, the place of schools in students' educational and social lives are discussed. At the same time, the effects of out-of-classroom activity areas and land uses in schools on their educational and social lives are discussed.

The meaning of the school for the student is very important in terms of spatial perceptions. Because school is the first environment where students are born and leave their homes and mothers. Their experiences here occur away from home and their parents. At the same time, there are students who are in the same situation as the students themselves, and they create a social environment with these students. A certain important part of a student's life is spent in school. Students spend five days a week and the most active hours of the day at school. Therefore, students have a direct and intense relationship with the school space. This relationship has psychological and physiological effects. If

we consider the space-user relationship, when students start school, they find themselves in a different environment and social environment (Kurt 2016). The student's relations with the place in schools, where different experiences occur after home, form their spatial perceptions. The effect of school, which is the first different environment after home, on students' spatial perception and psychological and physiological characteristics is undeniable.

A school is an institution that provides knowledge, skills, and attitudes to a certain age group in a programmatic way (Kalfa 2006). So, schools are the place where educational goals are realized. Primary education in our country covers the age range of 6-14 years. Secondary education covers the 14-18 age range. The main function of schools is known as learning and teaching (Günal 2018). But the only function of schools is not to realize learning and teaching. Students have leisure time during breaks and lunch breaks. A social environment is created for students to play with their friends during breaks and lunch breaks (Karadağ et al. 2012). The opportunities offered by the school gardens and the out-of-classroom activity areas in the school play a role in the socialization of students. The school's impact on a student's pedagogical development is significant, largely due to the social environment it provides (Erten 2012). The social environment offered by schools is not limited to out-of-class activities. Schools offer the opportunity for students to socialize not only with the out-of-classroom activity areas but also in the classroom. Thus, education in school goes beyond the boundaries of the school and includes the school environment.

The educational activities of the school are not limited to the school. Education at school is also affected by the environment in which the school is located (Çiloğlu 2006). In addition to the out-of-classroom activity areas that the school has, the surrounding land uses, building typologies, and quality of the environment also affect the student (Aydın 1988 as cited in Çiloğlu 2006). The physical characteristics of school environments vary. Some schools have only residential areas around them, while others have school environment have commercial uses around them. Since the physical environment of the school includes the social environment, it is worth examining the student's place in educational life (Çiloğlu 2006).

As a result, out-of-classroom activity areas and land uses around the school play an important role in the socialization process, which is part of education. Spatial perception studies were conducted to understand the interaction of students with physical space. These perception studies are very important for student-space interaction.

2.1.2.1 Learning Process and Academic Achievement of Students

In this section, the importance of learning in educational life and the concepts of learning, motivation, school climate, school engagement, and school absenteeism, which affect the learning process, will be examined. Then, student achievement, which is a result of the learning process, will be emphasized.

Learning is about behavior and can be defined as the observable changes that occur in an individual's responses to stimuli and behaviors (Ertmer and Newby 2013). Learning is the goal of the educational process. Learning is an important tool that transforms and changes the lives of individuals and societies (Kwegyiriba et al. 2021). Education has the task of equipping students with knowledge to cope with difficulties and producing quality students both physically and spiritually (Fath 2015 as cited in Supratno and Mochamad 2021). When education and the learning process are considered together, the first thing that comes to mind is schools. Schools are places where students carry out their learning activities and are nurtured to bring about changes in their lives.

Motivation is one of the most important factors in helping students achieve the desired goals in education (Akbaba 2006). Motivation is the most fundamental factor that enables students to learn (Kwegyiriba et al. 2021). Learning motivation is the individual's desire to perform a learning activity aimed at increasing achievements (Pratiwi 2017 as cited in Supratno and Mochamad 2021). It has been observed that learning motivation has a positive effect on learning achievement (Supratno and Mochamad 2021). Students with high motivation are expected to have high academic achievement (Kurniawan et al. 2018). A suitable school environment is very important for motivation, which is an important factor in the realization of learning. It is very difficult to create a learning environment that will appeal to every student (Özçalışan 2013). At this point, considering the school climate is important for learning motivation.

Although there is no common definition of **school climate,** it can be defined as the characteristics of the school that affect the behavior of each individual in the school (Hoy and Miskel 2011 as cited in Dulay and Karadağ 2017). The positive learning process of students is related to the climate in the school. School climate reflects students' perceptions of the school (Dönmez 2016). School climate consists of different parts of the school, such as the physical environment, communication between teachers and students, social environment, and emotional environment (Tableman 2004). At the same

time, the motivation of students and teachers and students' achievement are directly related to the school climate (Haynes et al. 1997). Another important factor in the school climate is the environment of trust in the school. The school climate is positive in schools where students feel safe (Dönmez 2016). A positive school climate makes students feel engaged with the school (Özdemir et al. 2010). Therefore, we will continue the literature review by examining the concept of school engagement.

School engagement is important factor for the educational process. School engagement is the state of the student's participating in academic activities at school and having positive feelings about the school (Arastaman 2009). Students with a high sense of belonging to the school have higher academic achievement (Wang and Holcombe 2010). Participating in activities at school and establishing bonds with the school through love results in an increase in the sense of belonging to the school (Fredericks et al. 2004). Students with low engagement to school become alienated from school by isolating themselves (Willms 2003). Students who are alienated from school engagement may drop out or avoid attending school. When students' school engagement increases, the probability of absenteeism decreases, and their academic achievement improves (Yılmaz 2016). We will continue by explaining the concept of school absenteeism, which is closely related to school engagement.

Studies show that students' coming to school is related to school climate, school engagement and motivation. Regularly attending school and participating in academic activities increase the student's engagement with the school and have a significant impact on student motivation (Wang and Holcombe 2010). Students who attend school regularly, concentrate on learning, and adhere to school rules are more successful (Bandura et al. 1996). There may be reasons for students to be absent from school, such as being bored with school, not liking the school and the course, and not having any expectations about education. **School absenteeism** and dropouts are increasing in Turkey. The reasons for the increase can be listed as individuals' academic capacity and motivation, absenteeism from school, academic failure, socioeconomic level of the family, loss of attractiveness of the school, and decreased confidence in the school. In addition, the lack of physical characteristics related to schools is also effective in absenteeism and school dropouts (MEB and UNICEF 2013 as cited in Günal 2018). At the same time, students who find the school climate positive are more likely to attend school. It has been observed that the attendance problem in schools with a small school size is less than in schools with large size. In addition, the school climate is positive, and academic achievement is higher in

small schools (Cotton 1996). While explaining these concepts, which are part of the learning process, we saw their connection with student achievement. We will continue by examining student achievement.

Student achievement can be defined as students exhibiting target behaviors. In addition, achievement is the change in the emotions and behaviors of students after experiencing the learning process (Alichia 2013 as cited in Supratno and Mochamad 2021). Evaluation takes place at the end of the teaching process (Fidan 1986). Different measures are used in the evaluation of the education system. As a result of this evaluation, the academic achievement of the students is revealed. Tests are applied or observation is used to grasp these changes. According to Carter and Good (1973), academic achievement is evaluated by teachers in schools with scores obtained by measuring skills and achievements. However, evaluation of success does not only consist of evaluations at the end of the teaching process. While homework and exams are used in the measurement of achievement, perceived academic achievement can also be measured with the tests developed by the researchers (Erdoğdu and Kapaklı 2008). Academic achievement has many factors. The fact that students have high physical and mental health and technological innovations affect academic achievement positively (Byrnes 2011).

There are many factors that affect the achievement of students. In the literature review, we explained the concepts of learning, motivation, school climate, school engagement, and school absenteeism, which are the factors affecting school achievement. In the learning process, students' positive school climate, high school engagement, high learning motivation, and low absenteeism ensure high academic achievement.

As a result, regular school attendance is also directly related to academic achievement, school climate, motivation to learn, and engagement in school. However, students' positive feelings about coming to school have not been used as a definition in the literature. For this reason, this study will examine the factors affecting student achievement while investigating the factors that affect positive feelings about coming to school. Because one of the basic requirements for student achievement is to come to school regularly. The factors affecting positive feelings about coming to school will be examined as social and physical factors in the next chapters.

2.2. Factors of "Desire to Come to School"

In this section, we focused on the individual characteristics that affect the academic achievement of the students. We examined the impact of the social environment at school, students' gender, age, and racial or ethnicity differences.

2.2.1. Social Factors

In this section, the effects of individual characteristics of students and socio-economic characteristics of parents were examined.

2.2.1.1 Individual Characteristics of Students

The individual characteristics that affect positive feelings about coming to school are related to the school climate. In the literature review, we defined the school climate as the physical environment, in the school, the communication between the teacher and the students, the social environment and the emotional environment. Communication among students affects their motivation to learn (Wang and Eccles 2013). When schools do not control the behavior of students and allow it, it can cause a "culture of bullying" (Whitted and Dupper 2005). This situation harms the academic, social and emotional development of students (Goldbaum et al. 2007). It has been observed that the engagement between the bullied students (victims) and the school has weakened or completely broken (Whitted and Dupper 2005). Thus, the academic achievement of the bullied students is low (Glew et al. 2005). The acceptance of the students' exitence by their friends as well as by teachers has an impact on academic achievement (Pianta and Stuhlman 2004). Acceptance of students by their friends and teachers causes them to feel safe at school. Feeling insecure at school is a major barrier to learning. Students who feel insecure are less likely to attend class (Hernandez and Seem 2004). At the same time, the social environment created by his friends is also effective in security. The presence of people who set a bad example in the school environment, that is, people who use cigarettes, drugs, and steal, is a factor that reduces the academic achievement of the student. In addition, the presence of the police at the school gate during fights after school negatively affects academic achievement (Yelgün and Karaman 2015).

The level of academic achievement also varies according to the individual differences (age, gender, race or ethnicity) of the individuals. Boys and girls receive different levels of support from their teachers at school (Rueger et al. 2010). Thus, girls are more attached to school than boys (Martin 2004). This difference in school engagement between girls and boys causes girls to have higher academic achievements than boys. In another study, it was found that the academic achievement of boys was higher than that of girls (Aslanargun et al. 2016).

In addition to gender, the academic achievement of students differs according to age groups. Hernandez (2011) found that the level of academic achievement in the third year is an important indicator of future academic achievement.

At the same time, racial differences among students also affect the level of academic achievement. In a study, Maloutas et al. (2019) found that immigrants from developing countries outside of Europe living in Greece were less likely to attend school and achieved lower academic achievement compared to Greeks.

As a result, the literature contains studies with varying results concerning gender. However, articles on age are limited, and academic achievement among minority racial groups is lower.

2.2.1.2 Socio-Economic Characteristics of the Parents

This section focused on the socio-economic status of the parents. The economic level of the neighborhoods where the students live and the economic status of the house they live in were also examined.

In studies on student achievement, the socio-economic characteristics of families are more emphasized than individual characteristics (Yelgün and Karaman 2015). Turkey is the third country with the strongest relationship between the economic situation and academic achievement. The high socio-economic level of parents ensures that academic achievement of student is high (Yanpar 1994). Parents who have a high economic level guide to their children, and student's academic achievement increases (Hortaçsu 1995). The parents' low educational level can lead to a lack of emphasis on education within the family, resulting in low academic achievement for the student (Connel et al. 1991). The academic achievement of the students whose parents have low economic level is low. Parents working in temporary jobs with irregular incomes, children engaged in street

work, lacking a conducive home study environment, having irregular meals, and limited access to resources like the internet and computers cause lower academic achievement (Yelgün and Karaman 2015). As the economic conditions look up (Dursun 2004) and the facilities at home increase (Gelbal 2008), the academic achievement of the student increases.

In a study conducted in Athens, researchers found that students who live on the lower floors have lower rate of participation in education. Parents with bad economic conditions live on the lower floors. We can say that when the economic conditions of parents are low, the academic achievement of students is low. At the same time, the participation rate of students with less than 15 m2 of residential area per capita in education is low (Maloutas et al. 2019).

The poor neighborhoods or neighborhoods where ethnic minorities live are less exposed to green space (Beere and Kingham 2017; Ward et al. 2016). A study conducted in New Zealand found a negative relationship between green space and academic achievement. The accessibility of green areas is higher than in neighborhoods with low socio-economic status. Academic achievement is lower in this neighborhood. The high socioeconomic status neighborhood schools have lower green areas than the low socioeconomic status neighborhood, and academic achievement is higher (Beere and Kingham 2017).

The presence of a library, reading room and internet cafe in the neighborhood where the student lives increases academic achievement. Student who cannot work at home use these land uses efficiently. The fact that the neighborhood where the students live is far from the center also negatively affects to meet their educational needs. While the difficult of transportation to schools negatively affects the academic achievement of the student, it affects the enthuasiasm of the teachers negatively (Yelgün and Karaman 2015).

As a result, the high socio-economic level of the parents ensures that the academic achievement of the student is high. As the economic situation increases and the opportunities at home increase, the student's academic achievement increases. Opportunities vary according to the socio-economic status of the neighborhoods. In this case, it is effective in improving the students' achievement. Having a library, reading room, and internet cafe in the neighborhood where the student lives increases academic achievement.

2.2.2 Physical Factors

In this section, the effect of out-of-classroom activity areas in schools on students' achievement was examined. At the same time, school gardens, which have an important place in the education process of students, were also examined.

2.2.2.1 Out-of-Classroom Activity Areas (OCAA) in School

In the literature review, we saw that the out-of-classroom activity areas of the schools have an important role in the education process. The quality and variety of out-of-classroom activity areas in schools vary. The physical factors of the school environment are very important in achieving the goals of the learning process (Daramola et al. 2017). Lack of out-of-classroom activity areas in schools and deficiencies in infrastructure negatively affect the learning process (Kurniawan et al. 2018). The efficient learning process is important for the academic achievement of the student. In the literature review, the out-of-classroom activity areas that positively affect academic achievement and cause the learning process to be productive the library, multipurpose hall, sports field, school garden, art class, and music class.

The school environment, which includes a library and a multipurpose hall (Kwegyiriba et al. 2021) other out-of-classroom activity areas, positively affects the academic achievement of the student. It is necessary to provide the physical environment for practical lessons such as physical education, music, or art lessons, which are included in the education programs in schools. With the lack of gymnasiums and multi-purpose halls, students cannot discharge their energies in the winter and cannot perform physical lessons efficiently (Yelgün and Karaman 2015).

The physical conditions of the school structure are very effective in terms of learning and the continuity of the student (Dağlı 2021). "Eğitim Binaları Minimum Tasarım Standartları Rehberi" (EYATSK), which was created in 2015, is used for the design and planning of schools in our country. According to this guide, the uses that should be found in secondary schools are determined as school garden, library, multipurpose halls, conference halls, places of workshop, sports fields, canteens, refectories, science and technology laboratories, and art and music classrooms. At the same time, the indoor and outdoor ratios of school gardens and educational areas in our

country are determined according to the legal regulations of the Ministry of National Education and the type of projects. For this reason, the designs of all schools are similar to each other and cannot respond to the differing demands of the students. In addition, there are schools that do not comply with these design standards. There are studies showing that failure to meet design standards negatively affects children's development (Karadağ et al. 2012).

According to EYATSK, the size of the land per student was calculated as at least 15m2 per student. At the same time, the building residence area of the schools was determined to be 50% of the total land size, and a 50% ratio was given to the open areas (MEB, 2015). This ratio emphasizes the importance of school gardens. Studies are carried out on the place of school gardens in education and more active use is given importance. While schools create the learning environment, school gardens should be areas that contribute to the mental, physical, and spiritual development of students as well as the learning environment (Aksoy 2021). School gardens are planned to support students' physical activities, increase their interaction with nature, ensure active learning, and have an impact on their social development (Dyment et al. 2009). School gardens increase communication between students, reduce bad habits, and create an effective learning environment (Funnell et all. 1997 as cited in Gök 2011). Students see school gardens as a place of rest and relaxation (Özdemir and Çorakçı 2010).

While evaluating the impact of out-of-classroom activity areas, we can also examine the school environment in students' dreams. In the dream school of the students, there are sports hall, basketball and football field, swimming pool, park, movie theater, library, open areas where they can be intertwined with nature and animals. These out-of-classroom activity areas not only increase students' belonging to the school but also contribute to their mental, physical, and language development and increase their motivation. In addition, out-of-classroom activity areas prepare them for life by developing their social relations and offering the opportunity to experience the situations of losing and winning (Çopur 2017). Students prefer natural elements when drawing their dream school (Çeviri 2019). The students demanded that there be animals in the school garden. The demand for animals was not only limited to cats and dogs but also to small farms. This communication between students and animals will develop personality traits such as taking responsibility, empathy, and increasing self-confidence (Çopur 2017).

In addition to all these out-of-classroom activity areas, the quality of the physical structure of the school also plays an important role in the academic achievement of the

students. The fact that the classes are cold in the winter and hot in the summer also reduces the student's achievement motivation (Ozdemir et al. 2010). The presence of uncomfortable chairs and tables, the absence of a library, the insufficient size of the school and the classroom (Kwegyiriba et al. 2021), the presence of an insufficient ventilation system negatively affect the academic achievement of students (Daramola et al. 2017). It was found that the size of the school is also important for academic achievement of the students (Başaran 1974 as cited in Kalfa 2006). School sizes are based on national and international standards. While calculating the size of the education facility in our country, the number of students and teachers is taken into account (Kalfa 2006). It has been found that the academic achievement of the schools, which we can define as small school where the number of students is limited to 300-400 people, is higher. An increase in the number of students means an increase in problems. In addition, there are crowded classrooms in schools where the number of students is high, and so communication between the student and the teacher becomes difficult. For achievement, the teacher should act supportively toward the student and create the appropriate environment. This is not possible in schools with a large number of students. (Başar 2000 as cited in Kalfa 2006)

As a result, areas such as the library, multipurpose hall, sports field, art class and music class among the out-of-classroom activity areas in the schools positively affect the academic achievement of the students. The lack of out-of-classroom activity areas affects the quality of education. School gardens contribute to the mental, physical and spiritual development of children as well as the educational process. Therefore, school gardens are an important out-of-classroom activity area. The literature review will continue by examining school gardens.

2.2.2.2 School Garden

In this section, the effect of school gardens on students' academic achievement and the expectations of student from the school garden was examined.

Open and green spaces in schools reduce the mental fatigue of the individual and enable them to focus on the academy (Lin and Van Stan 2020). At the same time, children's interactions with nature and the games they produce in nature improve their social aspects and enable them to be more accommodating (White 2009). It has been

observed that academic achievement is better in schools with more trees. Open spaces are a good option to sustain student motivation (Kweon et al. 2017). At least two hours of outdoor lessons per week increase their reading test scores and learning motivation (Otte et al. 2019). Students who cannot be motivated by the lesson in the classroom environment can be motivated to learn more easily in the school garden (Dyment 2005).

School gardens usually have concrete floors and open sports fields. These areas cause students other than those who do not play sports to not be able to use them (Dyment 2005). The open green areas in the school garden are areas where students who do not do sports can spend time. The green areas in the school also affect the physical health of the students positively by encouraging physical activity (Boldemann et al. 2006 as cited in Eminel Kutay 2019). At the same time, natural elements in the school garden cause students to have positive thoughts about the school environment (Moore 1997). Students in schools with insufficient green space have low academic achievement, have problems attending school, and have high anxiety and sleep problems (Louv 2005 as cited in Eminel Kutay 2019).

In studies conducted with children, they specified natural environments after home and friends' homes as the areas where students enjoy being (Eminel Kutay 2019; Chawla, 2015). Natural areas are areas that are interesting for students and can be a source for learning activities (Eminel Kutay 2019; Laaksoharju et al. 2012). The diversity of natural areas positively affects students' imaginations and provides opportunities for student to learn (Eminel Kutay 2019; Fjørtoft and Sageie 2000). Students living in the city have limited interactions with nature, and one of the ways to overcome this limitation is to ensure that school gardens, where students spend the most time during the day, strengthen their relationship with nature. In our country, school gardens are not planned considering this situation (Eminel Kutay 2019).

When designing school gardens for schools with students from various age groups, they should be designed to appeal to all students. We can collect the features that student looks for in school gardens under four headings.

(1) Places to do: Spaces where they can perform physical activities,

(2) Places to think: Spaces for learning and social interaction

(3) Space to feel: Areas for the senses,

(4) A place to be: Spaces for introverts to discover themselves (Çevikayak 2019).

Thus, these areas will be able to meet the needs of students from all age groups. When we look at the age groups, the items that the students want to be in the school

garden differ according to the classes. 5th grade students wanted children's play elements, trees, pools, football fields, and volleyball courts. 8th grade students, on the other hand, dream of having trees, seating units, football fields, basketball courts and volleyball courts. Besides, students want to have animals such as birds, butterflies, caterpillars, cats, bees, fish, snails, and ladybugs in the school garden. Swings, slides, seesaws, sandboxes, and ball pools were the play elements they wanted the most in the school garden. In addition to these, they wanted to have food and beverage places such as canteens and buffets (Gök 2012). The items that students want in the school garden vary according to gender. On the other hand, girls mostly prefer natural elements and game elements. Boys tend toward sports fields (Gök Akgül 2012).

As a result, students' interaction with nature positively affects their lives. Schools and the school garden, where students spend most of the day, are important areas where children can interact with nature. School gardens positively affect students' learning and also positively affect physical health by encouraging physical activity. The expectations of the students about the school garden differ according to gender

2.2.3 Location of and Land Uses Around the School

In this section, the effect of land use around schools on academic achievement is examined. Parks and other public green areas and eating services, which were seen to have different effects in the literature, were also discussed. In addition, the location selection for schools was also emphasized.

The effect of land uses around the school as well as out-of-classroom activity areas cause a differentiation in academic achievement. In other words, the environment where the school is located, and the different land uses in this environment are very important (Yelgün and Karaman 2015). It was observed that the presence of commercial places such as cafes around the school affected the school canteens and cafeterias to be in better conditions. In this way, students are encouraged to participate by socializing in cafes and cafeterias in the school. The academic achievement of schools with a residential density is higher than those with a commercial density. We can say that the social environment around schools negatively affects student achievement. Students go to places such as cafes, patisseries, and tea houses to spend time and relax (Çiloğlu 2006). These out-of-school activities can cause students to become alienated from school (Wellendorf 1980

as cited in Çiloğlu 2006). In addition, eating places in these places negatively affect the health of students. The presence of places such as internet cafes caused a decrease in students' interest in the lesson (Çiloğlu 2006). In a study conducted with private school students, students wanted quality eating places, stationery, sports fields, parks, health centers, and bookstores around their schools (Beyazlı and Sağlam 2018).

In addition to all these, the noise in the school environment is also effective on student achievement. The presence of the school in a noisy environment around the airport or in the city center is also effective for the learning process (Usaini et al. 2015). According to the teachers, the fact that the school is in a quiet residential area away from noise and traffic positively affects the school-environment relationship. There is a noise problem in schools located in the center (Kara 2007).

In the literature, the environment where the school is located has been evaluated under two headings: rural and urban. Schools in rural areas are isolated environments that are not preferred by qualified students. Since the physical conditions of these schools are not qualified, student performance is lower (Yelgün and Karaman 2015; Usaini et al. 2015). The physical and environmental conditions of urban schools are more developed (Usaini et al. 2015). However, an opposite view is that the interaction of students with nature in schools located in rural areas affects them positively. In the studies conducted, it has been observed that the development of student is positively affected even if they do not directly connect with nature, apart from experiencing nature directly. Academic achievement in schools with green areas such as trees and bushes are higher than in schools with a built environment around them (Chawla 2015). The dreams of the students in the schools in the city center are more focused on natural elements and nature than those of the students in the schools located on the periphery of the city (Gök 2012).

As a result, articles with different results were found on the parks and passive green areas around the school and the effect of eating services on academic achievement. Therefore, the literature review will focus on the effect of eating places, parks, and other public green areas on academic achievement. At the same time, we will start by examining the location of the schools, as we see the importance of the land uses around the schools in the educational process.

2.2.3.1 Location of Schools in Urban Areas

In this section, the location selection criteria of schools and the importance of location selection are emphasized.

The educational process has physical, social, cultural, and psychological dimensions. So, the education environment is very important for students (Arul Laurence 2012). Considering the physical and social conditions of the settlement where the school is located, it is the factor that affects academic success the most (Yelgün and Karaman 2015). In the studies carried out, it has been concluded that a qualified place increases the efficiency and motivation of the student (Halaç 2017). Students need a safe and stimulating environment to learn. Because they spend most of their days in the learning environment at school. In addition, they are exposed to the environment around the school on their way to and from school (Byoung-Suk and Christopher 2012). If the school environment is supportive for the student, they are less likely to acquire problem behaviors such as substance abuse and violence. Studies have shown that supportive schools develop students' sense of belonging to the school and encourage students in a positive way. Students in a supportive school environment increase their motivation and participate more actively in the learning environment (Usaini et al. 2015). Therefore, care should be taken in the location selection process.

The location selection criteria for educational buildings in our country are specified in the " Eğitim Yapıları Asgari Tasarım Standartları Kılavuzu". According to this guide, the location selection criteria are as follows:

• Primary and secondary school buildings are close to residential units, and the distances specified in the "Spatial Plans Construction Regulation" are followed,

• Less affected by traffic density,

• Being at easily accessible points public transport,

• Being away from noise sources that hinder education such as airports, railways, highways, and factories, (measured sound level should not be higher than 95 decibels),

• Being away from negative environmental factors (garbage, dust, insufficient lighting, etc.),

• Being in a region with high potential for development in the near and medium term,

• Planning of infrastructure such as electricity, natural gas, drinking water, sewerage,

• Being close to populated areas are defined as (MEB 2015).

The criteria used by countries for school location selection differ. In the School Site Selection and Approval Guide published by "School Facilities and Transportation Services Division California Department of Education", the location selection criteria of schools in California are grouped under 12 headings. These titles are: safety, location, soils, topography, size and shape, accessibility, public services, utilities, cost, availability, and public acceptance (California Department of Education 2023).

In a study, researchers found that the most important location selection criterion for managers was to being able to access it on foot. The reasons why the center is preferred in the location selection of private schools include factors such as being central, easy to reach, located on pedestrian roads, being close to functions that will meet the expectations of students, being close to the safety preferences of parents, and having buildings in accordance with private school standards (Beyazlı and Sağlam 2018).

As a result, the physical and social conditions of the settlement where the school is located affect academic achievement. This is why school location selection is important. While choosing the location of the schools, countries have determined their own criteria.

2.2.3.2 Eating Places Around the School

In this topic, the place of eating services in the educational process of students was examined.

Eating places are one of the important topics in the literature on land use around schools. It has been revealed that obesity in children and adolescents causes diabetes and cardiovascular diseases, as well as a lack of confidence (Camhi et al. 2015). With the increasing prevalence of obesity, this has become a public health problem (Yang et al. 2019). In the studies, the proximity of the eating services to the schools was analyzed, and the relationship between these areas and childhood obesity and academic achievement was examined.

Environment facts are very important affect for an obesogenic environment. Local supermarkets, grocery stores, and fast-food outlets are the examples of environments that

affect children's energy intake (Day and Pearce 2011). At the same time, limited physical activity in children causes obesity. Food outlets around of the public schools are healthier than private schools. The people living in the around the eating places have a low education level. Schools in neighborhoods with a high child rate have fewer eating services (Yang et al. 2019).

At the same time, the fact that the local population in the neighborhood is higher means that there are healthier food places. The neighborhood where tenants have higher density have more eating services (Yang et al. 2019). Besides, when there is a degree of deprivation of the schools, eating services increase. This situation is valid in areas with high commercial density and high population density. Eating services cluster in there. Within 800 meters of primary schools, there are more eating services per capita than secondary schools (Day and Pearce 2011). Eating places around the school not only negatively affect the physical health of students but also affect their social lives with the environment they create. The presence of eating services around the school creates a competitive environment with the canteen and cafeteria in the school.

This situation increases the commitment of the students to the school with the social environment it offers and the better service of the eating places in the school (Çiloğlu 2006). We can expect the opposite to happen for canteens, and cafeterias that cannot provide good service. The fact that the eating places around the school are more developed may cause the students to spend more time there and decrease their engagement with the school.

2.2.3.3 Parks and Other Public Green Areas Around the School

In this section, the physical and mental effects of green areas are emphasized. At the same time, its effect on academic achievement is mentioned.

Investigating the effect of green spaces on academic achievement is very important due to the decrease in children's contact with the natural world (White 2004). Contact with nature affects children's physical and mental health (Twohig-Bennett and Jones 2018). Greenspaces around the school are active areas used by students. Therefore, the design and management of these areas are very critical (Lin and Stan 2020). Being calm and safe in green spaces is not only important for the social environment but also

for physical activity (Kuo et al. 2019). Investments in green areas are low-cost interventions that can increase academic achievement (Browning and Locke 2020).

In a study conducted in China, it was revealed that public green spaces reduce the uncertainty and stress of students (Yang et al. 2019). At the same time, in another study conducted in China, the perceived high naturalness of green areas was found to be associated with health. Students felt more comfortable when exposed to natural areas (Liu et al. 2018). It has been observed that the quality of life of students who have access to green spaces increases, their stress level decreases, and they feel very happy (Holt et al. 2019). In another study, it was found that the presence of green space in the environment where people live is beneficial to their health. At the same time, it was emphasized that green areas should not be seen as a luxury and that more importance should be given in urban planning (Maas at al. 2006). It has been observed that green areas in neighborhoods have positive effects on mental health even when they are provided at a minimum level (Cox et al. 2017). Another study supporting this study was conducted in Wisconsin. It has been observed that green areas in the neighborhood have a better mental health effect (Beyer et al. 2014).

Studies examining the relationship between green space and academic achievement in the literature are grouped under three headings:

- The effect of green spaces on childhood development,
- The positive effect of green areas on concentration,
- The positive effect of access to green space on physical health (Beere and Kingham 2017).

According to the Attention Restoration Theory (ART), interaction with nature supports attention (Kaplan et al. 1998). Stressful environments decrease children's academic performance. Green areas are relaxing environments that allow individuals to focus (Lin and Stan 2020). Students exposed to more green spaces have better attentional abilities. Thus, the concentration period of student increases. Green areas play an important role in an individual's well-being by reducing stress and positively affecting focus. (Beere and Kingham 2017; Wells 2000). Landscapes restore the attention of students who are tired of working (Lin and Van Stan 2020; Felsten 2009). Students who have windows with a green field view have higher scores than students who have windows with a concrete view (Benfield et al. 2015).

2.3 Summary of Chapter 2

In summary, we can summarize the literature results under 9 titles.

- **About Individual Characteristics:**
  o Girls are more engaged in school than boys (Martin 2004).

- **About Parental Characteristics:**
  o The high socio-economic level of the parents ensures that the academic achievement of the student is high (Yanpar 1994).
  o The low level of education of the parents ensures that the academic achievement of the student is low (Connel et al. 1991).

- **About Household Characteristics:**
  o As the opportunities at home increase, for example, with private rooms for student, the academic achievement of the student increases (Gelbal 2008).

- **About OCAA:**
  o With the lack of sports fields, and multipurpose halls, students cannot get rid of their energy in winter and cannot perform physical lessons efficiently (Yelgün and Kahraman 2015).
  o Students' expectations from school are a sports hall, basketball and football fields, swimming pool, park, movie theater, library and open areas where they can be intertwined with nature and animals. These out-of-classroom activity areas increase the motivation of students by contributing to their mental, physical, and language development as well as increasing their sense of belonging to the school (Çopur 2017).

- **About School Garden:**
  o School gardens increase communication between students, reduce bad habits, and create an effective learning environment (Funnell et al. 1997). Therefore, its presence and quality in the school are important.
  o Academic achievement is high in schools where there are green areas such as trees and bushes (Chawla 2015).

o Stressful environments reduce student's academic performance. Green areas are relaxing environments that allow individuals to focus (Lin and Van Stan 2020). Therefore, the presence of these areas in the school is important.

- **About Spatial Perception:**

o As the area in which students spend time in school increases, the areas they remember at school increase (Türel 2017).

o The school garden was emphasized in the drawings made by the student in their spatial perception of the garden. Therefore, the existence and quality of school gardens is important (Kurt 2018).

o The academic achievement of students in schools with high external noise is lower (MacCarthy 1975).

- **About Land Use Around the School:**

o Having a library and internet cafe in the neighborhood where the student lives increases academic achievement. Students who cannot work at home use these land uses efficiently (Yelgün and Karaman 2015).

o The school environment, which includes the library and the multipurpose hall, which is one of the out-of-classroom activity areas, positively affects the academic achievement of the student (Kwegyiriba et al. 2021).

o Schools with a residential density have higher academic achievement than schools with a commercial density (Çiloğlu 2006).

o According to the teachers, the fact that the school is in a quiet residential area away from noise and traffic positively affects the school-environment relationship. There is a noise problem in schools located in the center (Kara 2007).

- **About Eating Places:**

o It has been observed that the presence of commercial spaces such as cafeterias around the school affects the better condition of the school canteen and dining halls. In this way, students are encouraged to participate in school by socializing in cafes and cafeterias within the school (Çiloğlu 2006).

o The social environment around the school negatively affects student achievement (Çiloğlu 2006).

- **About Parks and Other Public Green Areas:**

o Green spaces play an important role in the well-being of individuasl by reducing stress and positively affecting focus (Beere and Kingham 2007).

o The scores of the students whose windows have green field view are higher than those of who have windows with concrete view (Benfield et al. 2015).

CHAPTER 3

METHODOLOGY AND STUDY SITE

3.1 Study Sites and Methods for Data Collection

The aim of this study is to determine the existence of a relationship between the positive feelings about coming to school of students aged 10-15 to come to school and the out-of-classroom activity areas (we will use it as OCAA) in the school and the land use variety around school, and to determine the direction of these relationships. Based on the results of the study, it is also aimed to develop suggestions and strategies for the structural design, location selection and environmental planning of secondary schools. These are user survey studies with students and collecting physical environment data from Şenol's (2022) TUBITAK project, site observations and online sources (Yandex Maps).

Within the context of this aim four secondary schools of four neighborhood in Karabağlar and Konak are selected. These are Cemil Meriç Secondary School (KA1) in Sevgi neighborhood in Karabağlar and Şehit Muhtar Mete Sertbaş Secondary School (KA2) in Ali Fuat Cebesoy neighborhood in Karabağlar, Şehit Fethi Bey Secondary School (KO1) in Faik Paşa neighborhood in Konak, Kemal Atatürk Secondary School (KO2) in Yenimahalle neighborhood in Konak. These four secondary schools of four neighborhoods are examined in detail in this chapter.

In the study, it was aimed to determine the out-of-classroom activity areas and land use around the school that affect the positive feelings about coming to school of secondary school student aged 10-15 to come to school. According to the results, it is aimed to develop suggestions and strategies for the structural design, location selection and environmental planning of secondary schools. In order to investigate the factors affecting the positive feelings about coming to school, four different neighborhoods and four different schools were selected from Konak and Karabağlar.

The factors affecting the positive feelings about coming to school were examined under the sections of physical and social factors. Physical factors were examined as out-of-classroom activity areas and land uses around the school. Social factors were examined as parental characteristics, students' characteristics and house and households'

characteristics. To collect data on social factors, we developed a user survey with four secondary school students with the permission of the Ministry of National Education İzmir Provincial Directorate of National Education. For the variables related to the physical environment, data are obtained from site observations, user surveys and GIS data.

3.1.1 Study Sites and Selected Schools

The study areas are Karabağlar and Konak in İzmir. The two districts are the central districts of İzmir. According to data of TÜİK/2021, Karabağlar is the second biggest district of Izmir with 478 788 population. Konak is the fifth biggest district of İzmir with 336 545 population.
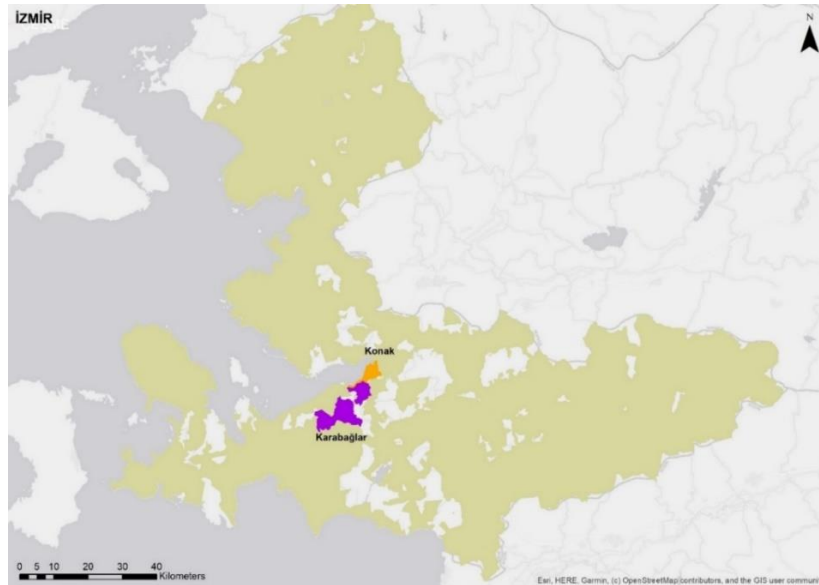
Figure 2: The Place of Konak and Karabağlar Within the Borders of İzmir

In this study, we focused on the central districts of İzmir. The reason for choosing the central districts is that the interaction of the children living in the city with nature is limited. In order to increase this interaction, school gardens, where children spend the most time during the day, can be planned to strengthen their relationship with nature (Eminel Kutay, 2019). Central districts in İzmir; Balçova, Bayraklı, Bornova, Buca, Çiğli, Gaziemir, Güzelbahçe, Karabağlar, Karşıyaka Konak, Narlıdere. We divided

neighborhood from these districts according to low-medium-high education and income levels (For income, parents with a high level of education are considered to have a high income because there is no access to income data in Turkey.) We chose the neighborhoods of Konak and Karabağlar, which have low and medium education levels. The education level of the Yeni neighborhood in Konak, one of the selected neighborhoods, and the income level of the neighborhood are low. The same situation is valid for the Faikpasa neighborhood in Konak. The education level and income level of Sevgi neighborhood in Karabağlar is medium. The same situation is valid for the Ali Fuat Cebesoy in Karabağlar. In addition that, we evaluated the neighborhoods where the number of children in these districts is above the İzmir average of 14% (TÜİK, 2018).

We considered three criteria regarding schools in the designated neighborhoods:

• How many kinds of out-of-classroom activity areas are there outside the classroom in the school? (Schools are grouped as "low-medium-high" according to the type of out-of-classroom activity areas)

• (If any) school garden with trees/grass areas and shady areas or schools with only concrete floors.

• Schools that are predominantly residential or schools that are predominantly non-residential (commercial and mixed (commercial and residential)) in the immediate vicinity of the school.
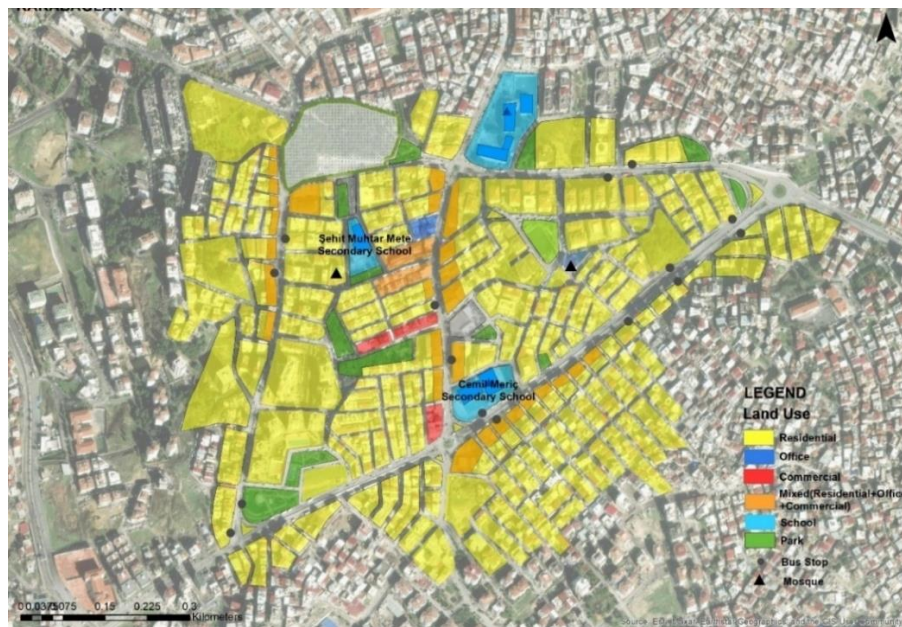
Figure 3: School Locations in Karabağlar
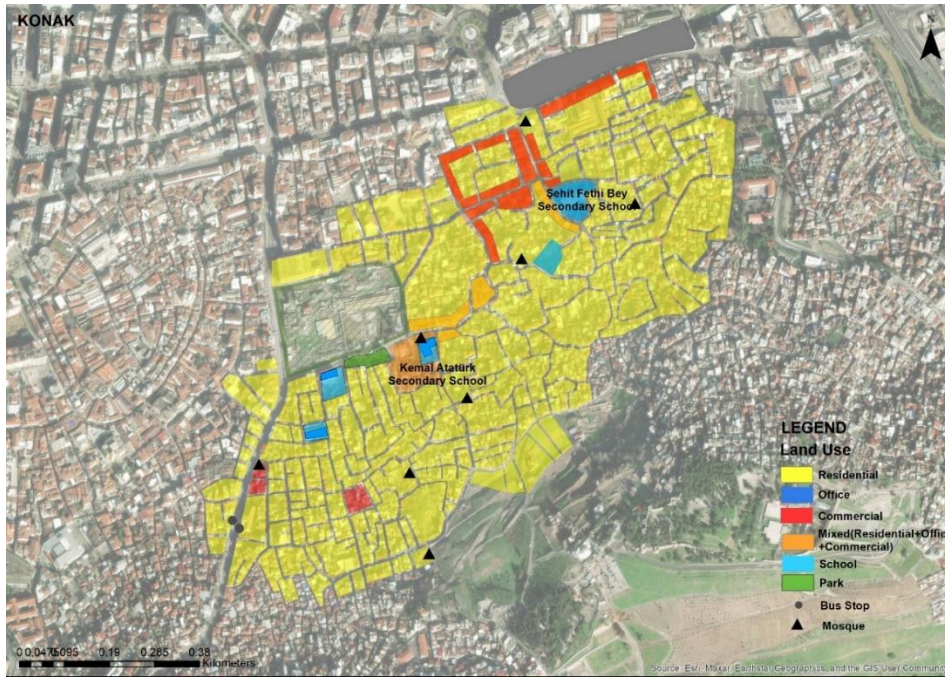
Figure 4: Schools Locations in Konak

To make the school selection in the determined neighborhoods 1 point was given for the presence of each out-of-classroom activity area and 0 points for the absence of each out-of-classroom activity area. When evaluating the presence of OCCAs in schools, we will categorize them based on the OCCAs we asked about in the survey. Table 2 shows that the OCCAs marked in yellow are the ones we used in the survey. There can be a maximum of 6 different types of OCCA. Schools with 1 or 2 OCCAs are classified as low, those with 2, 3, or 4 OCCAs are classified as medium, and those with 5 or 6 OCCAs are classified as high. The number of OCCAs in KO1(3) and KA1(4) is medium. On the other hand, KO2(5) and KA2(6) have a high number of OCCAs.

Table 2: Grouping and Diversity of OCAA

	School	Number of the Survey	Can be used by students outside of the lessons		Meeting/Show areas	Used by students only during the lesson						Eating Areas		
			School garden	Library	Conference room/Meeting room/Multipurpose room	IT Class	Gymnasium	Science Laboratory	Workshop Class	Music Class	Art Class	Refectory	Canteen	Total
Konak	KO1	55	X	X				X					X	3
	KO2	89	X	X	X		X	X					X	5
Karabağlar	KA1	293	X		X	X		X			X		X	4
	KA2	165	X	X	X	X	X	X	X	X	X		X	6

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While one school in each district has trees and shaded areas, the other school has a concrete-covered ground in its garden. The shaded area in schools with concrete grounds is less compared to schools with trees.

Table 3: Features of the School Garden

		School garden	
	Schools	Concrete Floor	Trees and Shady Areas
Konak	KO1		X
	KO2	X	
Karabağlar	KA1	X	
	KA2		X

In the Mekânsal Planlar Yapım Yönetmeliği (2014), the walking distance for secondary schools is determined as 1000 m. In this study, the land uses around 300 m around the school were examined. Commercial uses, mixed (commercial+office+ residential) uses and residential areas are determined around 300 meters. In Konak, KO2 has an environment with a high residential density. KO1 has an environment with a highly commercial density. In Karabağlar, density is highly residential in KA1. Density is highly commercial in KA2.

According to Table 4, shows that İzmir (15,9) according to the values of Turkey, the number of students per teacher is higher for İzmir than the value of Turkey (14,7). When we look at the number of students per classroom, this value is 29.28 for Turkey. İzmir (36,1) value is higher than Turkey average.

According to Table 5, shows that Karabağlar and Konak according to İzmir, the number of students per teacher in Karabağlar (16,8) is higher than the İzmir (15,9) average. In Konak (12,2), it is lower than the Izmir average. The number of students per classroom is higher than the İzmir (36,1) average in Karabağlar (47,6).

Table 5 shows that the schools according to the districts where they are located, the number of students per teacher in the two schools in Konak is higher than the Konak value. The number of students per classroom is lower than the Konak value in the two schools. While the number of students per teacher in the KA1 (20,1) in Karabağlar is higher than the Karabağlar value (16,8), the KA2 (13,1) value is lower than the Karabağlar value (16,8). While the number of students per classroom in KA1 (74,6) is

higher than the Karabağlar value (47,6), the value in KA2 (24,0) is lower than the Karabağlar value (47,6).

Table 4: Number and Ratio of Students, Teachers, and Classrooms in Secondary Schools (Source: National Education Statistics 2020/2021 and (Eğitim, n.d.))

		Number of the Secondary School	Number of the Student	Number of the Teacher	Number of the Classroom	Number of Student / Number of the Teacher	Number of student/Number of the Classroom
	Turkey	16682	4901158	331482	167379	14.79	29.28
	İzmir	686	223327	13993	6177	15.96	36.15
	Karabağlar District	27	22113	1312	464	16.85	47.66
	Konak District	34	16023	1306	484	12.27	33.11
Konak	KO1		504	39	19	12.92	26.53
	KO2		524	33	16	15.88	32.75
Karabağlar	KA1		697	53	29	13.15	24.03
	KA2		1493	74	20	20.18	74.65

Table 5 shows that the physical characteristics of the schools, the school building area of KO1 (1185) in Konak is larger than that of KO2 (501). The number of students per square meter is higher in KO2 (1,05) than KO1 (0,42). The area of the school garden of KO1 (4200) is larger than that of KO2 (500). The number of students per square meter in the school garden is higher in KO2 (1,05) than KO1 (0,12). In Karabağlar, the building area of the KA1 (4713) is larger than that of the KA2 (776). The number of students per square meter is higher KA1 (3,16) than KA2 (1,11). KA1's (3750) school garden is also larger than KA2's (1992). According to EYATSK, At the same time, the building residence area of the schools was determined as 50% of the total land size, and a 50% ratio was given to the open areas (MEB, 2015). Four schools meet this requirement. At the same time, according to EYATSK, the size of the land per student was calculated as at least 15m2/student. Four schools do not meet this condition.

Table 5: Physical Characteristics of Schools (Source: Arcgis)

District	School	Area of Building	Number of Students Per Square Meter	Area of School Garden	Number of Students Per Square Meter
Konak	KO1	1185	0.43	4200	0.12
	KO2	501	1.05	500	1.05
Karabağlar	KA1	4713	3.16	3750	2.51
	KA2	776	1.11	1992	2.86

As a result, KA1, KA2, KO1 and KO2 were selected as the study area in this research in order to determine the effect of out-of-classroom activity areas and land uses around the school on the positive feelings about coming to school. Schools were evaluated under 3 titles while being selected. These titles are the number of out-of-classroom activity areas, land uses around the school, and whether the school garden is trees/gras areas and shady areas or concrete floor. The number of out-of-classroom activity areas of KO2 belongs to the medium group. The school environment has low number of commercial uses, and the school grounds are concrete floors. The number of out-of-classroom activity areas of KO1 belongs to the low group. The school environment has high number of commercial uses, and the school garden has trees/grass areas and shady areas. The number of out-of-classroom activity areas of the KA1 belongs to the medium group. The land use around the school environment has high number of commercial uses and the school garden is covered with concrete floors. The number of out-of-classroom activity areas in KA2 belongs to the high group. The surrounding of the school environment has low commercial uses, and the school garden has trees and shady areas.

KO2 is located in Yeni neighborhood. The school is located at the intersection of Tarık Sarı Street and 806th Street. The 300-meter perimeter of the school is mostly residential areas. Figure-5 shows that within 300 m there are mixed uses and residential. There are roads around the school where the slope is more than 6% so access is difficult. The buildings around the school are either one or two stores. The buildings do not have a garden and their doors open directly to the street.

According to site observations, Tarık Sarı Street, where the school is located, is a busy street used by cars and pedestrians. The school has a front and a backyard. Although the front garden has trees/grass areas and shady areas, student's use is prohibited by the school administration. The school garden consists of a concrete floor and the shady areas are the areas formed by the buildings. There are no sitting areas. The benches that the children take out to the garden are used for sitting. The size of the school garden is small when we evaluate the student crowd in the garden. There is a basketball hoop in the school garden. Permission could not be obtained from the KO2 to take photography of the school garden. We have given the number of land uses around the school in table-6. Since the accessibility to the KO2 is limited, there are 2 types of land use within the 300-meter area and there are 6 uses in total. School recess time is 15 minutes.
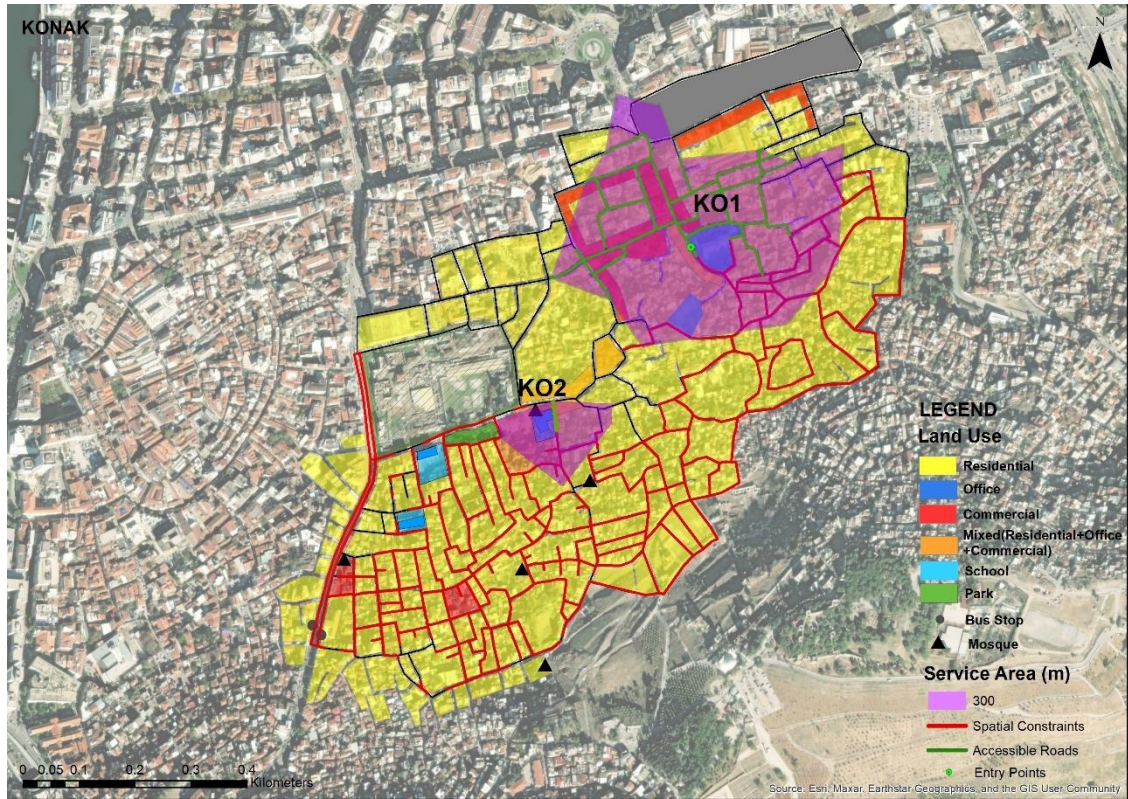
Figure 5: Accessible Areas and Land Use Around the School in Konak

Table 6: Number of Land Uses Around the KO1 and KO2

Land Use Around the School (300m)	Number of Land Use for KO1	Number of Land Use for KO2
Eating Places	29	3
Parks and Other Public Green Areas	-	-
Square	1	-
Internet Cafe	1	-
Stationary	-	-
Sports Fields	-	-
Industrial Areas	-	-
Grocery/Market/	12	3
Bus Stop	-	-
Construction Area/Empty Area	-	-
Mall/Shopping center	-	-
Total	**43**	**6**

Figure 6 shows that traffic density map of KO2. In addition to field observations, the traffic density around the schools was observed at the internet address

"https://izmir.yogunlukharitasi.com/" for 1 week in the morning (08:00), noon (12:30) and evening (18:00). As a result of these observations, a traffic density map was created. KO2 is located at the intersection of streets with high and medium traffic density. That's why traffic noise is felt from the school.

Figure 6: Traffic Density Around KO2

KO1 is located in Faikpaşa neighborhood. The school is located at the intersection of 967 and 1293. Streets. The 300-meter perimeter of the school is mostly residential, but it has more commercial uses than KO2. It is a more accessible school than KO2. Figure 6 shows that, there are mixed uses, primary school, mosque and commercial uses within 300 m. The buildings around the school are mostly 2-3 floors. The buildings do not have a garden and their doors open directly to the street.

According to site observations, 967th Street where the school is located is a very busy street used by pedestrians and cars. The school has a front and a backyard. There are trees/grass areas in the front yard. The trees in the backyard are outside the school boundaries but create a shadow. The school garden is sufficient for the crowd of students in the garden. There are 2 football goals in the school garden. There are also seating areas, but these areas remain in the sun. There are 4 types of land use within 300 meters of the KO1 and there are 43 land uses in total. School recess time is 10 minutes.

Figure 7: Images of KO1

Figure 8 shows that traffic density map of KO1. According to the traffic density map created, KO1 is located on the street with medium traffic density. Other streets around it are rarely used by vehicles due to the slope. Therefore, traffic noise is less in KO1.
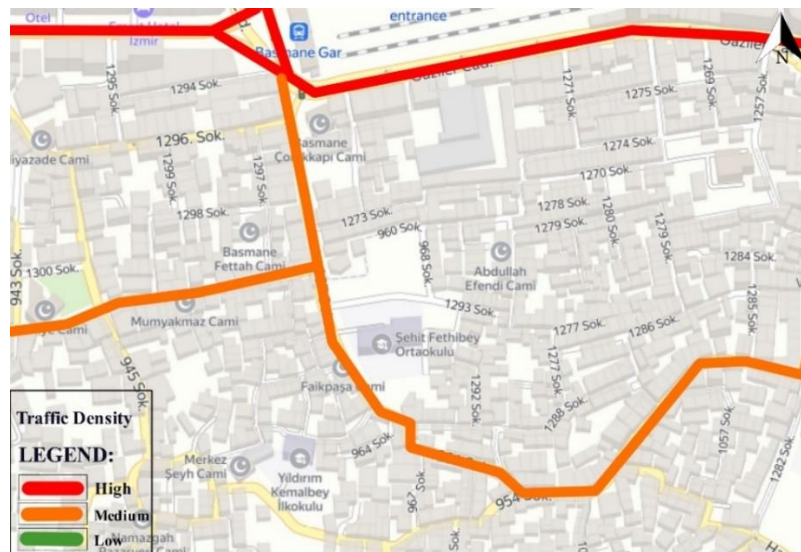
Figure 8: Traffic Density Around KO1

KA1 is located in Sevgi neighborhood. The school is located at the intersection of Dostluk Boulevard and Eski İzmir Street. The 300-meter perimeter of the school is mostly residential areas, but it has more commercial uses than KA2. Figure- 8 shows that there are mixed uses, primary school, mosque, and commercial uses within 300 m. The buildings around the school are mostly 3-4 floors. The buildings do not have a garden and their doors open directly to the street.
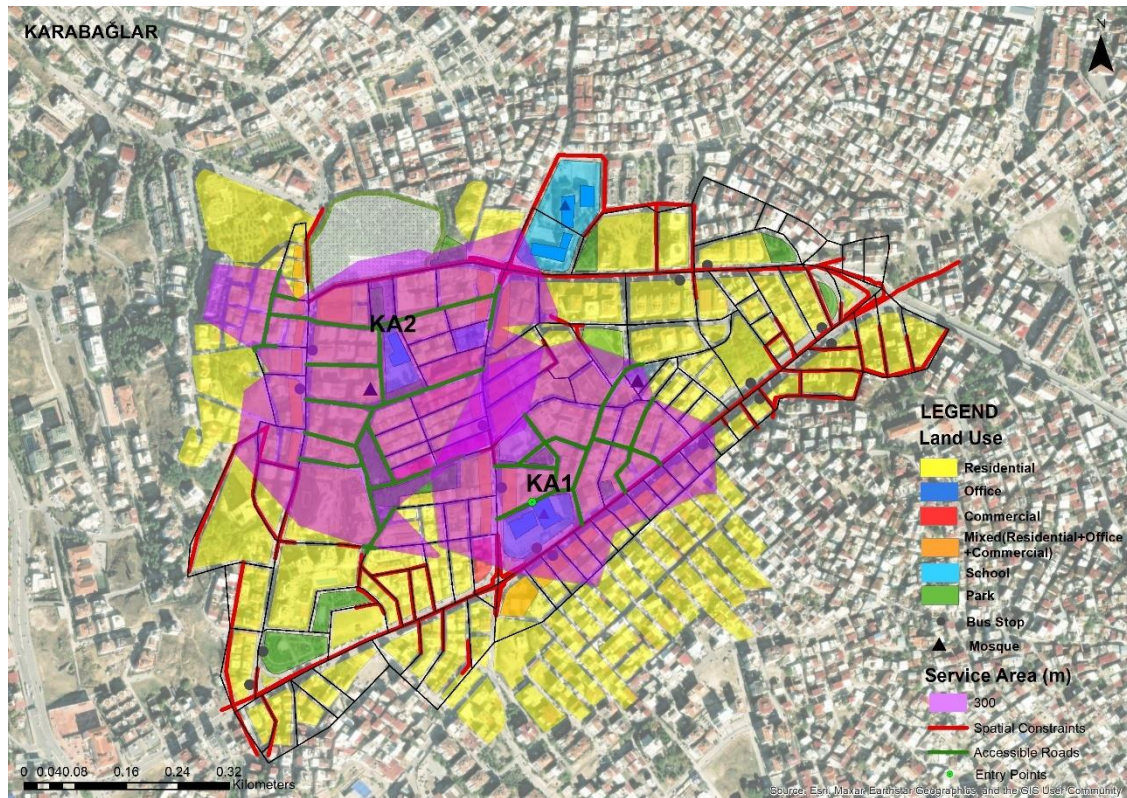
Figure 9: Accessible Areas and Land Uses Around the Schools in Karabağlar

According to site observations, the Dostluk boulevard and Eski İzmir street where the school is located is a very busy street used by pedestrians and cars. The school has a front and side garden. There are trees/grass areas in the front yard. School garden has seating areas and is shaded. The school garden is sufficient for the crowd of students in the garden. There are 2 football goals, 2 basketball hoops and 1 volleyball net in the school garden. There are 6 types of land uses around the KA1 and there are a total of 24 land uses. School recess time is 10 minutes.

Table 7: Number of Land Uses Around the KA1 and KA2

Land Use Around the School (300m)	Number of Land Use of KA1	Number of Land Use of KA2
Eating Places	8	16
Parks and Other Public Green Areas	1	3
Square	-	-
Internet Cafe	-	1
Stationary	1	1
Sports Fields	-	-
Industrial Areas	3	-
Grocery/Market/	6	8
Bus Stop	5	3
Construction Area/Empty Area	-	-
Mall/Shopping center	-	-
Total	**24**	**32**

Figure 10: Images of KA1

Figure 11 shows that traffic density map of KO1. On the map created for traffic density, it is seen that KA1 is located at the intersection of streets with high, medium and low traffic density. Traffic noise in KA1 can be felt from the school.
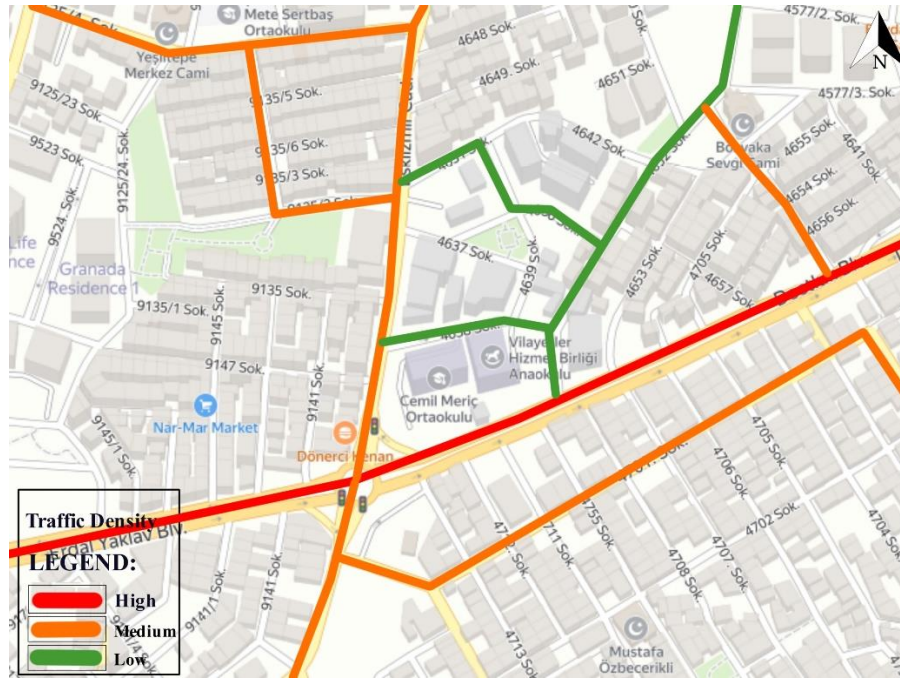
Figure 11: Traffic Density Around KA1

KA2 is located in Ali Fuat Cebesoy neighborhood. The school is located between 9125/24 and 9135/7 streets. The 300-meter perimeter of the school is mostly residential areas. Table-11 shows that there are mixed uses, primary school, mosque, park, office and commercial uses within 300 m. The buildings around the school are mostly 5-6 floors. The buildings do not have a garden and their doors open directly to the street.

According to site observations, the streets where the school is located are side streets. Pedestrian and vehicle density is low. The school has only one garden. There are tress/grass areas in the garden. Beneath these trees areas are seating areas and are shaded. The school garden is sufficient for the crowd of students in the garden. There are 2 football goals, 2 basketball hoops and 1 volleyball net in the school garden. There are 6 types of land use around the school in KA2 and there are 32 land uses in total. School recess time is 10 minutes. The last recess is 5 minutes.
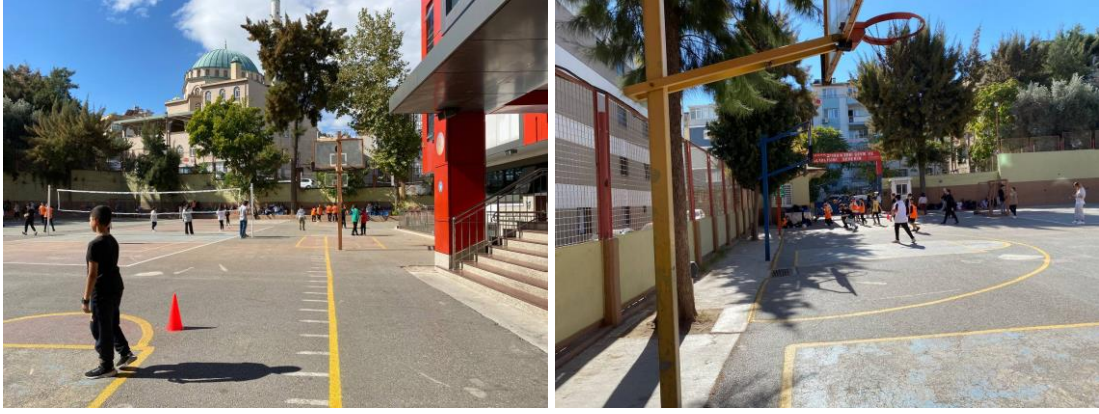
Figure 12: Images of KA2

Figure 13 shows that traffic density map of KA2. According to the traffic density map created, KA2 is located at the intersection of streets with medium traffic density. The traffic noise in KA2 is low.
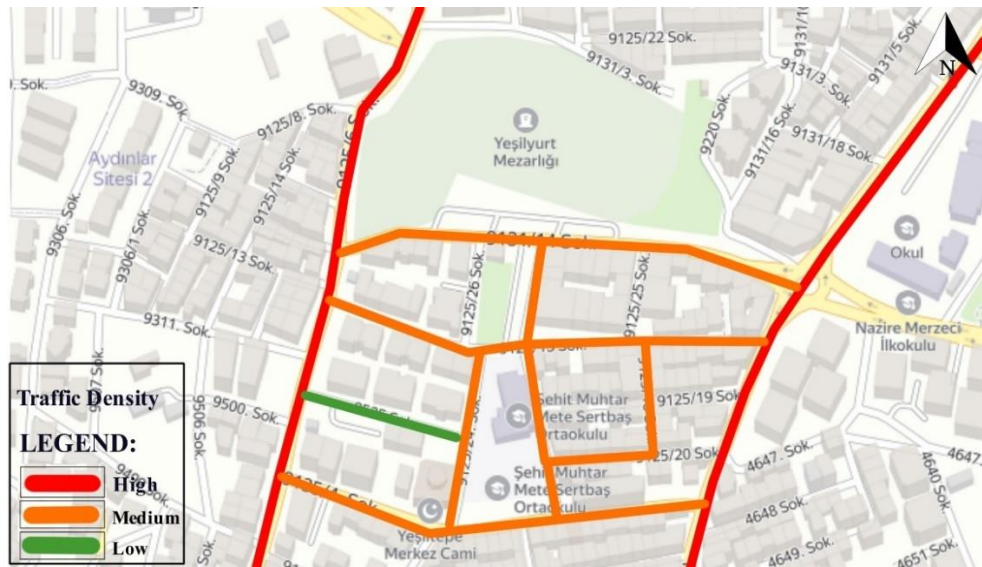
Figure 13: Traffic Density Around KA2

3.1.2 On-Site Observations of the Built Environment Data

Out-of-classroom activity areas and land use around the school were examined for physical environment data. The school principal or vice principals were interviewed to

determine the out-of-classroom activity areas. Then, all out-of-classroom activity areas that can be found in schools were determined from the "Eğitim Binaları İçin Asgari Tasarım Standartları Rehberi''.

According to this guide, there are 6 types of out-of-classroom activity areas in schools. There is no grouping of these fields in the literature. Since there is no grouping in the literature, out-of-classroom activity areas are divided into 4 groups. This grouping is shown in the table- 3. Schools with 1-2 points were determined as low, schools with 3-4 points were determined as medium, and schools with 5-6 points were determined as high. KO1 is at medium level, KO2 is at low level, KA1 is at medium level and KA2 is at high level. The results are shown in the Table 3.

In addition to the determination of out-of-classroom activity areas, school gardens were examined according to the situation of having concrete floors or trees/grass areas and shady areas.

For school environment data, databases from Şenol's TUBITAK project (2022) and site observations and GOOGLE EARTH were used. Maps were created by determining the use of the school environment as residential, commercial, and mixed (residential + commercial). While determining the land uses around the school, the area within 300 meters of the schools was evaluated. The area of 300 meters was determined by network analysis. This area was determined based on the 1000 m walking distance of secondary schools specified in the ''Mekansal Planlar Yapım Yönetmeliği (2014)''.

3.1.3 Social Environment Data

To gather social environment data, we deployed user surveys with students (10-15 years old) with the help of the permission of the Ministry of National Education, Izmir Provincial Directorate of Education. These surveys consist of open and close-ended questions. The questionnaires were conducted with the students in the classroom environment where the classroom teacher was the supervisor during the lesson hours. The survey questions consist of questions about personal information and understanding students' views on spatial perception of the school environment and out-of-classroom activity areas. At the same time, in the survey conducted with the students, do the out-of-classroom activity areas and the land use around the school affect the positive feelings about coming to school? If so, how does it affect? These are survey questions to

understand their questions. The target group is students between the ages of 10-15. For this reason, the research was carried out with secondary school 5th, 6th, 7th and 8th grade students.

The survey was conducted in four secondary schools. Schools in Karabağlar; KA1 in Sevgi neighborhood and KA2 in Ali Fuat Cebesoy neighborhood. Schools in Konak; KO1 in Faik Paşa neighborhood, KO2 in Yenimahalle neighborhood. The total number of surveys conducted in schools is given in the Table 8. A survey was conducted with a total of 602 students.

Table 8: Number of Students in Schools and Classes

Schools	District	Grade 5	Grade 6	Grade 7	Grade 8	Total
KA1	Karabağlar	144	43	76	30	293
KA2		18	43	57	47	165
KO1	Konak	27	15	7	6	55
KO2		22	26	21	20	89
	Total	212	128	161	103	602

3.2 Data Analysis

While deciding on data analysis, we considered the methods of the articles in the literature review. In the articles in the literature, user Survey or semi-structured interview was preferred as the data collection method. Regarding the subject of this thesis, it was decided that the user survey method was more accurate with secondary school students. Regression models were generally used in data analysis methods in the literature. In this thesis, linear regression method, ordered logistic regression method and additionally descriptive analysis methods were decided.

In the literature study, while the number of studies that conduct face-to-face surveys (Beyazlı and Sağlam 2018) (Maloutas et al. 2019) (Gietz and McIntosh 2014; Gök 2012; Aksoy 2021) with students is high, there are few studies that conduct surveys with parents, teachers and administrators (Zor 2020; Yelgün and Karaman 2015; Kwegyiriba et al. 2021; Çiloğlu 2016). At the same time, the subject of the studies that made drawing with students is generally spatial perception and the students did drawing work (Türel and Gür 2019; Çevikayak 2019).

On the other hand, while the number of studies using the regression analysis (Maloutas et al. 2019; Kuyvenhoven and Boterman, 2021; Usaini et al. 2015; Kweona et al., 2017; Gietz and McIntosh 2014; Supratno et al. 2021; Beere and Kingham 2017; Browning and Locke, 2020; Akkaya 2019) method is high in the literature study, the number of studies using the mapping (Yang et al. 2019; Day et al. 2011; Demir 2018; Kutay 2019) and descriptive statistics method (Kweon et al. 2017; Kwegyiri et al. 2021; Supratno et al. 2021; Pollin and Fürst 2021; Graham et al. 2005) is less. The mapping method was used in studies related to eating places, green space and school garden around the school.

Based on the literature, survey method and two different regression methods were applied to the students in this study. The descriptive statistics analysis was started with the characteristics of the students, characteristics of house and households, socio-economic characteristics of parents. Then, the data was divided into two headings as those related to out-of-classroom activity and those related to land uses around the school. Regarding the out-of-classroom activity areas, variety (number of type) of out of classroom activity areas, students' awareness of these areas, the purpose of using these areas, the frequency of use, their enjoyment of using these areas during and outside the lessons, the characteristics of the school garden and the expectations of the students from these areas examined.

Regarding the land uses around the school, students' awareness of these areas, the frequency of use, the areas they enjoy using, the use of parks and other public green areas around the school, and the use of eating splaces around the school and the school environment in the students' expectations examined.

Social environment data that are collected from questionnaires are analyzed by using the Statistical Package for Social Sciences (SPSS) Version 24 and Stata. Linear Regression Model and Ordered Logistic Regression Model were used. After that, in order to describe associations between independent variables dependent variable, regression analysis technique is conducted. Dependent variables are ''when I wake up in the morning, I want to go to school'' and ''I feel good at school''. The purpose of regression analysis is to learn the effect of students' positive feelings about the coming to school by questioning with independent variables. Independent variables are grouped under three headings; These headings are out-of-classroom activity areas, land uses around the school, individual characteristics, parental characteristics and house and household characteristics.

CHAPTER 4

CHARACTERISTICS OF STUDENTS

The answers that students gave were analyzed with the descriptive analysis technique according to gender, age, and districts. Besides, characteristics of the students, demographic and socio-economic characteristics of the household, characteristics of the parents, and houses are examined under the related sections.

4.1. Individual Characteristics of Students

Survey completed with 602 student, 321 (57%) girls and 261 (43%) boys (Table-9). In addition, the number of 13-year-old students is higher than other ages. Figure 14 shows that the number of students participating in the survey is higher in Karabağlar than in Konak.

Table 9: Characteristics of Students

Gender	**Girl**	321
	Boy	261
	No Response	22
Age	**10**	31
	11	156
	12	154
	13	158
	14	80
	15	10
	No Response	15
Grade	**5th Grade**	211
Grade	**6th Grade**	128
	7th Grade	160
	8th Grade	103
	Total	602

The majority of the students who participated in the surveys are girls. According to Figure 14, in Konak, the survey in KO1 included 31 (34,83%) girls and 54 (60,67%)

boys, for a total of 89 students. 29 (52, 73%) girls and 24 (43,64%) boys, in total 55 students participated in the survey conducted in KO2. The survey was done in KA1 with 293 students in Karabağlar, consisting of 155 (52%) girls and 128 (43 %) boys. Additionally, a total of 165 students took part in the survey in KA2, with 82 (49%) girls and 78 (47%) boys.
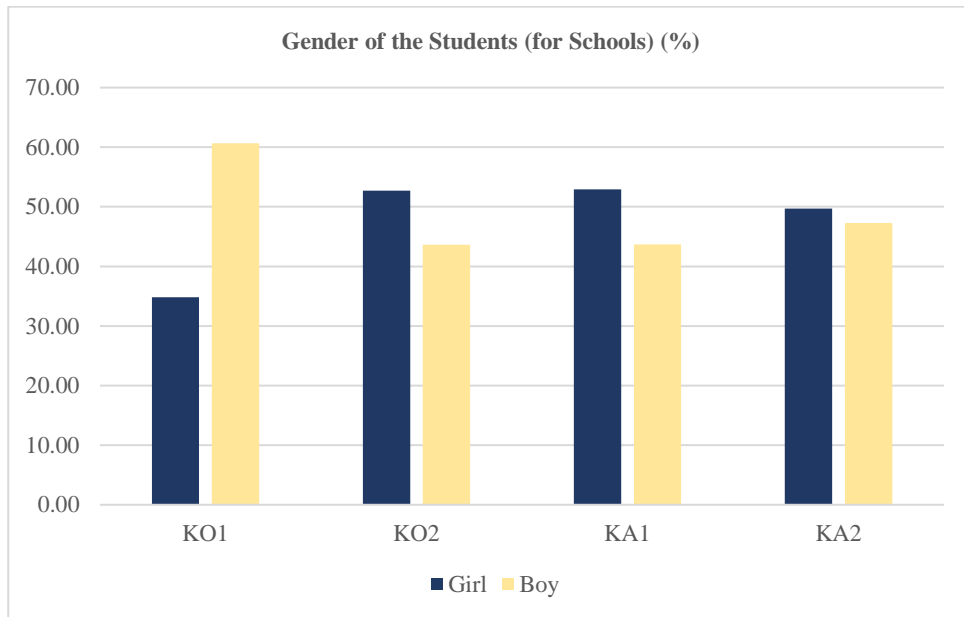
Figure 14: Gender of the Students (for Schools) (%)

According to the age distribution by school, the majority of the participating students are 11, 12, and 13 years old. Figure 15 shows that the surveys included students from 5th, 6th, 7th, and 8th grades at the schools. Among the 89 students in KO1, 32 (or 36% of them) are 13 years old, and 24 (or 27% of them) are 12 years old. Out of the 55 students at KO2, 18 (or 32% of them) are 11 years old, while 17 (or 30% of them) are 12 years old. At KA1, out of the 293 students, 101 (or 34% of them) are 11 years old, and 72 (or 24% of them) are 12 years old. In KA2, 54 (or 32% of them) out of the 165 students are 13 years old, and 41 (or 24% of them) are 12 years old.
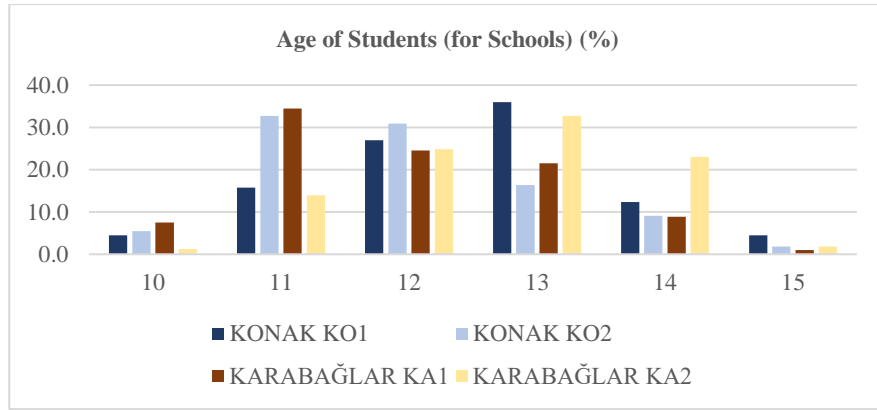
Figure 15: Age of the Student (for Schools) (%)

Students residing in Konak have lived in the same neighborhood for a longer duration compared to students residing in Karabağlar. According to Figure 16, among the 144 students in Konak, 49 (or 34% of them) have resided in the same neighborhood for 6 to 11 years. The number of students who have lived in the same neighborhood for 12 to 17 years is 45 (31%). On the other hand, in Karabağlar, out of the 458 students, 148 (or 32%) have lived in the same neighborhood for 6 to 11 years. Among them, 130 (or 28%) have resided in the same neighborhood for 12 to 17 years.
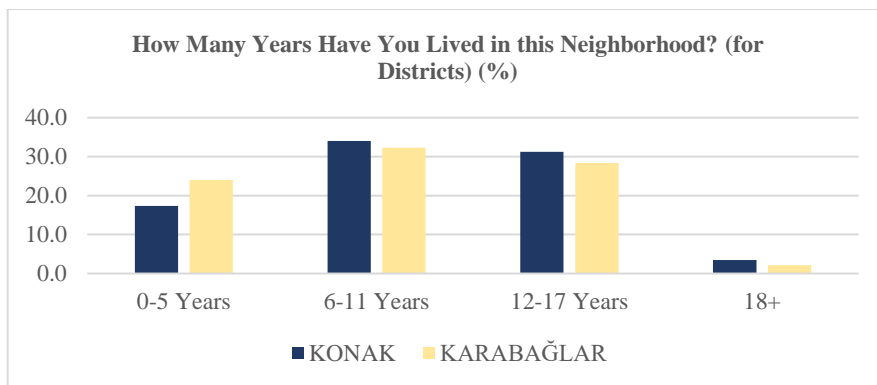
Figure 16: How Many Years Have You Lived in This Neighborhood? (for Districts) (%)

As a result, the majority of the students who participated in the surveys are girls, 13 years old, and in 5th grade for Table 9. Students in Konak have been living at home longer than students in Karabağlar.

4.2 Parental Characteristics

In this section, the characteristics of parents are analyzed. In comparison to Konak, Karabağlar has a higher percentage of working parents. Figure 17 shows that the education level of mothers in Karabağlar is higher than of mothers in Konak. Out of the 144 mothers in Konak, 17 (or 10%) are working mothers. On the other hand, in Karabağlar, 115 (or 25%) of the 458 mothers are working mothers. Among the 144 fathers in Konak, 177 (or 80%) are employed. In Karabağlar, 419 (or 90%) of the 458 fathers are employed.

The education level of mothers in Karabağlar is higher than that of mothers in Konak. This result aligns with our prediction because the education level in Konak is medium. The level of education in Karabağlar is high. At the same time, we expect students whose mothers have a higher education level to have a more positive feeling about coming to school. Figure 17 shows that the percentage of mothers studying at university in Karabağlar (36, or 7% of 458) is higher than in Konak (5, or 3% of 144). In Konak, there are more illiterate mothers (23, or 16% of 144) than in Karabağlar (28, or 6% of 458).
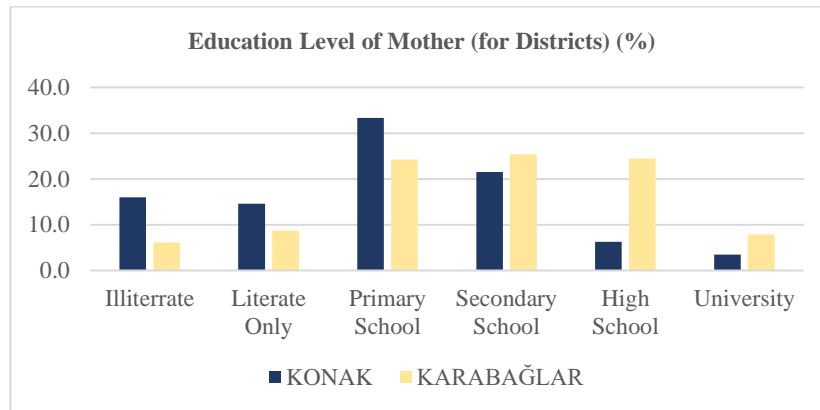
Figure 17: Education Level of Mother (for Districts) (%)

The education level of fathers in Karabağlar is higher than that of fathers in Konak. This is also an expected result. At the same time, we expect students whose fathers have higher education level to have more positive feelings about coming to school. Figure 18 shows that in Karabağlar, there are more fathers attending university (46, or 10% of 458)

than there are in Konak (6, or 4% of 144). Konak has a higher rate of illiterate fathers (10, or 6% of 144) than Karabağlar (14, or 3% of 458).

Education Level of Father (for District) (%)
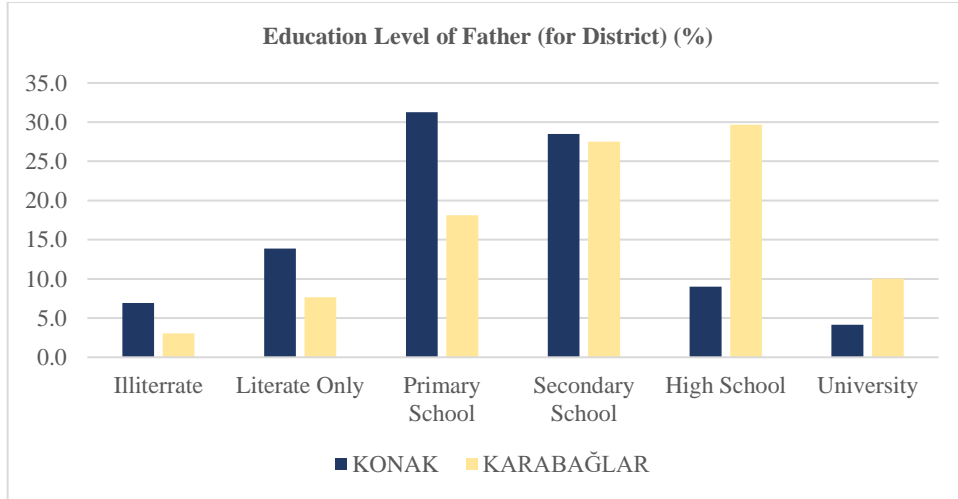
Figure 18: Education Level of Father (for District) (%)

We see in our analysis that the education level of Karabağlar is higher than that of Konak. Figure 13 and Figure 14 confirmed these analyses. The education level of mothers and fathers in Karabağlar is higher than that of mothers and fathers in Konak. At the same time, the percentage of working mothers in Karabağlar is higher.

4.3 House and Household's Characteristics

In this section, the characteristics of houses and households are emphasized. The household size in Konak is larger compared to Karabağlar. Considering the education of the parents in Karabağlar, we expected this result. Figure 19 shows that the number of households in Konak is higher than in Karabağlar. The majority of families in Konak consist of 5-8 people (107, or 74 out of 144). On the other hand, families in Karabağlar are mostly composed of 1-4 people (234, or 51% of 458).
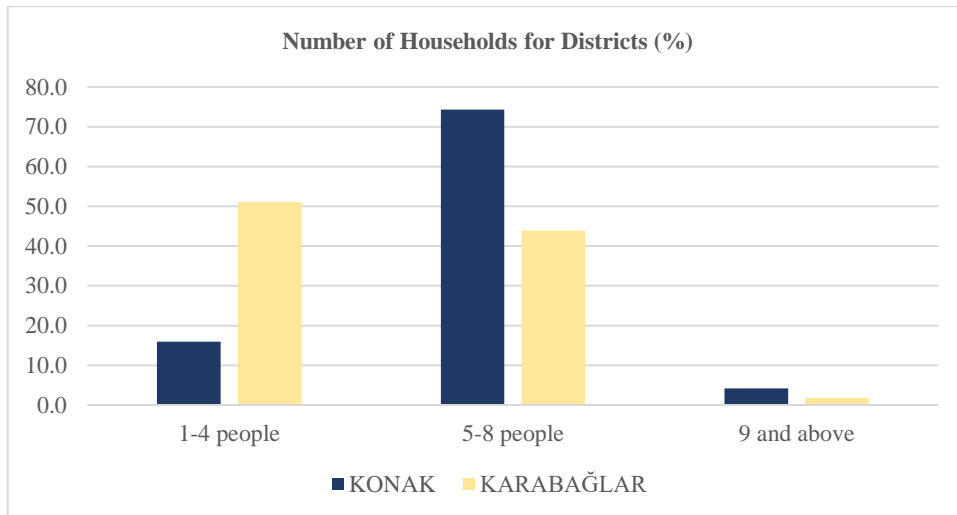
Figure 19: Number of Households (for Districts) (%)

Students mostly live with their mother, father, and siblings in both districts, but students living with other family elders are more common in Konak. It is normal to have such a result in Konak where the number of households is higher. Figure 20 shows that more people live with mother, father, and other family elders in Konak (22, 15% of 144) than Karabağlar (13, 7% of 458).
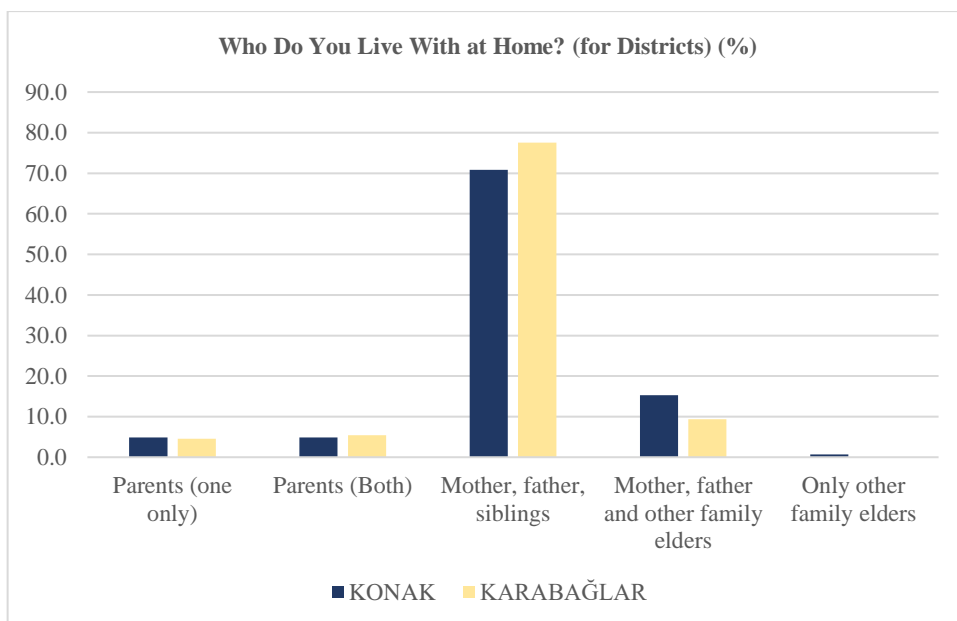
Figure 20: Who Do You Live With at Home? (for Districts) (%)

The houses in Karabağlar have more advanced amenities, whereas the houses in Konak have fewer amenities. We expected this result because we expect families to live in better conditions as the income level in Karabağlar is higher. Figure 21 shows that 22% of the houses (38 of 144) in Konak do not have any amenities. 20% have a residential garden (35 of 144). On the other hand, 12.8% of the houses in Karabağlar have apartment services (92 of 458), and 16% have a common use garden (117 of 458).
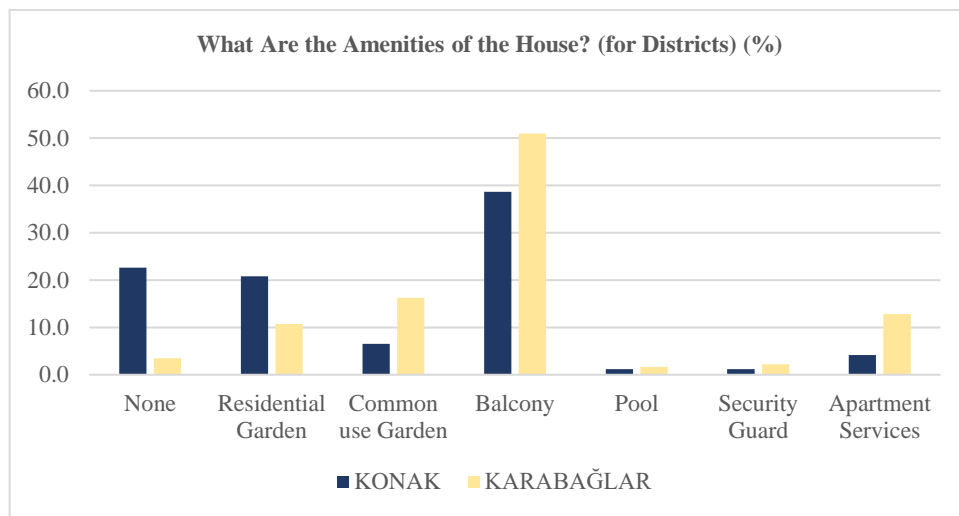
Figure 21: What Are the Amenities of the House? (for Districts) (%)

Revealed that Konak's housing possibilities are constrained. We expected that students wouldn't have their own private space or use separate rooms because both the income level, and the facilities of the houses are lower in Konak. The results support this. Figure 22 shows that 4% of the students (6 of 144) in Konak use their parents' rooms because they do not have private areas. 47% of them use the hall or living room (68 of 144). In Karabağlar, 39% have their own room (182 of 458). Siblings share a room with 43% of participants (201 of 458).
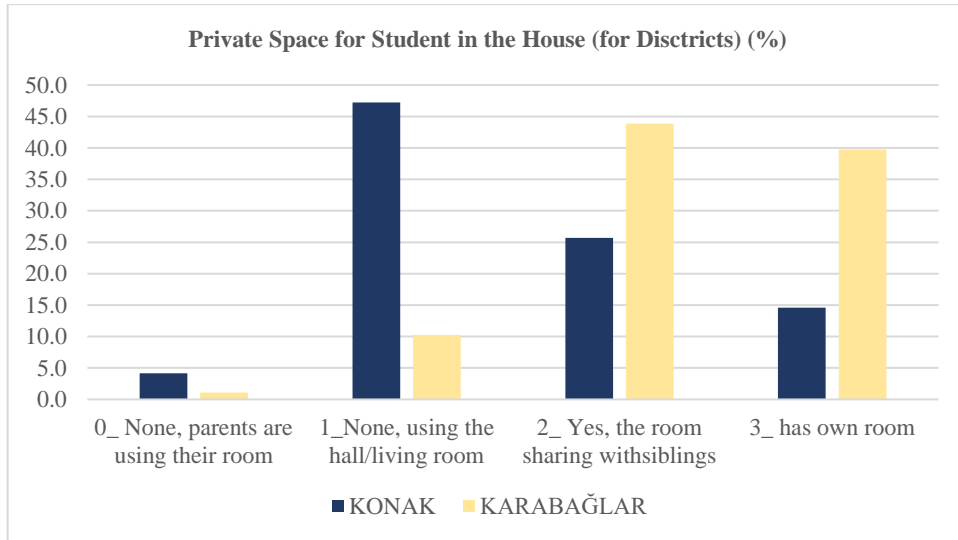
Figure 22: Private Space for Student in the House (for Districts) (%)

Results of household characteristics show that the number of households in Konak is higher than in Karabağlar. Students living with their parents and other family members in Konak are higher than Karabağlar. Houses in Karabağlar have more amenities than houses in Konak. Students in Karabağlar have more private areas than students in Konak.

4.4 Summary of Chapter 4

In summary, the majority of the students who participated in the surveys are girls, 13 years old, and in 5th grade. Students in Konak have been living at home longer than students in Karabağlar. The education level of mothers and fathers in Karabağlar is higher than that of mothers and fathers in Konak. At the same time, the percentage of working mothers in Karabağlar is higher. The number of households in Konak is higher than in Karabağlar. Students living with their parents and other family members in Konak are higher than Karabağlar. Houses in Karabağlar have more amenities than houses in Konak. Students in Karabağlar have more private areas than students in Konak.

CHAPTER 5

STUDENTS' USE OF OCAAs

In this section, the variety of students' out-of-classroom activity areas, the frequency of students' use, the duration of use, the areas that students enjoy using, and their expectations from school and the school garden are explained. In the literature, the school garden, one of the out-of-classroom activity areas, comes to the fore and is also discussed. Which of the out-of-classroom activity areas stood out was determined by measuring how it was used, how often it was used, how long it was used, and which ones they enjoyed using.

5.1 Variety of OCAAs and Students' Awareness of OCAAs

We marked the out-of-classroom activity areas that we asked the students about in our fieldwork with yellow on Table 10. We have grouped these out-of-classroom activity areas into meeting and show areas, which can be used outside of the classroom, and areas that can only be used during the lesson.

Table 10: OCAAs Distribution in Schools

| | School | Number of the Survey | Can be used by students outside of the lessons | | Meeting/Show areas | Used by students only during the lesson | | | | | | Eating Areas | | |
			School garden	Library	Conference room/Meeting room/Multipurpose room	IT Class	Gymnasium	Science Laboratory	Workshop Class	Music Class	Art Class	Refectory	Canteen	Total
Konak	KO1	55	X	X				X					X	3
	KO2	89	X	X	X		X	X					X	5
Karabağlar	KA1	293	X		X	X		X			X		X	4
	KA2	165	X	X	X	X	X	X	X	X	X		X	6

The conclusion from Table 10 is that in a school, there can be a maximum of 6 different types of OCCA. Schools with 1 or 2 OCCAs are classified as low, those with 2, 3, or 4 OCCAs are classified as medium, and those with 5 or 6 OCCAs are classified as

high. The number of OCCAs in KO1(3) and KA1(4) is medium. On the other hand, KO2(5) and KA2(6) have a high number of OCCAs.

Students are aware of the school garden This result caused us to examine the school garden in more detail. In the schools in Konak, after the school garden, the students are most aware of the library, while in Karabağlar they are aware of the laboratory. In Figure 23, the asterisk (*) next to OCAAs indicates that the OCAA is available at the school. The percentage of those who answered in Konak, in KO1 and KO2 school gardens, is 87 (38%), and 51 (38%), out of 144 people. The percentage of those who gave in Karabağlar, in KA1 and KA2 school gardens, is 284 (27%), and 160 (20%), out of a total of 458 people. The percentages of those who gave the laboratory answer are 263 (25%) and 154 (20%).
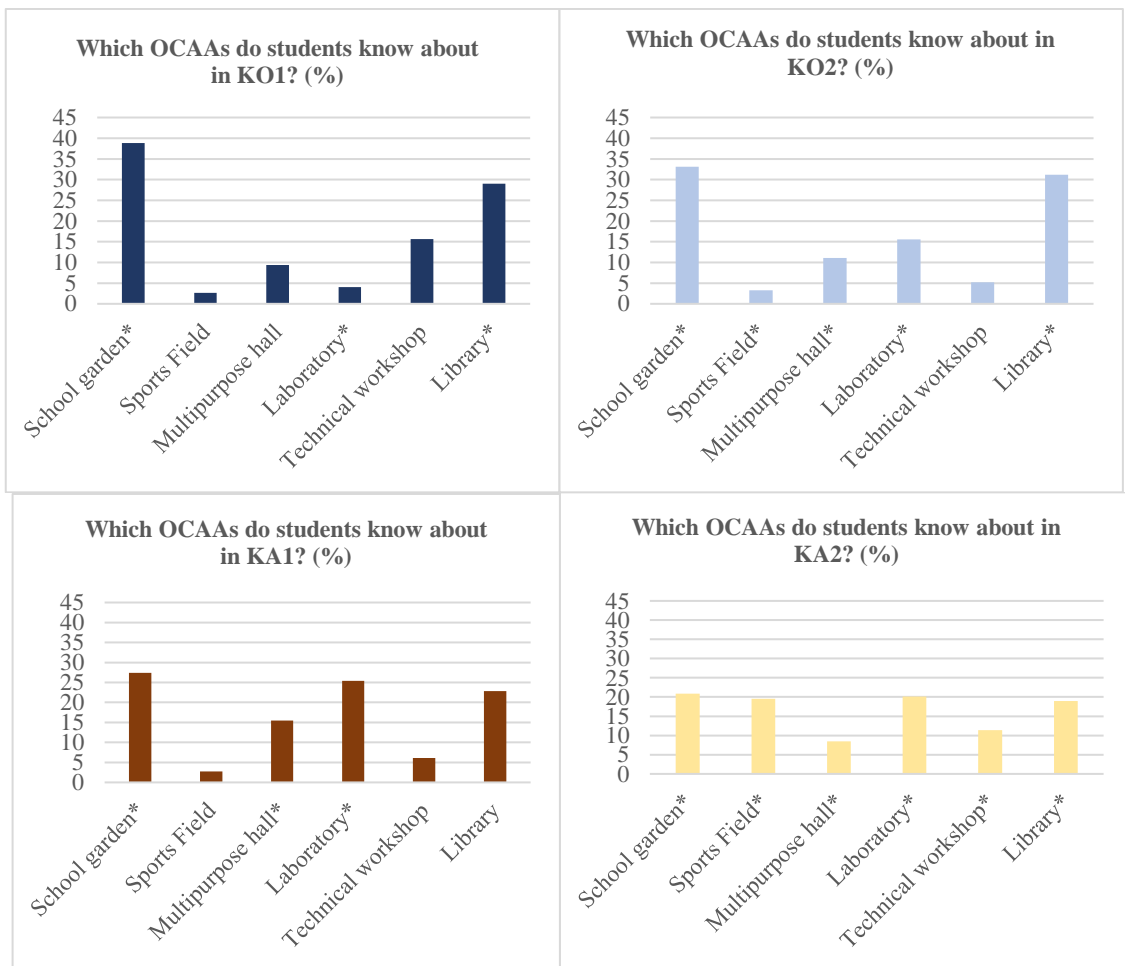
Figure 23: Which OCAAs do Students Know About in Schools? (%)

As a result, the students in Konak schools are most aware of the school garden and the library. The school garden and laboratory are the most well-known OCAAs in Karabağlar.

5.2 Students' Use Purposes of OCAA

In this section, students' purposes of using OCAAs, their frequency, and their duration of use are examined. We also consider what they use these areas for. The school garden is generally used for "for playing and "to breathe" purposes. While evaluating the school garden, we will consider the purpose of use and the quality of the school garden together in a section (5.2) about the school garden. Table 11 shows that the majority of the "for playing game" answers were given by total (215, 34% of 631), girls (114, 36% of 315), boys (101, 41% of 241), and students aged 10-12(158, 46% of 158) but 13-15 age (64, 28% of 223) gave most "to breathe" answers. The second response is "to breathe" by total, girls, and boys. The 10–12 age group gave the second highest number for "to have fun with my friends". The 13-15 age group gave the second answer is "for playing games".

Table 11: What Are You Using the School Garden for? (for All Students) (%)

| School Garden | Total | Total% | GENDER | | | | AGE | | | |
			Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
for playing game	215	34.1	114	36.2	101	41.9	158	46.5	57	25.6
to breathe	107	17.0	70	22.2	37	15.4	43	12.6	64	28.7
to walk around	74	11.7	43	13.7	31	12.9	32	9.4	42	18.8
to have fun with my friends	59	9.4	36	11.4	23	9.5	51	15.0	8	3.6
to rest	12	1.9	7	2.2	5	2.1	5	1.5	7	3.1
to play with the ball	31	4.9	2	0.6	9	3.7	10	2.9	1	0.4
to sit	6	1.0	3	1.0	3	1.2	3	0.9	3	1.3
No Response	127	20.1	40	12.7	32	13.3	38	11.2	41	18.4
Total	631	100.0	315	100	241	100	340	100	223	100

According to Konak and Karabağlar, the answers did not differ from the total but the students in Konak use the school garden for "for playing games" more than the students in Karabağlar. Students usually use the school garden for "for playing" and "to

breathe". 57% of the answers in Konak (100 of them 173) and 25% of the answers in Karabağlar (115 of them 458) gave the answer "for playing".

Table 12: What Are You Using the School Garden for? (for Districts)

	Total	Total%	Konak	Konak %	Karabağlar	Karabağlar%
for playing game	215	34.1	100	57.8	115	25.1
to breathe	107	17.0	27	15.6	80	17.5
to walk around	74	11.7	9	5.2	65	14.2
to have fun with my friends	59	9.4	3	1.7	56	12.2
to rest	12	1.9	3	1.7	9	2.0
to play with the ball	31	4.9	5	2.9	26	5.7
to sit	6	1.0	2	1.2	4	0.9
No Response	127	20.1	24	13.9	103	22.5
Total	631	100	173	100	458	100

We marked OCAAs in schools as yellow in Table 11. While evaluating the purpose of students to using these areas, we created a table according to the schools where these areas are located. Table 13 shows that, In KO2 and KA2, where the sports fields are located, the purpose of students to using these fields has been "doing sports". The answers do not change according to age or gender. In KO2, KA1 and KA2, where the multipurpose hall is located, students clearly used it for "for meeting/conferences" purposes. All schools have a laboratory, and the purpose of its use is "to experiment". The technical workshop is only available in KA2, and its intended use is "take a lesson". The library is not only available in KA1. The purpose of use in other schools has been "to read a book". (You can refer to Figure 1 in "Appendix E" to see the distributions by schools.)

Table 13: Using Purpose of Other OCAAs (for all Students) (%)

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
Sports Field										
Doing sports	88	28.1	48	42.1	40	39.2	42	40.8	46	40.7
For everything	4	1.3	3	2.6	1	1.0	1	1.0	3	2.7
For meetings/conferences	2	0.6	2	1.8		0.0		0.0	2	1.8
No Response	219	70.0	61	53.5	61	59.8	60	58.3	62	54.9
Total	313	100	114	100	102	100	103	100	113	100.0
Multipurpose Hall										
For meetings/conferences	80	15.6	51	19.2	28	12.2	53	17.8	26	12.9
To study	4	0.8	1	0.4	3	1.3	4	1.3		0.0
to read a book	3	0.6	1	0.4	2	0.9	1	0.3	2	1.0
No Response	425	83.0	213	80.1	196	85.6	240	80.5	173	86.1
Total	512	100	266	100	229	100	298	100	201	100
Laboratory										
To experiment	246	40.9	169	52.6	90	34.6	137	40.2	141	56.9
No Response	356	59.1	152	47.4	170	65.4	204	59.8	107	43.1
Total	602	100	321	100	260	100	341	100	248	100
Technical Workshop										
To take a lesson	27	16.4	17	20.7	10	12.7	9	13.6	18	18.9
No Response	138	83.6	65	79.3	69	87.3	57	86.4	77	81.1
Total	165	100	82	100	79	100	66	100	95	100
Library										
To read a book	155	50.2	102	61.4	51	38.6	80	53.3	74	47.1
No Response	154	49.8	64	38.6	81	61.4	70	46.7	83	52.9
Total	309	100	166	100	132	100	150	100	157	100

As a result, KA2 has the highest number of OCCA varieties in schools. The least OCCA variety is found in KO1. Students use the school garden for different purposes. This is one of the reasons we that causes us to examine the school garden in more detail. At the same time, while the purpose of the school garden is the same for total and gender, it differs for age and districts. As the age of the students increased, they started to use the school garden for "to breathe" instead of "for playing". The students in Konak use the school garden for "for playing games" more than the students in Karabağlar.

5.3 Frequency of Use of OCAAs

We will examine the frequency of use of OCAAs in this section. The frequency of use by the students is grouped. The grouped version is shown in Table 14.

Table 14: Grouping of Frequency of OCAAs

1	Never	I don't use
2	Rarely	Rarely
		Once or twice a year
		Bimonthly
3	Sometimes	Sometimes
		Once or twice a month
		3-4 times a month
		Fortnightly
4	Usually	1-2 per week
		2-3 per week
5	Often	3-4 per week
		In Some Recesses
		Every Recess
		Everyday

Students used the areas they could use without a teacher more often. The school garden and library are the most commonly used OCAA by students. It is often used by all students. A sports field is usually used by students. The multipurpose hall is generally used, except for boys. Laboratory is used sometimes. Technical workshop is usually used.

Girls (69%, 231 of them 332) use the school garden more often than boys (58%, 152 of them 261). At the same time, 13–15-year-olds (75%, 198 of them 276) use the school garden more often than 10-12 years old (58%, 198 of them 341). 10-12 Age (38%, 40 of them 104) use the sports field more usually than 13-15 age (29%, 33 of them 113). 13-15 age (27%, 100 of them 359) use the library more usually than 10-12 age (5%, 17 of them 295).

Table 16 shows that when we compare it with all students, there are differences in Konak and Karabağlar. In Konak, students use OCAAs more frequently. The school garden is often used in both districts. While the laboratory is often used in Konak, it is usually used in Karabağlar. Sports field is usually used in both districts but Karabağlar (43%, 71 of them 165) use the sports field more usually than Konak (3%, 2 of them 54). Technical workshop is only available in Karabağlar and is usually used. While the multipurpose hall is often used in Konak, it is sometimes used in Karabağlar. While it is often used in Library Konak, it is usually used in Karabağlar. (You can refer to Figure 2 in "Appendix E" to see the distributions by schools.)

Table 15: Frequency of Use of OCAAs (for All Students) (%)

School Garden

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
			Gender				**Age**			
Never	1	0.2	1	0.3		0	1	0.3	1	0.4
Rarely	1	0.2	0	0	1	0.4	1	0.3	1	0.4
Sometimes	5	0.8	5	1.5		0	5	1.5	5	1.8
Usually	10	1.7	6	1.8	4	1.5	3	0.9	3	1.1
Often	383	63.6	231	69.6	152	58.2	198	58.1	198	72
No Response	202	33.6	89	26.8	104	39.8	133	39	67	24.4
Total	602	100	332	100	261	100	341	100	275	100

Sports Field

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
Never										
Rarely	7	3.2	3	1	4	1.5	1	1	6	5.3
Sometimes	11	5	6	1.9	5	1.9		0	11	9.7
Usually	73	33.3	44	14.1	29	11.1	40	38.5	33	29.2
Often	6	2.7	0	0	6	2.3	4	3.8	2	1.8
No Response	122	55.7	260	83.1	217	83.1	59	56.7	61	54
Total	219	100	313	100	261	100	104	100	113	100

Multipurpose Hall

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
Never										
Rarely	30	5.9	23	8.6	7	3	19	6.4	11	3.1
Sometimes		0	0	0		0		0	0	0
Usually	23	4.5	15	5.6	8	3.5	14	4.7	9	2.5
Often	9	1.8	4	1.5	5	2.2	4	1.4	5	1.4
No Response	450	87.9	225	84.3	211	91.3	258	87.5	334	93
Total	512	100	267	100	231	100	295	100	359	100

Laboratory

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
Never										
Rarely	12	2	5	1.5	7	2.7	9	2.6	3	1.1
Sometimes	93	15.4	65	19.6	28	10.7	40	11.7	53	19.3
Usually	72	12	50	15.1	22	8.4	26	7.6	46	16.7
Often	7	1.2	0	0	7	2.7	7	2.1	0	0
No Response	418	69.4	212	63.9	197	75.5	259	76	173	62.9
Total	602	100	332	100	261	100	341	100	275	100

Technical Workshop

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
Never										
Rarely	1	0.6		0	1	1.3	1	1.5		0
Sometimes	5	3	5	6.2		0		0	5	5.3
Usually	22	13.4	13	16	9	11.5	9	13.6	13	13.7
Often		0		0		0		0		0
No Response	136	82.9	63	77.8	68	87.2	56	84.8	77	81.1
Total	164	100	81	100	78	100	66	100	95	100

Library

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
Never										
Rarely	10	2	5	1.9	5	2.2	6	2	16	4.5
Sometimes	32	6.3	22	8.2	10	4.3	2	0.7	34	9.5
Usually	83	16.2	54	20.2	29	12.6	17	5.8	100	27.9
Often	38	7.4	25	9.4	13	5.6	16	5.4	54	15
No Response	349	68.2	161	60.3	174	75.3	254	86.1	155	43.2
Total	512	100	267	100	231	100	295	100	359	100

Table 16: Frequency of Use of OCAAs (for Districts) (%)

	School Garden				Laboratory			
	Konak	Konak %	Karabağlar	Karabağlar %	Konak	Konak %	Karabağlar	Karabağlar %
Never			1	0.2			10	2.2
Rarely			2	0.4			2	0.4
Sometimes	3	2.1	1	0.2	1	0.7	96	21.0
Usually	4	2.8	6	1.3	12	8.3	52	11.4
Often	94	65.3	289	63.1	6	4.2	1	0.2
No Response	43	29.9	159	34.7	125	86.8	297	64.8
Total	144	100	458	100	144	100	458	100

	Sports Field				Technical Workshop			
Never								
Rarely			8	4.8			1	0.6
Sometimes			10	6.1			6	3.6
Usually	2	3.7	71	43.0			22	13.3
Often			5	3.0				0.0
No Response	52	96.3	71	43.0			136	82.4
Total	54	100	165	100.0	0	0	165	100.0

	Multipurpose Hall				Library			
Never								
Rarely			14	8.5			4	2.4
Sometimes			16	9.7	2	1.4	23	13.9
Usually	4	7.4	12	7.3	21	14.6	46	27.9
Often	8	14.8	8	4.8	33	22.9	7	4.2
No Response	42	77.8	115	69.7	88	61.1	85	51.5
Total	54	100	165	100.0	144	100.0	165	100

As a result, the frequency of use of the school garden, laboratory, and library is higher than other OCAAs. Girls use the school garden more often than boys. At the same time, 13-15 years of age use the school garden more often than 10-12 years old. When we look at the differentiation by districts, OCAAs are used more frequently in schools in Konak than in schools in Karabağlar.

We will continue this section by examining how long students spend on OCAAs. As shown in Table 17, according to all students, the school garden, sports field, laboratory, and technical workshop are used for 31 minutes to 1 hour. The school garden is used less often by girls. The library, on the other hand, is used longer by boys and 10-12 years old.

13-15 years of age (42%, 106 of them 248) use the school garden longer than 10-12 years old (31%, 106 of them 341). 13-15 years of age (21%, 20 of them 90) use the sports field longer than 10-12 years old (12%, 10 of them 81). Girls (20%, 65 of them 321) use the laboratory longer than boys (10%, 27 of them 262) and students aged 13-15 (29%, 74 of them 248) use it longer than students aged 10-12 (5%, 19 of them 341).

Table 17: How Many Minutes Do You Spend in OCAAs? (for All Students) (%)

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
School Garden										
				Gender				**Age**		
0-30 minutes	144	23.9	95	29.6	49	18.7	82	24.0	82	33.1
31 minutes-1 hour	179	29.7	89	27.7	90	34.4	106	31.1	106	42.7
No Response	279	46.3	137	42.7	123	46.9	153	44.9	60	24.2
Total	602	100	321	100	262	100	341	100	248	100
Sports Field										
0-30 minutes	11	5.0	9	10.5	9	10.7	8	9.9	3	3.2
31 minutes-1 hour	30	13.7	9	10.5	9	10.7	10	12.3	20	21.3
No Response	178	81.3	68	79.1	66	78.6	63	77.8	71	75.5
Total	219	100	86	100	84	100	81	100	94	100
Multipurpose Hall										
0-30 minutes	29	5.8	18	6.8	11	4.8	25	8.4	4	2.0
31 minutes-1 hour	22	4.4	16	6.0	6	2.6	10	3.4	12	6.0
No Response	447	89.8	232	87.2	214	92.6	263	88.3	185	92.0
Total	498	100	266	100	231	100	298	100	201	100
Laboratory										
0-30 minutes	41	6.8	18	5.6	23	8.8	18	5.3	23	9.3
31 minutes-1 hour	93	15.4	65	20.2	27	10.3	19	5.6	74	29.8
No Response	468	77.7	238	74.1	212	80.9	304	89.1	151	60.9
Total	602	100	321	100	262	100.0	341	100	248	100
Technical Workshop										
0-30 minutes		0.0		0.0		0.0				
31 minutes-1 hour	14	2.3	7	9.6	7	9.2	5	7.9	9	10.5
No Response	150	24.9	66	90.4	69	90.8	58	92.1	77	89.5
Total	164	27.24252	73	100	76	100	63	100	86	100
Library										
0-30 minutes	70	22.7	55	39.6	15	11.9	22	16.9	48	34.8
31 minutes-1 hour	33	10.7	13	9.4	20	15.9	32	24.6	1	0.7
No Response	206	66.7	71	51.1	91	72.2	76	58.5	89	64.5
Total	309	100	139	100	126	100	130	100	138	100

There is no change in the duration of use of OCAAs by district. Students generally tend to use OCAAs of 31 minutes to 1 hour. Only the library is used for 0-30 minutes. (You can refer to Figure 3 in "Appendix E" to see the distributions by schools.)

Students in Karabağlar (19%, 89 of them 458) use the laboratory longer than students in Konak (2%, 4 of them 144). Students in Karabağlar (27%, 45 of them 165) use the library longer than students in Konak (17%, 25 of them 144).

Table 18: How Many Minutes Do You Spend in OCAAs (for Districts) (%)

	Total	Total%	Konak	Konak%	Karabağlar	Karabağlar %
School Garden						
0-30 minutes	144	23.9	32	22.2	112	24.5
31 minutes-1 hour	179	29.7	42	29.2	137	29.9
No Response	279	46.3	70	48.6	209	45.6
Total	602	100	144	100	458	100
Sports Field						
0-30 minutes	11	5.0			11	6.7
31 minutes-1 hour	30	13.7			30	18.2
No Response	178	81.3	54	100	124	75.2
Total	219	100	54	100	165	100
Multipurpose Hall						
0-30 minutes	29	5.8	4	7.4	25	15.2
31 minutes-1 hour	22	4.4	2	3.7	20	12.1
No Response	447	89.8	48	88.9	120	72.7
Total	498	100	54	100	165	100
Laboratory						
0-30 minutes	41	6.8	2	1.4	39	8.5
31 minutes-1 hour	93	15.4	4	2.8	89	19.4
No Response	468	77.7	138	95.8	330	72.1
Total	602	100	144	100	458	100
Technical Workshop						
0-30 minutes		0				
31 minutes-1 hour	14	8.5			14	8.5
No Response	150	91.5			151	91.5
Total	164	100			165	100
Library						
0-30 minutes	70	22.7	25	17.4	45	27.3
31 minutes-1 hour	33	10.7	22	15.3	11	6.7
No Response	206	66.7	97	67.4	109	66.1
Total	309	100	144	100	165	100

As a result, students aged 13-15 use school garden, sports field and laboratory are longer than students aged 10-12. Students tend to use OCAAs frequently and for a long time. In addition that, girls use the laboratory longer than boys. School garden stands out more than other OCAAs in terms of frequency and duration of use. This is one of the reasons for us to consider the school garden in detail.

5.4 OCAA Areas That Students Enjoy

In this section, while evaluating the OCAAs that students enjoy using, we have discussed them under two different headings: the areas they use during and outside the lessons. The reason for this is that students cannot access some of the OCAAs they use during the lesson outside of the lesson. At the same time, as seen in the analyses, the frequency of use of the areas that students use outside of the and during of the lessons

differs. It is important for us to identify the OCAAs that students enjoy because student enjoyment at school is related to positive feelings about school.

Table 19 shows that all students generally enjoy the use of the school garden and laboratory during the lesson. The majority of boys and 13–15-year-olds enjoy using the school garden. Girls and 10–12-year-olds mostly enjoy the use of the school garden.

Table 19: OCAAs That Students Enjoyed During Lessons (for All Students) (%)

OCAAs That Students Enjoyed During Lessons										
			Gender				Age			
	Total	Total %	Girls	Girls %	Boys	Boys %	10-12 Age	10-12 Age %	13-15 Age	13-15 Age %
School garden	286	36.5	146	34.4	140	39.0	109	30.1	177	42.0
Laboratory	262	33.5	149	35.1	113	31.5	140	38.7	122	29.0
Library	111	14.2	72	17.0	39	10.9	51	14.1	60	14.3
Sports Field	62	7.9	31	7.3	31	8.6	26	7.2	36	8.6
Multipurpose Hall	42	5.4	13	3.1	29	8.1	29	8.0	13	3.1
Technical Workshop	20	2.6	13	3.1	7	1.9	7	1.9	13	3.1
Total	783	100	424	100	359	100	362	100	421	100

The areas that students enjoy using outside of the classroom are mostly the school garden and laboratory. However, it is important that students cannot use the laboratory without the permission of the teacher. Students also enjoy using the laboratory outside of the lessons.

Table 20: OCAAs That Students Enjoyed Outside Lessons (for All Students)

OCAAs That Students Enjoyed Outside Lessons										
			Gender				Age			
	Total	Total %	Girls	Girls %	Boys	Boys %	10-12 Age	10-12 Age %	13-15 Age	13-15 Age %
School garden	417	61.7	253	64.7	164	57.5	240	62.7	177	60.4
Laboratory	82	12.1	38	9.7	44	15.4	50	13.1	32	10.9
Library	61	9.0	41	10.5	20	7.0	30	7.8	31	10.6
Sports Field	56	8.3	27	6.9	29	10.2	26	6.8	30	10.2
Multipurpose Hall	46	6.8	26	6.6	20	7.0	33	8.6	13	4.4
Technical Workshop	14	2.1	6	1.5	8	2.8	4	1.0	10	3.4
Total	676	100	391	100	285	100	383	100	293	100

In Konak and Karabağlar, the areas that students enjoy during the lesson differ. Table 21 shows that, in Konak, students enjoy the school garden the most (286,36% of 783). The second area they enjoy is the library (262, 33% of 783). In Karabağlar, students enjoy the laboratory (246, 38% of 644) the most. The second area they enjoy is the school

garden (221, 34% of 644). (You can refer to Figure 4 in "Appendix E" to see the distributions by schools.)

Table 21: OCAAs That Students Enjoyed During Lessons (for Districts) (%)

OCAAs That Students Enjoyed During Lessons						
	Total	Total %	Konak	Konak %	Karabağlar	Karabağlar %
School garden	286	36.5	65	46.8	221	34.3
Laboratory	262	33.5	16	11.5	246	38.2
Library	111	14.2	52	37.4	59	9.2
Sports Field	62	7.9	5	3.6	57	8.9
Multipurpose Hall	42	5.4	1	0.7	41	6.4
Technical Workshop	20	2.6		0.0	20	3.1
Total	783	100	139	100	644	100

Table 22 shows that, in Konak and Karabağlar, the areas that students enjoy outside of class differ. In the Konak, students mostly enjoy the school garden (201, 76% of 262) and laboratory (30, 11% of 262). In Karabağlar, students enjoy the school garden (216, 52% of 414) and the sports field (54, 13% of 414). Students enjoy using the school garden outside of lessons more in Konak than in Karabağlar. (You can refer to Figure 5 in "Appendix E" to see the distributions by schools.)

Table 22: OCAAs That Students Enjoyed Outside Lessons (for Districts) (%)

OCAAs That Students Enjoyed Outside Lessons						
	Total	Total %	Konak	Konak %	Karabağlar	Karabağlar %
School garden	417	61.7	201	76.7	216	52.2
Laboratory	82	12.1	30	11.5	52	12.6
Library	61	9.0	27	10.3	34	8.2
Sports Field	56	8.3	2	0.8	54	13.0
Multipurpose Hall	46	6.8	2	0.8	44	10.6
Technical Workshop	14	2.1		0.0	14	3.4
Total	676	100	262	100	414	100

As a result, the area that students enjoy the most outside and during the lesson is the school garden. The second area they enjoy is the laboratory. There is no differentiation according to age or gender. In Konak, the library comes to the forefront the school garden. In addition to that, students enjoy using the school garden outside of lessons more in

Konak than in Karabağlar. The qualities of the school garden, which is the most enjoyed area, are important and worth examining.

5.5 Students' Expectations About OCAAs

In this section, we will examine students' expectations from school and identify areas they can enjoy at school. It is important to determine students' expectations from school, as the areas they enjoy can positively affect their feelings about coming to school.

We grouped this question, which students answered free-hand, as closed space related, open green space related, and lesson related. Students' answers were mostly gathered in closed space related, open green areas related and lesson related groups. Table 23 shows that in closed space related, the most given answers according to total, girls and age were "if there a was sports field" and "having a dining hall". There are differences according to boys. The boys' first response was, "if there was a sport field" (73, 26% of 273), while their second response was "if there was a pool" (10, 3% of 273) and "if there was an internet café" (10, 3% of 273). For open green area related answers, all students' answers were "if there was a park or playground and other public green areas". For lesson related answers, students gave the answer "if the recess increases".

Although the students' expectations from the school are the sports field and the park/playground, the number of students who want more physical lesson hours is few. We can say that students want to realize the areas where they can play physical activity and games at school, away from the supervision of the teacher. This situation also affects the school design. While designing schools, areas where students can play games by doing physical activity should be designed as public spaces, not classrooms.

When examining the answers by district, we examined the two answers with the highest percentage in the three groups with the highest number of answers. Figure 24 shows that closed space related, and open green areas related, and lesson related answers because these are the most answered groups. "If there was sports field" and "if there was a park/playground" are the most common answer for two districts. In Konak (55, 38% of 144) and Karabağlar (94, 20% of 458), students gave the most "if there was sports field" answer. Students in Konak want more sports fields than students in Karabağlar. The second answer is "if there was a park/playground and other public green areas" in Konak

(23, 15% of 144) and Karabağlar (54, 11% of 458). (You can refer to Figure 6 in "Appendix E" to see the distributions by schools.)

Table 23: Students' Expectations from Your School (for All Students) (%)

		Total	Total %	Gender				Age			
				Girls	Girls %	Boys	Boys %	10-12 Age	10-12 Age%	13-15 Age	13-15 %
Closed Space Related	If there was Sports field	142	23.9	69	21.5	73	26.7	93	27.3	49	19.4
	Having a dining hall	28	4.7	25	7.8	3	1.1	15	4.4	13	5.1
	If there was pool	23	3.9	13	4.0	10	3.7	8	2.3	15	5.9
	a larger area	18	3.0	12	3.7	6	2.2	8	2.3	10	4.0
	If there was internet cafe	14	2.4	4	1.2	10	3.7	5	1.5	9	3.6
	Having a canteen	11	1.9	9	2.8	2	0.7	6	1.8	5	2.0
	Having a computer room	10	1.7	6	1.9	4	1.5	5	1.5	5	2.0
	Having a library	8	1.3	7	2.2	1	0.4	6	1.8	2	0.8
	If there was movie saloon	7	1.2	5	1.6	2	0.7	4	1.2	3	1.2
Open Green Areas Related	If there was a park/playground and other public green areas	112	18.9	67	20.9	45	16.5	75	22.0	37	14.6
	If there was shaded seating	5	0.8	3	0.9	2	0.7	3	0.9	2	0.8
Lesson Related	If the recess increases	46	7.7	25	7.8	21	7.7	18	5.3	28	11.1
	If there was more gym lesson	4	0.7	1	0.3	3	1.1	3	0.9	1	0.4
	No Response	166	27.9	75.0	23.4	91.0	33.3	92.0	27.0	74	29.2
	Total	594	100.0	321	100.0	273	100.0	341	100.0	253	100.0
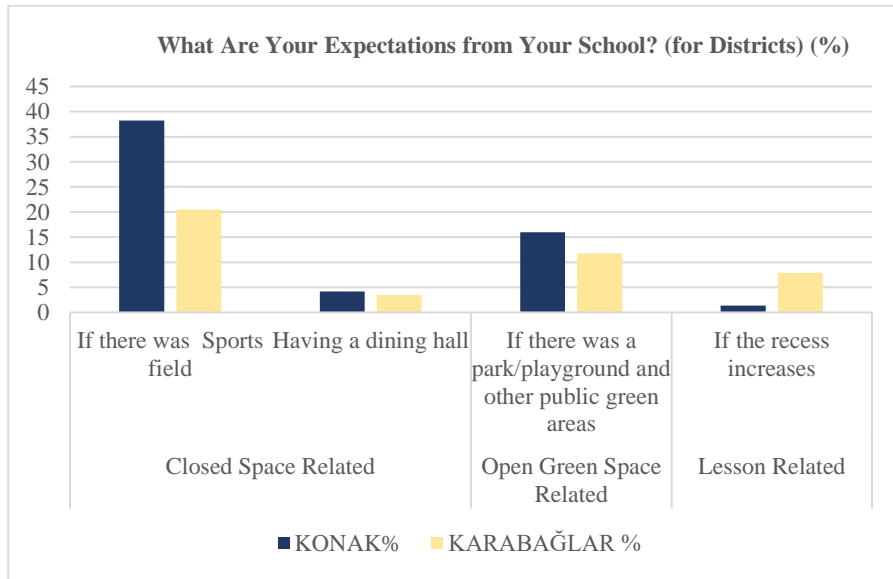
Figure 24: What Are Your Expectations from Your School? (for Districts) (%)

In the distribution of the students' expectations from school by total and age groups, the most common answers were "if there was sports field", "if there was a park/playground and other public green areas", and "if the recess increases". The second answer differed for boys. The second response of the boy was "if there was a pool" and

"if there was an internet café". The students in Konak gave the answer "if there was a sports field" more than the students in Karabağlar. The students in Karabağlar, on the other hand, gave more "if the recess increases" answers than the students in Konak. KO1, KO2 and KA1 stood out with their "if there was sports field" answer. Since KA2 has a sports field, the answer may be low. There is also a sports field in KO2, but according to these answers, we can say that it is insufficient for students. KA2, on the other hand, came to the forefront with the answer "if the recess increases".

5.6 School Garden as a Significant OCAA

The school garden is the OCAA that students use most often and spend the longest time in. In addition, the school garden is the OCAA that students most enjoy using outside of the lesson and during the lesson. Therefore, the features of school gardens are important for students. In this section, we will examine the features of school gardens with descriptive statistics. Before examining the descriptive statistics, we will re-examine the tables on the qualitative characteristics of the schools. We will take these tables as a base while evaluating the descriptive statistics. According to Table 25, we expect students in KO1 to say that the school garden is inadequate for playing, running, and wandering around. At the same time, we expect students in KO2 and KA1 to say that trees, grass areas, and shady areas are insufficient.

Table 24: Qualitative Characteristics of the School

District	School	Area of Building	Number of Students Per Square Meter	Area of School Garden	Number of Students Per Square Meter	Concrete Floor	Trees and Shady Areas
Konak	KO1	1185	0.43	4200	0.12		X
	KO2	501	1.05	500	1.05	X	
Karabağlar	KA1	4713	3.16	3750	2.51	X	
	KA2	776	1.11	1992	2.86		X

In order to evaluate the questions with tables and graphics, abbreviations of the questions are used. The abbreviations of the questions are shown in Table 26.

Table 25: Code of Options for Students' Perceptions About School Garden

Options	Code
I enjoy using the school garden.	Enjoy
The school garden is big enough to play games.	Play games
There is enough seating area to sit in the school garden.	Seating Area
There is enough area in the school garden to walk around and run around.	Walk and Run
There are enough trees and grass areas to play in the school garden	Trees and Grass Areas
The shaded areas in the school garden provide protection from the sun and rain	Shaded Areas
If we had held the lessons in the school garden, I would have enjoyed those lessons more.	Lesson
The school garden improves my friendships.	Friendship

All students, age and gender were answered in Table 27, which shows that "enjoy", "play games", "seating areas", "walk and run", "lesson", and "friendship" are the groups that answered "yes". In addition to that, students aged 13-15 said that the "seating area" was sufficient for the school garden more than the students aged 10-12. All of the students and age and gender groups answered "no" to the question of "Trees and Grass areas". We can say that trees and grass areas are insufficient in school gardens. While total and girls answered "partially" to the shaded areas question, boys and 10–12-year-olds gave the answer "yes". 13–15-year-old gave the answer "no".

Table 26: All Student Perceptions About School Gardens

			Enjoy	Play games	Seating Area	Walk and Run	Trees and Grass Areas	Shaded Areas	Lesson	Friendship
	Total%	Yes	71.0	53.6	42.4	60.8	23.9	23.9	63.4	44.7
		Partially	19.4	24.2	23.5	20.8	29.0	27.5	21.8	28.0
		No	7.4	19.8	30.4	15.3	43.0	24.9	11.0	22.7
Gender	Girls %	Yes	68.5	54.2	41.4	59.5	24.9	18.7	64.2	44.5
		Partially	21.5	24.0	22.7	22.4	29.9	25.5	21.2	26.8
		No	8.1	19.6	32.1	15.6	42.1	24.6	11.5	24.9
	Boys %	Yes	73.9	52.9	43.7	62.5	22.6	30.3	62.5	44.8
		Partially	16.9	24.5	24.5	18.8	28.0	29.9	22.6	29.5
		No	6.5	19.9	28.4	14.9	44.1	25.3	10.3	19.9
Age	10-12 Age %	Yes	71.0	55.4	38.7	63.3	23.2	26.7	62.5	45.7
		Partially	19.4	25.2	26.7	19.1	28.4	23.8	25.2	29.0
		No	7.3	16.1	31.4	13.5	44.0	20.8	9.1	21.4
	13-15 Age%	Yes	70.2	50.4	48.8	57.7	25.0	18.5	61.7	42.3
		Partially	19.8	23.0	21.4	22.6	30.2	25.0	17.7	26.2
		No	7.3	24.6	27.4	17.7	40.7	30.6	13.7	25.0

It has been observed that trees and grass areas are insufficient in both districts. At the same time, students answered no for shaded areas in Konak and yes in Karabağlar. Table 27 shows that, to the question "trees and grass areas", more than half of the students

in Konak answered no (90, 62% of 144). Less than half of the students in Karabağlar answered no (165, 36% of 458). Almost a quarter of the students in Konak answered no (40, 27% of 144) to the question "shaded areas" in Karabağlar, and nearly a quarter of the students answered yes (123, 26% of 458). In all other questions, students in Karabağlar and Konak answered yes. Students in Karabağlar said that more "play games", "seating area" and "walking and run" were sufficient than students in Konak. Students in Konak said that more "trees and grass areas'' were sufficient than students in Karabağlar.

Table 27: Students' Perceptions About School Garden (for Districts) (%)

	Total			Konak			Karabağlar		
	Yes%	Partially%	No%	Yes%	Partially%	No%	Yes%	Partially%	No%
Enjoy	71.0	19.4	7.4	66.0	20.8	9.7	71.8	19.2	6.8
Play games	53.6	24.2	19.8	44.4	22.2	30.6	55.9	25.1	16.4
Seating Area	42.4	23.5	30.4	34.7	29.2	31.3	45.2	23.1	29.5
Walk and Run	60.8	20.8	15.3	47.9	29.2	20.1	64.4	18.3	13.8
Trees and Grass Areas	23.9	29.0	43.0	14.6	16.0	62.5	26.9	33.6	36.0
Shaded Areas	23.9	27.5	24.9	13.2	24.3	27.8	26.9	24.0	24.2
Lesson	63.4	21.8	11.0	61.1	27.8	8.3	63.8	20.1	11.8
Friendship	44.7	28.0	22.7	43.8	30.6	22.9	44.1	27.5	22.7

The percentage of yes answers is higher than the percentage of other answers in most of the questions. Figure 25 shows that for "trees and grass areas", 51% (46 of 89) of the students answered no to the question. For "Shaded areas", 30% (27 of 89) of the students answered no to the question. We knew that the school garden of KO1 had trees and grass areas, and shaded areas, but we realized that these areas were not enough for children. We expected the school garden to be insufficient for playing, walking, and running, but the students said it was sufficient. In all other questions, the percentage of yes answers is higher than the no and partially.
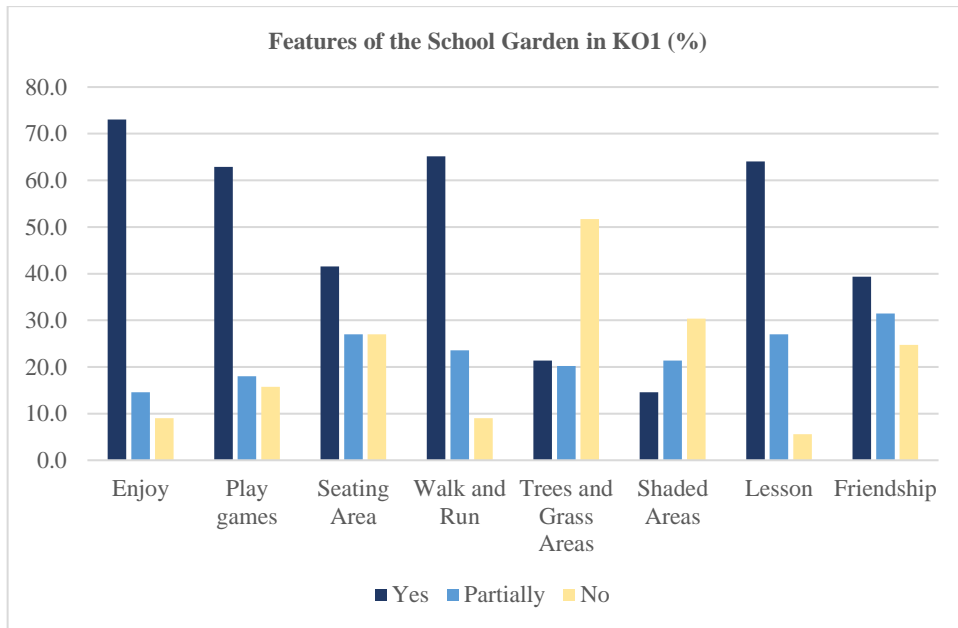
Figure 25: Features of the School Garden in KO1 (%)

Figure 26 shows that the answers in the KO2 differ according to the total answers. 55% (30 of 54) of the students answered no to the question "play games." In the question "seating area'', 38% (21 of 54) of the students answered no. Although there are sitting areas in the school, it is not enough for the students. To the question "walk and run", 38% (21 of 54) of the students gave the answer partially or no. When we looked at the square meter per student in KO2, we expected the school garden to be sufficient for playing, running, and walking. But the students said that it was insufficient. To the question "shaded areas", 29% (19 of 54) of the students answered partially and 24% answered no. Seating areas stay in the sun. At the same time, no answer was given to the questions of "trees and grass areas" (43, 79% of 54). We expected this result because the school garden has a concrete floor.
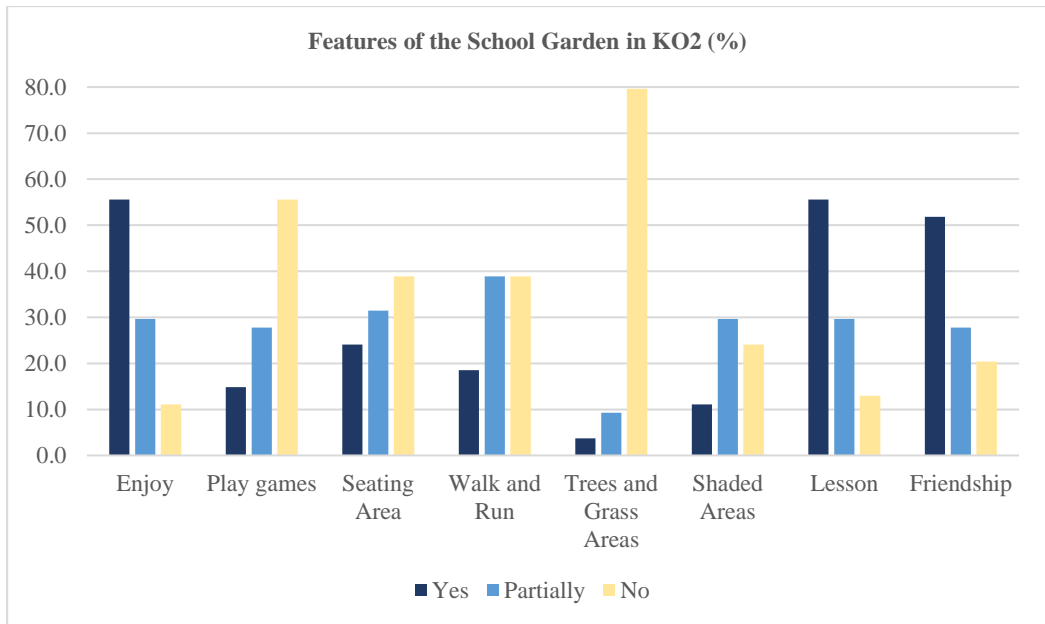
Figure 26: Features of the School Garden in KO2 (%)

Figure 27 shows that, students answered yes to most of the questions. 37% (111 of 293) of the students answered no to the question "seating area". There are sitting areas in the school, but we understand that it is not enough for students. 40% (119 of 293) of the students answered no to the question "trees and grass areas". We mentioned in the previous that the school garden at KA1 is covered with a concrete floor.
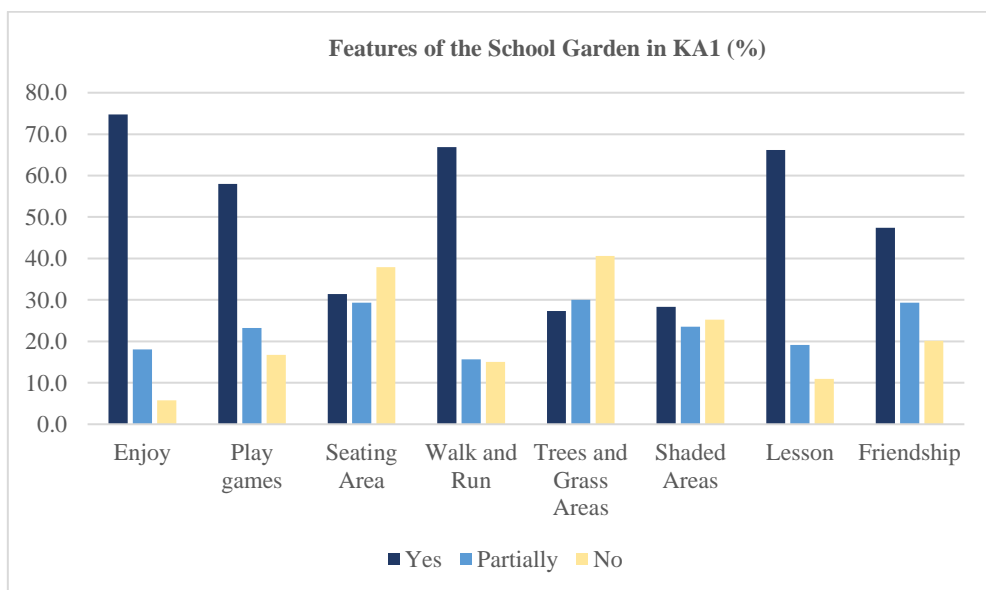
Figure 27: Features of the School Garden in KA1 (%)

Figure 28 shows that the students answered yes to most of the questions. To the question "trees and grass areas", 40% (66 of 165) of the students answered no. Although the school garden of KA2 has trees and shaded areas, it is not considered sufficient by the students. To the question "shaded areas", 24% (41 of 165) of the students answered partially.
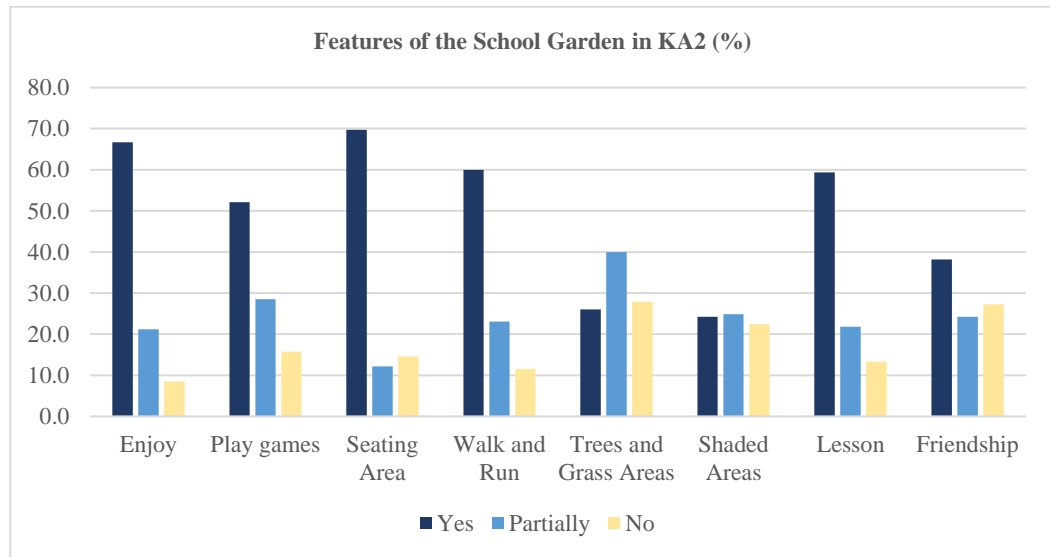
Figure 28: Features of School Garden in KA2 (%)

As a result, the students answered yes to most of the questions. However, the students answered no or partially to the questions "trees and grass areas" and "shaded areas". We can say that schools are insufficient for students in trees and grass areas, and shaded areas. Especially in Konak, students answered no to the questions "play games'', "seating areas'', and "walk and run''. While they expected that the school garden in KO1 would be insufficient for the activities of the students, the students answered that it was sufficient. Also, while they expected that the school garden in KO2 would be sufficient for the activities of the students, the students answered that it was insufficient.

5.6.1 Students' Expectations About School Garden

In the descriptive statistics, we saw that the school garden came to the forefront. Determining the expectations of the students about the school garden is important in terms of designing an environment where they will enjoy the school garden.

Table 28 shows that the students' expectations from the school garden are grouped according to their answers. Students answered these questions in freehand. The common answer is "if there was a park/playground and other public green areas'' for open green areas. Students aged 10-12 (41%, 139 of them 336) and girls (39%, 133 of them 335) wanted more "if there was a park/playground and other public green areas" than students aged 13-15 (27%, 67 of them 243) and boys (29%, 73 of them 248). The second highest answer given by the students was "a bigger school garden". Regarding the closed space, the students generally answered "sports field" and "if there was a pool".

Table 28: Grouping Students' Expectations from Their School Garden (for All Students) (%)

		Total	Total %	Gender				Age			
				Girl	Girl %	Boy	Boy %	10- 12 Age	10-12 Age %	13-15 Age	13-15 Age %
Open Space Related	if there was a park/playground and other public green areas	206	35.6	133	39.7	73	29.4	139	41.4	67	27.6
	A bigger school garden	69	11.9	39	11.6	30	12.1	40	11.9	29	11.9
	Shady areas to chat	41	7.1	21	6.3	20	8.1	30	8.9	11	4.5
Closed Space Related	Sports field	70	12.1	38	11.3	32	12.9	30	8.9	40	16.5
	If there was a pool	12	2.1	7	2.1	5	2.0	7	2.1	5	2.1
	A show stage we can use	3	0.5	1	0.3	2	0.8	3	0.9		0.0
	No Response	178	30.7	96	28.7	86	34.7	87	25.9	91	37.4
	Total	579	100.0	335	100.0	248	100.0	336	100.0	243	100.0

In Figure 29 shows that "if there was a park and other public green areas" and "a bigger school garden'' are the common answers for two districts. In open green areas related answers, the highest response in Karabağlar and Konak was "if there was a park/playground and other public green areas". In Karabağlar (45, or 9% of 458) and Konak (28, or 19% of 144), the second highest response was "a bigger school garden". Students in Konak wanted more "a bigger school garden" than students in Karabağlar. In closed green areas related answers, the highest response in Karabağlar (45, or 9% of 458) and Konak (23, or 16% of 144) was "sports field". (You can refer to Figure 7 in "Appendix E" to see the distributions by schools.)
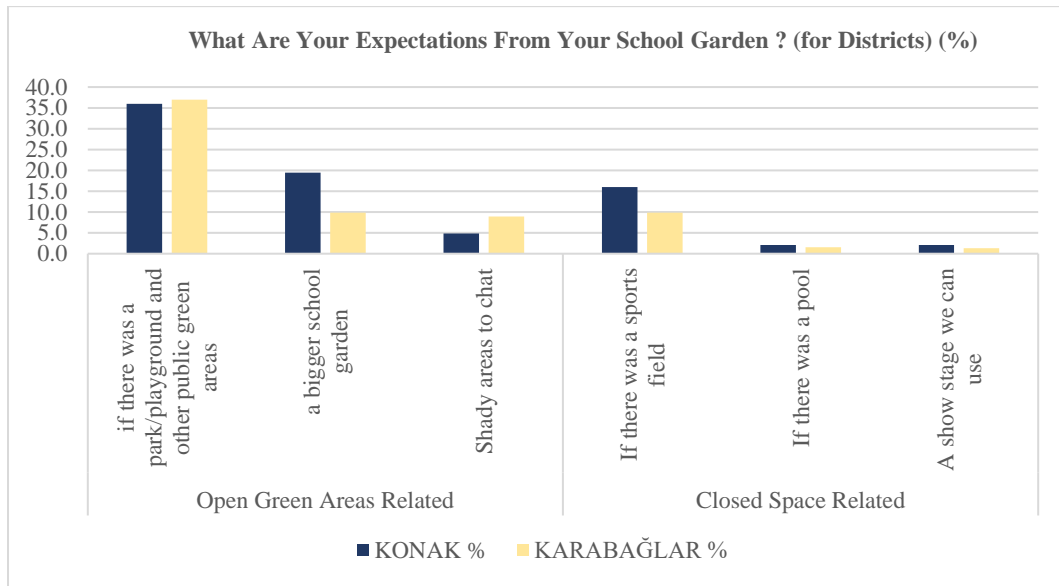
Figure 29: What Are Your Expectations from Your School Garden? (for Districts) (%)

The students' expectations from the school garden were mostly "if there was a park and other public green areas" from the open green areas related group and the second highest answer was "sports field". The students at KO2 wanted a larger school garden. KO2's school garden is small compared to other schools. At the same time, the square meter per student is less. That's why we expected this result. Students' expectations are mostly about closed space and open green areas related. Sport fields, parks/playgrounds and other public green areas are the prominent answers.

5.7 Summary of Chapter 5

In summary of Section 5, as the age of the students decreases, they use the school garden to have fun and play with their friends. As students get older, students use it to breathe. The students in Konak use the school garden for "for playing games" more than the students in Karabağlar. At Konak, students use more types of OCAAs more frequently. The most commonly used OCAA is the school garden. Girls use the school garden more often than boys. At the same time, 13–15-year-olds of age use the school garden more often than 10-12-year-olds. 10-12-year-olds and Karabağlar use the sports field more usually than 10–12-year-olds and Konak. The OCAAs with the longest time spent differ. But the school garden and laboratory are common to all. 13–15-year-olds of age use the school garden longer than 10–12-year-olds. 13–15-year-olds use the sports

field longer than 10–12-year-olds. Boys use the laboratory longer than girls and students aged 13-15 use it longer than students aged 10-12. In addition to that, students in Karabağlar use the laboratory and library longer than students in Konak. The areas that students enjoy using during the lesson are the laboratory for girls and the school garden for boys. While it is a laboratory for 10–12-year-olds, it is a school garden for 13–15-year-olds. While it is a school garden in Konak, it is a laboratory in Karabağlar. The areas that students enjoy using outside of lesson the most are the school garden for all groups. Students enjoy using the school garden outside of lessons more in Konak than in Karabağlar. The expectation of students from school is if there was sports field, if there was a park/playground and if the recess increases. Students in Konak want more sports fields than students in Karabağlar. In this case, there are two situations that we should focus on. First of all, although the students expect sport fields, and parks/playgrounds, and other public green areas from the school, the number of students who want physical lessons to be long is few. In this case, we can say that students want to use these areas according to their own wishes without teacher supervision. This shows that it is more appropriate to design these areas as public spaces. The second thing to focus on is recess times. School recess time vary between 10 and 15 minutes. This time is insufficient for students to use the out-of-classroom activity areas, do physical activities, and play games during recess. According to this table, we understood that the school garden is the most important area for students. Therefore, we will continue by focusing on the school garden.

According to all groups, it is enjoyable to use the school garden, the school garden is large enough for playing, the sitting areas in the school garden are sufficient; the school garden is large enough for walking and running; the students would have more pleasure if they had studied their lessons in the school garden; the school garden develops the friendship relations of the students; and there are not enough trees and grass areas in schools. Students aged 13-15 said that the "seating area" was sufficient for the school garden more than the students aged 10-12. While the girls answered partially to question about the shaded areas in the school garden protecting them from the sun, the boys answered yes. While 10-12 age answered yes, 13-15 age answered no. While the students in Konak answered no, the students in Karabağlar answered yes. Students in Karabağlar said that more "play games" and "seating area" were sufficient than students in Konak. In addition to that, students in Karabağlar answered yes to "play games", "walk and run", and "trees and grass" more than students in Konak. The students' requests for the school garden were park/playgrounds and other public green areas and sports field. For the

Konak and Karabağlar, students gave "park/playgrounds and other public green areas", and "a bigger school garden" answers. The students in Konak wanted a bigger school garden more than the students in Karabağlar. These are important in the planning of the school garden. When planning school gardens, students' open space related requests should be considered. School gardens should have parks, shaded areas, playgrounds, and seating areas like public spaces.

CHAPTER 6

STUDENTS' USE OF LAND USES AROUND THE SCHOOL

In this section, the effect of commercial areas, industrial areas, transportation areas, and public green areas around the school on positive feelings about coming to school and the types of land use around the school will be examined. In the user survey conducted with the students, eating places, parks, other public green areas, internet cafes, sports fields, grocery/market, bus stop, stationery, street, square, industrial areas, mostly houses, construction area/empty spaces, and shopping mall/shopping center land use questions asked. In this section, the variety of students' the land uses around the school, the frequency of students' use, the duration of use, the areas that students enjoy using, and their expectations from these areas are explained. In the literature, parks and eating places, two of the land uses around the school, comes to the fore, and is also discussed. Which of the land uses around the school stood out was determined by measuring how they were used, how often they were used, how long they were used, and which ones they enjoyed using.

6.1 Students' Awareness of Land Uses Around the School

In this section, students' awareness of out-of-classroom activity areas is explained. In Table 29, the land uses around 300 m of the schools are given. There is number of high commercial use around KO1 in Konak and KA2 in Karabağlar.

Table29: Land Uses Around the School for Schools

	Number of Land Use			
Land Uses Around the School(300m)	**KO1**	**KO2**	**KA1**	**KA2**
Eating Places	29	3	8	16
Parks	-	-	1	3
Other Public Green Areas	-	-	-	-
Square	1	-	-	
Internet Cafe	1	-	-	1
Stationary	-	-	1	1
Sports Fields	-	-	-	-
Industrial Areas	-	-	3	-
Grocery/Market	12	3	6	8
Bus/Dolmus Stop	-	-	5	3
Construction Area/Empty Area	-	-	-	-
Mall/Shopping Center	-	-	-	-
Total	**43**	**7**	**24**	**32**

Students were able to mark more than one option for this question. We'll look at how many land uses they marked to examine students' perceptions of their land use. The perimeter of the school covers a circle of 300 meters in radius. Students are mostly aware of the land uses around the school, except for KO1. Figure 30 shows that while there are 4 types of land use in KO1 in Konak, students marked the most 6 types (8,14% of 55). While there are 5 types of land use in KO2, students marked 5 types (11, 20%, of 55). While there were 8 types of usage in KA1 in Karabağlar, students marked 9 types (45, 13% of 333). There are 8 types in KA2, and students ticked at most 8 types (15, 28% of 184).
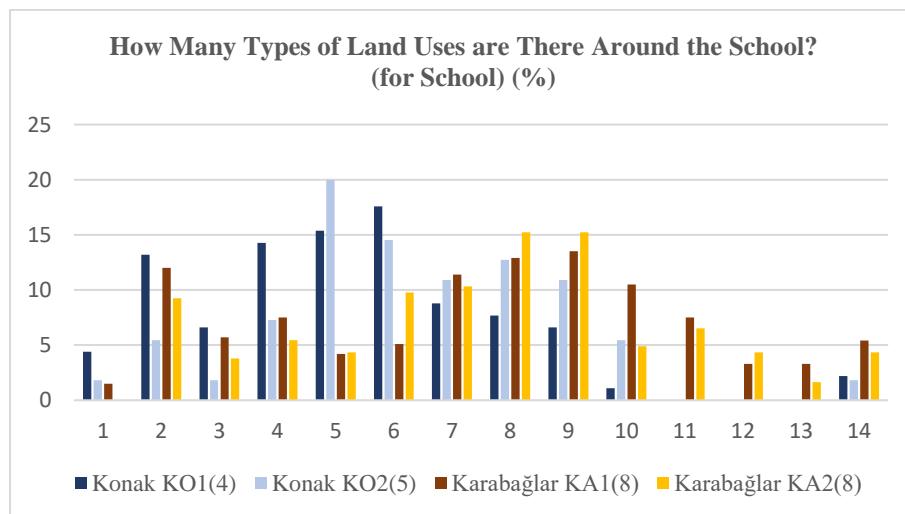
Figure 30: How Many Types of Land Uses are There Around the School? (for School) (%)

As a result, students are generally aware of the land uses around the school. The number of aware students in KO1 is lower the others. We can assume that students who respond more than the type of land use owned by the schools respond based on an area larger than 300 m around the schools.

6.2 Why and How Do Students Use Land Uses Around the School?

In this section, students' purposes of using land use around the school are examined. While examining the land uses around the school, we will examine the 14 different land uses that differ in use with tables and graphs.

Eating places are used by students to eat something. All of the students gave this answer. Parks are generally used by students for "for playing" and "for fun" purposes. However, as age increases, the purpose of use differs. Besides playing games, students started to use the parks for sitting purposes. Table 30 shows that 13–15-year-old students' use purposes are "for fun" (23, 9% of 254), "for playing" (21, 8% of 254), and "to sit" (21, 8% of 254). (You can refer to Figure 8 in "Appendix E" to see the distributions by schools.)

Table 30: Students' Purposes of Using the Parks (for All Students) (%)

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age %
for playing	97	16.1	50	15.5	47	18.1	76	21.8	21	8.3
for fun	58	9.6	42	13.0	16	6.2	35	10.1	23	9.1
to sit	32	5.3	23	7.1	9	3.5	11	3.2	21	8.3
to meet my friends	13	2.2	11	3.4	2	0.8	6	1.7	7	2.8
to eat	13	2.2	8	2.5	5	1.9	6	1.7	7	2.8
to walk around	9	1.5	2	0.6	7	2.7	4	1.1	5	2.0
to get air	4	0.7	4	1.2		0.0	0	0.0	4	1.6
cause I'm bored	2	0.3	0	0.0	2	0.8	2	0.6		0.0
to relax		0.0	0	0.0		0.0	0	0.0		0.0
No Response	374	62.1	182	56.5	171	66.0	208	59.8	166	65.4
Total	602	100	322	100	259	100	348	100	254	100

As a result, parks are generally used for "for playing", "for fun", and "to sit" purposes. As the students got older, they started to use the parks for sitting.

Table 31 shows that for students, the most common response is "to sit" for other public green areas. The second response differs for all groups. Students gave "for playing" in data from total (23, 3% of 602), boys (23, (of 286) and 10-12 age (42, 12% of 344).

Boys (10, 3% of 286), and 13–15-year-olds (15, 6% of 238) gave the "to walk around" answer. Girls (15, 4% of 316) gave the "to get air" answer.

Table 31: Students' Purposes of Using the Other Public Green Areas (for All Students) (%)

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age %
			Gender				Age			
to sit	74	12.3	51	16.1	23	8.0	42	12.2	32	13.4
for playing	23	3.8	13	4.1	10	3.5	19	5.5	4	1.7
to get air	21	3.5	15	4.7	6	2.1	13	3.8	8	3.4
to walk around	20	3.3	10	3.2	10	3.5	5	1.5	15	6.3
for fun	11	1.8	6	1.9	5	1.7	5	1.5	6	2.5
to picnic	6	1.0	1	0.3	5	1.7	5	1.5	1	0.4
to meet my friends	4	0.7	2	0.6	2	0.7	1	0.3	3	1.3
to relax	3	0.5	0	0.0	3	1.0	3	0.9		0.0
to watch nature	3	0.5	2	0.6	1	0.3	3	0.9		0.0
to protect from the sun	3	0.5	2	0.6	1	0.3	2	0.6	1	0.4
No Response	434	72.1	214	67.7	220	76.9	246	71.5	168	70.6
Total	602	100	316	100	286	100	344	100	238	100

Table 32 shows that there are differences in the use of other public green areas between the two districts. It is used for "to walk around" (10, 7% of 130) and "to get air" (4, 3% of 130) purposes in Konak. It is used for "to sit" (71, 15% of 457) and "for playing" (20, 4% of 457) purposes in Karabağlar. (You can refer to Figure 9 in "Appendix E" to see the distributions by schools.)

Table 32: Students' Purposes of Using the Other Public Green Areas (for District) (%)

	Total	Total%	Konak	Konak%	Karabağlar	Karabağlar%
to sit	74	12.3	3	2.1	71	15.5
for playing	23	3.8	3	2.1	20	4.4
to get air	21	3.5	4	2.8	17	3.7
to walk around	20	3.3	10	7.1	10	2.2
for fun	11	1.8	3	2.1	8	1.8
to picnic	6	1.0	2	1.4	4	0.9
to meet my friends	4	0.7	0	0.0	4	0.9
to relax	3	0.5	0	0.0	3	0.7
to watch nature	3	0.5	0	0.0	3	0.7
to protect from the sun	3	0.5	0	0.0	3	0.7
No Response	434	72.1	105	74.5	314	68.7
Total	602	100	130	92.2	457	100.0

As a result, the use purpose of other public green areas has become "to sit", "for playing", "to get air", and "to walk around". All of the students use it for "to sit" purposes. While 10-12 age use it for "for playing" purposes, 13-15 age use it for "to walk around". Girls, on the other hand, use it for "to get air". In Konak, students generally used it for

"to get air" and "to walk around". In Karabağlar, they are used for "to sit" and "for playing" purposes.

Table 33 shows that streets used for "to walk around" by total, girls, and 13–15-year-olds. The other answer with the highest value stated by boys and 10–12-year-olds was "for playing". The second highest answer given by the students was "for playing" for the total, girls, and 13-15 age groups. The other second highest answer is "to walk around" for boys and 10-12 age. (You can refer to Figure 10 in "Appendix E" to see the distributions by schools.)

Table 33: Students' Purposes of Using the Streets (for All Students) (%)

| | Total | Total% | Gender | | | | Age | | | |
			Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age %
to walk around	74	12.3	50	15.8	24	9.4	34	9.9	40	16.1
for playing	63	10.5	25	7.9	38	14.8	47	13.7	16	6.5
for transportation	23	3.8	20	6.3	3	1.2	9	2.6	14	5.6
for fun	11	1.8	1	0.3	10	3.9	9	2.6	2	0.8
to play with my friends	7	1.2	4	1.3	3	1.2	4	1.2	3	1.2
to get air	4	0.7	4	1.3		0.0	1	0.3	3	1.2
to sit	4	0.7	4	1.3		0.0	2	0.6	2	0.8
No Response	416	69.1	209	65.9	178	69.5	236	69.0	168	67.7
Total	602	100.0	317	100.0	256	100.0	342	100.0	248	100.0

There is no difference according to districts. The highest answers given in both districts were "walk around" and "for playing".

Squares are used by all the students "to walk around". All the students use internet cafes "to play games". Stationary are used by all students "to shopping". The students generally answered, "to get snack" and "to get my needs" for the usage purposes of the grocery/market. Boys also replied, "for do shopping".

Table 34: Students' Purposes of Using the Grocery/Market (for All Students)

| | Total | Total% | Gender | | | | Age | | | |
			Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age %
to get snacks	115	19.1	70	21.6	45	17.2	79	23.2	36	14.3
to get my needs	53	8.8	46	14.2	7	2.7	18	5.3	35	13.9
for do shopping	39	6.5	25	7.7	14	5.3	18	5.3	21	8.4
No Response	395	65.6	183	56.5	196	74.8	225	66.2	159	63.3
Total	602	100	324	100	262	100	340	100	251	100

Table 35 shows that in Konak, the most common response is "to get my needs" (25, or 17% of 144). In Karabağlar, students generally use the grocery/market "to get snack" (66, or 21% of 457). As it is understood from the answers, students' economic status is low in Konak, but they use grocery/market "to get my needs". In Karabağlar, students' economic status is higher than in Konak, however students use the grocery/market "to get snack". (You can refer to Figure 11 in "Appendix E" to see the distributions by schools.)

Table 35: Students' Purposes of Using the Grocery/Market (for District) (%)

	Total	Total%	Konak	Konak%	Karabağlar	Karabağlar%
to get snacks	115	19.1	16	11.1	99	21.7
to get my needs	53	8.8	25	17.4	28	6.1
for do shopping	39	6.5	9	6.3	30	6.6
No Response	395	65.6	94	65.3	300	65.6
Total	602	100	144	100	457	100

As a result, when we consider the economic level of the two districts, students in Konak use groceries for their needs, while in Karabağlar they use them for their own wishes.

Stops are used by all of the students for transportation, and students use shopping center for shopping fand to get needs.

As a result, parks are generally used for "for playing" and "for fun" purposes. As their age gets higher, "to sit" is added to the purposes of use. Public green areas are used for "to walk around" by boys and 13–15-year-olds, while they are used for "for playing" purposes by boys. Girls, on the other hand, use it for "to get air". Streets are used for "for playing" purposes for boys and 10–12-year-olds. Students in Konak generally use the grocery/market for "to get my needs". Those in Karabağlar, on the other hand, use it for "to get snacks". When we consider their economic situation, an expected situation has emerged.

6.3 Use Frequency of Land Uses Around the School

In this section, we explain the frequency of land uses around the school. When the frequency of using these areas is evaluated together with whether they find them pleasant or not, we can determine how it affects their positive feelings about coming to school.

According to Table 36, eating places, streets, squares, market/groceries and bus/dolmus stops are usually used by students. Internet cafes, stationaries, and shopping centers are sometimes used. While parks and other public green areas are mostly sometimes used, 10–12-year-olds students usually use them. Sports areas are usually used by boys and 10-12 years old students, although they are sometimes used.

Table 36: How Often Do You Use Land Uses Around the School (for All Students)?

	Total	Total %	Girls	Girls %	Boys	Boys %	10-12 Age	10-12 Age %	13-15 Age	13-15 Age %
EATING PLACES										
			Gender				**Age**			
Rarely	11	1.8	6	1	5	0.8	5	0.8	6	1
Sometimes	60	10	39	6.5	21	3.5	24	4	36	6
Often	17	2.8	13	2.2	4	0.7	7	1.2	10	1.7
Usually	93	15.4	52	8.6	41	6.8	48	8	45	7.5
No Response	421	69.9	492	81.7	531	88.2	518	86	505	83.9
Total	602	100	602	100	602	100	602	100	602	100
PARKS										
Rarely	14	2.3	12	2	2	0.3	8	1.3	6	1
Sometimes	83	13.8	52	8.6	31	5.1	37	6.1	46	7.6
Often	22	3.7	3	0.5	19	3.2	3	0.5	19	3.2
Usually	64	10.6	47	7.8	17	2.8	38	6.3	26	4.3
No Response	419	69.6	488	81.1	533	88.5	516	85.7	505	83.9
Total	602	100	602	100	602	100	602	100	602	100
OTHER PUBLIC GREEN AREAS										
Rarely	17	2.8	9	1.5	8	1.3	9	1.5	8	1.3
Sometimes	62	10.3	41	6.8	21	3.5	24	4	38	6.3
Often	13	2.2	9	1.5	4	0.7	4	0.7	9	1.5
Usually	52	8.6	31	5.1	21	3.5	27	4.5	25	4.2
No Response	458	76.1	512	85	548	91	538	89.4	522	86.7
Total	602	100	602	100	602	100	602	100	602	100
STREETS										
Rarely		0		0						
Sometimes	28	4.7	21	3.5	7	1.2	9	1.5	19	3.2
Often	15	2.5	8	1.3	7	1.2	10	1.7	5	0.8
Usually	143	23.8	82	13.6	61	10.1	75	12.5	68	11.3
No Response	416	69.1	491	81.6	527	87.5	508	84.4	510	84.7
Total	602	100	602	100	602	100	602	100	602	100

(Cont. on the next page)

(Table 36. Cont.)

SQUARES									
Rarely	0	0	0	0					
Sometimes	16	2.7	8	1.3	8	1.3	9	1.5	7	1.2
Often	4	0.7	3	0.5	1	0.2	3	0.5	1	0.2
Usually	27	4.5	15	2.5	12	2	13	2.2	14	2.3
No Response	555	92.2	576	95.6	581	96.5	577	95.8	580	96.3
Total	602	100	602	100	602	100	602	100	602	100
INTERNET CAFES									
Rarely	1	0.2			1	0.2	1	0.2	0	0
Sometimes	26	4.3	9	1.5	16	2.7	7	1.2	19	3.2
Often	14	2.3	5	0.8	9	1.5	6	1	8	1.3
Usually	6	1	1	0.2	5	0.8	2	0.3	4	0.7
No Response	555	92.2	587	97.5	571	94.9	586	97.3	571	94.9
Total	602	100	602	100	602	100	602	100	602	100
STATIONARIES									
Rarely	24	4	16	2.7	8	1.3	8	1.3	16	2.7
Sometimes	88	14.6	69	11.5	19	3.2	43	7.1	45	7.5
Often	21	3.5	11	1.8	10	1.7	8	1.3	13	2.2
Usually	22	3.7	18	3	4	0.7	10	1.7	12	2
No Response	447	74.3	488	81	561	93.2	533	88.5	516	85.7
Total	602	100	602	100	602	100	602	100	602	100
SPORTS AREAS									
Rarely	4	0.7	2	0.3	2	0.3	4	0.7	0	0
Sometimes	16	2.7	7	1.2	9	1.5	7	1.2	9	1.5
Often	9	1.5	3	0.5	6	1	2	0.3	7	1.2
Usually	16	2.7	6	1	10	1.7	13	2.2	3	0.5
No Response	557	92.5	584	97	575	95.5	576	95.7	583	96.8
Total	602	100	602	100	602	100	602	100	602	100
MARKET/GROCERIES									
Rarely	5	0.8	4	0.7	1	0.2	2	0.3	3	0.5
Sometimes	61	10.1	44	7.3	17	2.8	28	4.7	33	5.5
Often	14	2.3	10	1.7	4	0.7	5	0.8	9	1.5
Usually	88	14.6	57	9.5	31	5.1	45	7.5	43	7.1
No Response	434	72.1	487	80.9	549	91.2	522	86.7	514	85.4
Total	602	100	602	100	602	100	602	100	602	100
BUS/DOLMUS STOPS									
Rarely	2	0.3	1	0.2	1	0.2	2	0.3	0	0
Sometimes	33	5.5	23	3.8	10	1.7	13	2.2	20	3.3
Often	8	1.3	6	1	2	0.3	1	0.2	7	1.2
Usually	36	6	25	4.2	11	1.8	14	2.3	22	3.7
No Response	523	86.9	547	90.9	578	96	572	95	553	91.9
Total	602	100	602	100	602	100	602	100	602	100
SHOPPING CENTERS									
Rarely	17	2.8	14	2.3	3	0.5	7	1.2	10	1.7
Sometimes	33	5.5	21	3.5	12	2	15	2.5	18	3
Often	13	2.2	9	1.5	4	0.7	8	1.3	5	0.8
Usually	10	1.7	5	0.8	5	0.8	5	0.8	5	0.8
No Response	529	87.9	553	91.9	578	96	567	94.2	564	93.7
Total	602	100	602	100	602	100	602	100	602	100

According to districts the answers given by the students the most are the same as the total data. As a result of eating places, streets, squares, markets, and bus stops being usde usually by students. These areas are preferences frequently.

6.4 Land Uses Around the School That Students Enjoy/Don't Enjoy

In this section, we will examine the land use around the school that students enjoy and do not enjoy using. Identifying these areas is important to learn how the areas that students enjoy and do not enjoy around the school affect their positive feelings about the school. In Table 37, total (240, 14% of 1617) boys (93, 13% of 711) and 10–12-year-olds (74, 14% of 518) enjoy eating places the most. Girls (148, 16% of 903) and 13–15-year-olds (169, 15% of 1094) enjoy parks. The second enjoyment areas are parks for total (236, 14% of 1617), boys (88, 12% of 711) and 10–12-year-olds (67, 12% of 518). Girls (147, 16% of 903) and 13–15-year-olds (166, 15% of 1094) are eating places.

Table 37: Land Uses That Students Enjoy Using Around the School (for All Students) (%)

| | Total | Total% | Gender | | | | Age | | | |
			Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
Eating Places	240	14.8	147	16.3	93	13.1	74	14.3	166	15.2
Parks	236	14.6	148	16.4	88	12.4	67	12.9	169	15.4
Other Public Green Areas	176	10.9	104	11.5	72	10.1	50	9.7	126	11.5
Grocery/Market	168	10.4	105	11.6	63	8.9	58	11.2	110	10.1
Street	145	9.0	72	8.0	73	10.3	49	9.5	96	8.8
Stationary	140	8.7	100	11.1	40	5.6	56	10.8	84	7.7
Mall/Shopping Center	97	6.0	59	6.5	38	5.3	35	6.8	62	5.7
Internet cafe	94	5.8	30	3.3	64	9.0	24	4.6	70	6.4
Sports fields	85	5.3	32	3.5	53	7.5	29	5.6	56	5.1
Square	59	3.6	26	2.9	33	4.6	19	3.7	40	3.7
Bus/Dolmus Stop	47	2.9	23	2.5	24	3.4	18	3.5	29	2.7
Construction/Empty Area	31	1.9	11	1.2	20	2.8	12	2.3	19	1.7
Industrial Areas	26	1.6	13	1.4	13	1.8	9	1.7	17	1.6
No response	73	4.5	33	3.7	37	5.2	18	3.5	50	4.6
Total	1617	100	903	100	711	100	518	100	1094	100

There are differences according to the districts. Table 38 shows that the most enjoyable place for students in Konak is eating places (47, 14% of 336). In Karabağlar, it is parks (198, 17% of 1160). The second area that students enjoy in Konak is the grocery/market (45, 13% of 336). In Karabağlar, there were eating places (193, 16% of 1160). (You can refer to Figure 12 in "Appendix E" to see the distributions by schools.)

Table 38: Land Uses That Students Enjoy Using Around the School (for Districts) (%)

	Total	Total%	Konak	Konak%	Karabağlar	Karabağlar%
Eating Places	240	14.8	47	14.0	193	16.6
Parks	236	14.6	38	11.3	198	17.1
Other Public Green Areas	176	10.9	37	11.0	139	12.0
Grocery/Market	168	10.4	45	13.4	2	0.2
Street	145	9.0	42	12.5	103	8.9
Stationary	140	8.7	17	5.1	123	10.6
Mall/Shopping Center	97	6.0	16	4.8	81	7.0
Internet cafe	94	5.8	17	5.1	77	6.6
Sports fields	85	5.3	18	5.4	67	5.8
Square	59	3.6	18	5.4	41	3.5
Bus/Dolmus stop	47	2.9	4	1.2	43	3.7
Construction/Empty Area	31	1.9	8	2.4	23	2.0
Industrial areas	26	1.6	10	3.0	16	1.4
No Response	73	4.5	19	5.7	54	4.7
Total	1617	100	336	100	1160	100

As a result, students enjoy use generally eating services, parks and grocery/market and street. While grocery/market and street stand out in Konak, eating services and parks stand out in Karabağlar.

It is important to determine the land use around the school that students do not enjoy to see its effect on positive feelings about coming to school. According to Table 39, the land uses that students do not enjoy using are by total (138, 10% of 1296), girls (91, 12% of 748), and construction/empty by 13–15-year-olds (85, 10% of 790). is the area. The areas that boys (50, 9% of 542) and 10–12-year-olds (56, 11% of 512) do not enjoy using are industrial areas. Other areas that students do not enjoy using are total (128, 9% of 1296), and industrial areas for girls (78, 10% of 748). According to boys (47, 8% of 542) and 10–12-year-olds (53, 10% of 502) it is a construction/empty area. According to 13–15-year-olds (73, 9% of 790), the students' answer was bus/dolmus stop.

Table 39: Land Uses That Students Don't Enjoy Using Around the School (for All Students) (%)

			Gender				Age			
	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
Construction/Empty Area	138	10.6	91	12.2	47	8.7	53	10.6	85	10.8
Industrial Areas	128	9.9	78	10.4	50	9.2	56	11.2	72	9.1
Bus/Dolmus Stop	112	8.6	70	9.4	42	7.7	39	7.8	73	9.2
Street	102	7.9	61	8.2	41	7.6	42	8.4	60	7.6
Square	98	7.6	55	7.4	43	7.9	34	6.8	64	8.1
Internet cafe	92	7.1	68	9.1	24	4.4	32	6.4	60	7.6
Stationary	87	6.7	41	5.5	46	8.5	30	6.0	57	7.2
Parks	76	5.9	39	5.2	37	6.8	32	6.4	44	5.6
Grocery/Market	63	4.9	35	4.7	28	5.2	20	4.0	43	5.4
Other Public Green Areas	61	4.7	37	4.9	24	4.4	18	3.6	43	5.4
Eating Places	54	4.2	33	4.4	21	3.9	23	4.6	31	3.9
Sports fields	54	4.2	25	3.3	29	5.4	16	3.2	38	4.8
Mall/Shopping Center	49	3.8	23	3.1	26	4.8	13	2.6	36	4.6
No Response	182	14.0	92	12.3	84	15.5	94	18.7	84	10.6
Total	1296	100	748	100	542	100	502	100	790	100

Table 40 shows that the most common answers are construction/empty area, industrial area, and bus stop. In Karabağlar and Konak have similar values for data. In Konak, 8% of students (31 out of 378) mentioned 'construction/empty area and in Karabağlar, 10% of students (107 of 1011) gave construction/empty area answer. For another answer, industrial area, 9% of the students(100 of 1011) answered in Konak. In Karabağlar, 7% (28 of 378) of students answered industrial areas. (You can refer to Figure 12 in "Appendix E" to see the distributions by schools.)

Table 40: Land Uses That Students Don't Enjoy Using Around the School (for Districts) (%)

	Total	Total%	Konak	Konak%	Karabağlar	Karabağlar%
Construction/Empty Area	138	10.6	31	8.7	107	11.4
Industrial Areas	128	9.9	28	7.9	100	10.6
Bus/Dolmus Stop	112	8.6	30	8.5	82	8.7
Street	102	7.9	29	8.2	73	7.8
Square	98	7.6	28	7.9	70	7.4
Internet cafe	92	7.1	27	7.6	65	6.9
Stationary	87	6.7	22	6.2	65	6.9
Parks	76	5.9	18	5.1	58	6.2
Grocery/Market	63	4.9	21	5.9	42	4.5
Other Public Green Areas	61	4.7	22	6.2	39	4.1
Eating Places	54	4.2	17	4.8	37	3.9
Sports Field	54	4.2	17	4.8	37	3.9
Mall/Shopping Center	49	3.8	18	5.1	31	3.3
No Response	182	14.0	47	13.2	135	14.3
Total	1296	100	355	100	941	100

The land uses that students most commonly do not enjoy using are industrial areas, construction/empty areas, squares, internet cafes, and bus stops.

6.5 Enjoyment of Public Green Areas and Eating Places

In the literature review, we saw that open green spaces have an important place in the educational lives of students. In the survey made with the students, questions about parks and trees/grass areas were also included. In the previous section, it was saw that the students enjoyed using the parks and other public green areas. In this section, we will examine how the use of parks and other public green areas has an effect on the student's positive feelings about coming to school.

In addition to that, we saw in the literature that eating places reduce students' engagement in school due to their social environment. In this section, we will examine the effect of the social environment in these areas effect on students' positive feelings about coming to school.

In Table 41, we see that all students answered yes to the question "using parks and other public green areas around the school makes me feel more enjoyable at school". Total (175, 29% of 602), boys (128, 45% of 281) and 10–12-year-olds (132, 37% of 351) answered the question "using the sports fields around the school makes me feel more enjoyable at school". answers probably, while girls (77, 24% of 321) and 13-15 age (65, 26% of 248) answer yes.

Table 41: Enjoyment of Parks, Other Public Green Areas, and Sports Areas (for All Students) (%)

Using parks and other public green areas around the school makes me feel more enjoyable at school.										
			Gender				**Age**			
	Total	**Total%**	**Girls**	**Girls%**	**Boys**	**Boys%**	**10-12 Age**	**10-12 Age %**	**13-15 Age**	**13-15 Age%**
Yes	241	40.0	144	42.9	97	37.0	150	42.4	91	36.7
Probably	133	22.1	76	22.6	57	21.8	67	18.9	66	26.6
No	104	17.3	50	14.9	54	20.6	64	18.1	40	16.1
No Response	124	20.6	66	19.6	54	20.6	73	20.6	51	20.6
Total	602	100	336	100	262	100	354	100	248	100
Using the sports fields around the school makes me feel more enjoyable at school.										
Yes	87	14.5	77	24.0	10	3.6	22	6.3	65	26.2
Probably	175	29.1	47	14.6	128	45.6	132	37.6	43	17.3
No	118	19.6	59	18.4	59	21.0	66	18.8	52	21.0
No Response	222	36.9	138	43.0	84	29.9	131	37.3	88	35.5
Total	602	100	321	100	281	100	351	100	248	100

Differences can be seen in districts. In Konak, 25% of the students (or 37 of 144) probably to the question "using parks and other public green areas around the school makes me feel more enjoyable". In Karabağlar, 45% of the students (or 208 of 458) answered yes. To the question "Using the sports fields around the school makes me feel more enjoyable at school", the students mostly answered yes (39, 27% of 144) in Konak. In Karabağlar, they gave the answer probably the most (155, 33% of 458).

Table 42: Enjoyment of Parks, Other Public Green Areas, and Sports Areas (for Districts) (%)

Using parks and other public green areas around the school makes me feel more enjoyable at school.						
	Total	Total%	Konak	Konak%	Karabağlar	Karabağlar%
Yes	241	40.0	33	22.9	208	45.4
Probably	133	22.1	37	25.7	96	21.0
No	104	17.3	27	18.8	77	16.8
No Response	124	20.6	47	32.6	77	16.8
Total	602	100	144	100	458	100

Using the sports fields around the school makes me feel more enjoyable at school.						
Yes	87	14.5	39	27.1	48	10.5
Probably	175	29.1	20	13.9	155	33.8
No	118	19.6	26	18.1	92	20.1
No Response	222	36.9	59	41.0	163	35.6
Total	602	100	144	100	458	100

As a result, according to all students, the park and other public green areas around the school increase students' positive feelings about coming to school. Sports fields, on the other hand, partially affect students' positive feelings about coming to school.

Table 43 indicates that all of the students have responded with "yes" to the question, "I like places such as eating places around the school, markets/groceries more than the school canteen and cafeteria''. Additionally, all of the students have answered "yes" to the question "I enjoy the friendly atmosphere in places such as internet cafes, eating places, and shopping malls/shopping centers around the school''. However, when asked "Instead of going to school, I like to spend time in the internet cafe around'', all of the students have responded with "no''. On the other hand, when asked "Instead of going to school, I like to spend time in eating places around the school and shopping malls/shopping centers'', the total, girls, and boys have given a "yes'' response, while the age groups of 10-12 and 13-15 have answered with "no''.

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
I like places such as eating places around the school, markets/groceries more than the school canteen and cafeteria.										
			Gender				**Age**			
Yes	340	56.5	188	58.6	142	54.4	188	55.1	147	59.5
Probably	116	19.3	61	19.0	51	19.5	67	19.6	46	18.6
No	57	9.5	29	9.0	24	9.2	33	9.7	20	8.1
No Response	89	14.8	43	13.4	44	16.9	53	15.5	34	13.8
Total	602	100	321	100	261	100	341	100	247	100
I enjoy the friendly atmosphere in places such as internet cafes, eating places and shopping malls/shopping centers around the school.										
Yes	249	41.4	131	40.8	111	42.5	134	39.3	111	44.9
Probably	138	22.9	68	21.2	65	24.9	78	22.9	57	23.1
No	77	12.8	37	11.5	35	13.4	42	12.3	30	12.1
No Response	138	22.9	85	26.5	50	19.2	87	25.5	49	19.8
Total	602	100	321	100	261	100	341	100	247	100
Instead of going to school, I like to spend time in the internet cafe around.										
Yes	126	20.9	44	13.7	76	29.1	73	21.4	53	21.5
Probably	81	13.5	38	11.8	38	14.6	48	14.1	29	11.7
No	218	36.2	127	39.6	87	33.3	113	33.1	98	39.7
No Response	177	29.4	112	34.9	60	23.0	107	31.4	67	27.1
Total	602	100	321	100	261	100	341	100	247	100
Instead of going to school, I like to spend time in eating places around the school and shopping malls/shopping centers.										
Yes	177	29.4	101	31.5	72	27.6	97	28.4	78	31.6
Probably	136	22.6	63	19.6	69	26.4	72	21.1	61	24.7
No	170	28.2	91	28.3	72	27.6	101	29.6	62	25.1
No Response	119	19.8	66	20.6	48	18.4	71	20.8	46	18.6
Total	602	100	321	100	261	100	341	100	247	100

Table 44 shows that the majority of students say "I like places such eating places around the school, markets/groceries more than the school canteen and cafeteria'' in Konak (52% or 76 of 144), and Karabağlar (57% or 264 of 458). For "I enjoy the friendly atmosphere in places such as internet cafes, eating places and shopping malls/shopping centers around the school'' in Konak (30% or 44 of 144) students say "probably'', and in Karabağlar (46% or 211 of 458) students say "yes''. For instead of going to school, I like to spend time in the internet cafe around students say "no'' in Konak (36% 53 of 144), and Karabağlar (36% or 165 of 458). For "Instead of going to school, I like to spend time in eating places around the school and shopping malls/shopping centers students'', students say "no'' in Konak (34% or 49 of 144) and students say "yes'' in Karabağlar (32% or 147 of 458). (You can refer to Figure 13 in "Appendix E" to see the distributions by schools.)

Table 44: Enjoyment of Land Uses Around the School (for Districts) (%)

I like places such as eating places around the school,markets/groceries more than the school canteen and cafeteria.					
	TOTAL	TOTAL%	KONAK	KONAK%	KARABAĞLAR	KARABAĞLAR%
Yes	340	56.5	76	52.8	264	57.6
Probably	116	19.3	26	18.1	90	19.7
No	57	9.5	15	10.4	42	9.2
No Response	89	14.8	27	18.8	62	13.5
Total	602	100	144	100	458	100
I enjoy the friendly atmosphere in places such as internet cafes, eating places and shopping malls/shopping centers around the school.					
Yes	249	41.4	38	26.4	211	46.1
Probably	138	22.9	44	30.6	94	20.5
No	77	12.8	28	19.4	49	10.7
No Response	138	22.9	34	23.6	104	22.7
Total	602	100	144	100	458	100
Instead of going to school, I like to spend time in the internet cafe around.					
Yes	126	20.9	23	16.0	103	22.5
Probably	81	13.5	23	16.0	58	12.7
No	218	36.2	53	36.8	165	36.0
No Response	177	29.4	45	31.3	132	28.8
Total	602	100	144	100	458	100
Instead of going to school, I like to spend time in eating places around the school and shopping malls/shopping centers.					
Yes	177	29.4	30	20.8	147	32.1
Probably	136	22.6	32	22.2	104	22.7
No	170	28.2	49	34.0	121	26.4
No Response	119	19.8	33	22.9	86	18.8
Total	602	100	144	100	458	100

As a result, eating places around the school attract students' attention more than canteens and cafeterias. This may cause students to want to spend more time in this area and reduce their ties with the school. Students enjoy the friendly atmosphere in areas such as eating places, shopping malls, and internet cafes around the school. This may lead to a decrease in their engagement with the school. Internet cafes around the school do not attract the attention of students. According to Karabağlar and age group, it is more interesting to spend time in eating places or shopping malls instead of going to school. This situation reduces their engagement with the school.

6.6 Students' Expectations About Land Uses Around the School

We can look at what kind of school environment they expectation to understand the areas that students enjoy around the school. In the survey, students were asked questions about their expectation of the school environment. Students gave freehand answers to these questions.

Table 45 shows that except for girls and those age 13-15, parks and other public green areas gave the most answers to their expectations about public green areas. Girls and 13–15-year-olds answered entertainment/playgrounds. In total, girls and ages groups gave the most shopping center answers to the expectations of commercial areas. Boys, on the other hand, gave the answer to the internet cafe. Sports facilities are among the most frequently given answers by students. Students prefer areas such as parks, other public green areas, and playgrounds where they can do physical activity and play games around the school. In addition to these areas, students also prefer the sports field, which they can use for physical activity and games. These areas where students can do physical activity and play games should be taken into consideration when choosing a school location.

Table 45: Students' Expectations About School Environment (for All Students) (%)

| | | | | Gender | | | | Age | | | |
		Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
Urban Green Areas	**Parks**	72	10.2	46	11.4	26	8.5	47	11.3	25	8.5
	Other Public Green Areas	42	1.0	25	6.2	17	5.6	30	7.2	12	4.1
	Entertainment/Playgrounds	33	4.7	28	7.0	5	1.6	16	3.8	17	5.8
	Seating Areas	14	2.0	11	2.7	3	1.0	8	1.9	6	2.0
	Shaded areas	2	0.3	1	0.2	1	0.3	1	0.2	1	0.3
	Walking Paths	2	0.3	2	0.5		0.0	1	0.2	1	0.3
Commercial Areas	**Shopping Center**	55	7.8	42	10.4	13	4.2	57	13.7	23	7.8
	Cafes/Eating Places	41	5.8	32	8.0	9	2.9	25	6.0	16	5.4
	Internet cafe	35	4.9	15	3.7	20	6.5	26	6.2	9	3.1
	Market	27	3.8	14	3.5	13	4.2	15	3.6	12	4.1
	Stationary	7	1.0	6	1.5	1	0.3	7	1.7	0	0.0
Sports Facilities	**Sports fields**	80	11.3	30	7.5	50	16.3	57	13.7	23	7.8
Social Facilities	**Pool**	14	2.0	5	1.2	9	2.9	9	2.2	5	1.7
	Library	9	1.3	6	1.5	3	1.0	1	0.2	8	2.7
	Amusement Park	9	1.3	4	1.0	5	1.6	2	0.5	7	2.4
	Cinema	5	0.7	3	0.7	2	0.7	1	0.2	4	1.4
Transportation Areas	**Bus Stop**	3	0.4	1	0.2	2	0.7	3	0.7	0	0.0
Others	**That's fine**	31	4.4	22	5.5	9	2.9	18	4.3	13	4.4
	Sea	5	0.7	4	1.0	1	0.3	2	0.5	3	1.0
	Less house	5	0.7		0.0	5	1.6	2	0.5	3	1.0
	Cleaner Areas	1	0.1		0.0	1	0.3	1	0.2	0	0.0
	No Response	216	30.5	105	26.1	111	36.3	118	28.3	101	34.4
	Total	708	100	402	100	306	100	417	100	294	100

Districts answers differ for social facilities and other groups. While the expectation of the students in Konak is an amusement park, the expectation of the students in Karabağlar is the pool. (You can refer to Figure 14 in "Appendix E" to see the distributions by schools.)

Table 46: Students' Expectations About School Environment (for Districts) (%)

		Total	Total%	Konak	Konak%	Karabağlar	Karabağlar%
Urban Green Areas	**Parks**	72	10.2	22	11.7	50	9.5
	Other Public Green Areas	42	1.0	13	6.9	29	5.5
	Entertainment/Playgrounds	33	4.7	5	2.7	28	5.3
	Seating Areas	14	2.0	1	0.5	13	2.5
	Shaded areas	2	0.3	2	1.1	0	0.0
	Walking Paths	2	0.3		0.0	2	0.4
Commercial Areas	**Shopping Center**	55	7.8	14	7.4	41	7.8
	Cafes/Eating Places	41	5.8	10	5.3	31	5.9
	Internet cafe	35	4.9	6	3.2	29	5.5
	Market	27	3.8	11	5.9	16	3.0
	Stationary	7	1.0	2	1.1	5	0.9
Sports Facilities	**Sports fields**	80	11.3	23	12.2	57	10.8
Social Facilities	**Pool**	14	2.0	2	1.1	12	2.3
	Library	9	1.3	1	0.5	8	1.5
	Amusement Park	9	1.3	5	2.7	4	0.8
	Cinema	5	0.7		0.0	5	0.9
Transportation Areas	**Bus Stop**	3	0.4	1	0.5	2	0.4
Others	**That's fine**	31	4.4	2	1.1	29	5.5
	Sea	5	0.7	4	2.1	1	0.2
	Less house	5	0.7	2	1.1	3	0.6
	Cleaner Areas	1	0.1	1	0.5	0	0.0
	No Response	216	30.5	61	32.4	162	30.7
	Total	**708**	**100**	**188**	**100**	**527**	**100**

The expectations of the students from the school environment are parks, other public green areas, shopping centers, eating places and sports fields. In the previous section, we saw that students do not prefer internet cafes around the school, but there is also an internet cafe in their expectations.

6.7 Summary of Chapter 6

In summary of Sections 6.1, 6.2, and 6.3, the purpose of using the parks is "for playing" and "for fun" for all students. The purpose of using public green areas varies. Except for the students in Konak, they mostly use it for "to sit" purposes. As the age increased, "for playing" was replaced by "to walk around". At the same time, girls use it for "to get air" instead of "for playing". Grocery/market is mostly used for "to get my needs" only in Konak. Considering that Konak's income level is lower, this result is expected. Students often make frequent use of all land uses around the school. The use of the land around the school, which is enjoyed by the students, is for parks and eating places. In Konak, there are eating places and a market. The land uses around the school that students did not enjoy were construction/empty areas and industrial areas. In the summary table, we saw that the public green areas around the school and the eating areas

came to the fore. Therefore, we will continue the analysis by examining these areas in more detail.

In summary of Section 6.5, parks and other public green areas cause students to feel more enjoyed at school compared to all groups except Konak. The effect of the sports field is less than the parks and other public green areas. According to all groups, students like eating places and market/groceries around the school more than the school canteen and cafeteria. With the exception of the Konak, the friendship environment around the school, such as internet cafes and eating places, is pleasant for students. Students do not prefer to spend time at the internet cafe instead of going to school. According to gender, students prefer to spend time in eating places and shopping centers instead of going to school. The same is true for Karabağlar. Konak and age groups do not prefer it.

In summary of Section 6.6, the students' expectations about the school environment, especially those related to the public green area, differ by gender and age. While girls prefer parks and playgrounds, boys prefer parks and other public green areas. While parks and other public green areas are preferred by students aged 10-12, those aged 13-15 tend to prefer parks and playgrounds. Those related to commercial areas vary according to gender, age, and districts. Girls, 13-15 age and Karabağlar prefer shopping center and eating places, while boys prefer internet café, shopping center and market. 10–12-year-olds preferred shopping center and internet cafe. Konak prefers shopping center and market. In the answers about social facilities, girls and 13-15 age group prefer the library, while boys and 10-12 age group prefer the pool.

In Chapter 5 and Chapter 6, we saw that the school garden, laboratory, library, and sports field, which are out-of-classroom activities, came to the fore. In terms of land uses around the school, parks, other public green areas, and playgrounds were prominent. Additionally, sports fields, eating places, shopping centers, and markets were also notable. However, we saw that the prominent areas for out-of-classroom activity areas and land use around the school differ according to gender, age, and districts. Therefore, we will analyze age and gender by making regression analyses according to districts.

CHAPTER 7

POSITIVE FEELINGS ABOUT COMING TO SCHOOL

There are two dependent variables for regression analysis: "When I wake up in the morning, I want to go to school." and "I feel good at school". First of all, the descriptive analyses of these two dependent variables are examined. Then, descriptive analyzes of questions that directly question positive feelings about coming to school are examined. After that, the linear regression method and ordered logistic regression were used in the regression analysis. In these methods, dependent and independent variables were determined to measure hypotheses from survey questions. First, linear regression results and then ordered logistic regression results are given. Analyses were performed by grouping total data, Karabağlar data, and Konak data. The results were analyzed under two headings, social and physical results.

7.1 OCAAs That Make Students Feel Enjoyable

We will explain the areas that students like to use at school and around the school with descriptive statistics, which we collect directly with questions. Two of these questions are also dependent variables used in regression analysis. Table 47 shows that the majority of the students say "yes'', "When I wake up in the morning, I want to go to school'', and "I feel good at school''. Girls (53%, 172 of them 321) want to go to school more than boys (41%, 115 of them 279) when they wake up in the morning. Girls (56%, 180 of them 321) feel better at school than boys (46%, 130 of them 279). At the same time, students aged 13-15 (55%, 198 of them 354) feel better at school than students aged 10-12 (45%, 112 of them 248).

Table 47: Responses of Students to Dependent Variables (%)

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
When I wake up in the morning, I want to go to school.										
				Gender				Age		
Yes	287	47.7	172	53.6	115	41.2	106	42.7	181	51.1
Probably	210	34.9	105	32.7	105	37.6	92	37.1	118	33.3
No	87	14.5	33	10.3	54	19.4	41	16.5	46	13
No Response	18	3	11	3.4	5	1.8	9	3.6	9	2.5
Total	602	100	321	100	279	100	248	100	354	100
I feel good at school.										
Yes	310	51.5	180	56.1	130	46.6	112	45.2	198	55.9
Probably	195	32.4	97	30.2	98	35.1	88	35.5	107	30.2
No	79	13.1	34	10.6	45	16.1	38	15.3	41	11.6
No Response	18	3	10	3.1	6	2.2	10	4	8	2.3
Total	602	100	321	100	279	100	248	100	354	100

Figure 31 shows that in Konak and Karabağlar, nearly 50% of the students answered "yes" for "When I wake up in the morning, I want to go to school", and "I feel good at school."

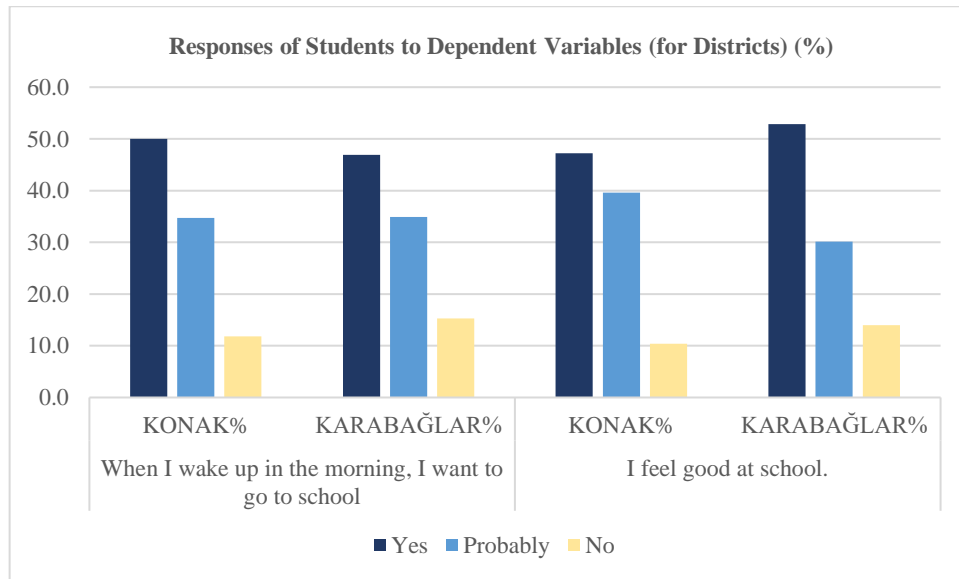Figure 31: Responses of Students to Dependent Variables (for Districts) (%)

Table 48 shows that in all the data, nearly 70% of students gave the answer "yes'' answer for "I enjoy using the school garden''. For "I enjoy using canteen or cafeteria at school'', only 13-15-year-olds students gave the answer "no". Other all of data gave "yes'' answer. For "It gives me pleasure to use the activity areas outside the classroom,

such as the library, laboratory, music/painting classrooms and sports fields in the school.'' all of the data gave the answer "yes''. The same situation is available for "When I look out of the classroom window, seeing parks, other public green areas make me feel joyful''.

Table 48: Responses of Students to OCAAs (for All Students) (%)

	Total	Total%	Girls	Girls%	Boys	Boys%	10-12 Age	10-12 Age %	13-15 Age	13-15 Age%
I enjoy using the school garden.										
Yes	424	70.4	220	68.5	194	74	242	71	174	70.2
Probably	118	19.6	69	21.5	44	16.8	66	19.4	49	19.8
No	45	7.5	26	8.1	17	6.5	25	7.3	18	7.3
No Response	15	2.5	6	1.9	7	2.7	8	2.3	7	2.8
Total	602	100	321	100	262	100	341	100	248	100
I enjoy using the canteen or cafeteria at school.										
Yes	221	36.7	118	36.8	94	35.9	140	41.1	76	30.6
Probably	167	27.7	90	28	73	27.9	102	29.9	62	25
No	147	24.4	77	24	68	26	64	18.8	79	31.9
No Response	67	11.1	36	11.2	27	10.3	35	10.3	31	12.5
Total	602	100	321	100	262	100	341	100	248	100
It gives me pleasure to use the activity areas outside the classroom, such as the library, laboratory, music/painting classrooms and sports fields in the school.										
Yes	330	54.8	182	56.7	138	52.7	194	56.9	129	52
Probably	150	24.9	78	24.3	69	26.3	80	23.5	67	27
No	85	14.1	41	12.8	40	15.3	50	14.7	32	12.9
No Response	37	6.1	20	6.2	15	5.7	17	5	20	8.1
Total	602	100	321	100	262	100	341	100	248	100
When I look out of the classroom window, seeing parks and other public green areas makes me feel joyful.										
Yes	276	45.8	154	48	114	43.5	151	44.3	120	48.4
Probably	157	26.1	78	24.3	74	28.2	95	27.9	58	23.4
No	126	20.9	64	19.9	58	22.1	71	20.8	51	20.6
No Response	43	7.1	25	7.8	16	6.1	24	7	19	7.7
Total	602	100	321	100	262	100	341	100	248	100

Figure 32 shows that for "I enjoy using the school garden'', nearly 70% of the students gave the answer "yes''. Nearly 40% of the students gave "yes'' answer for "I enjoy using the canteen or cafeteria at school''. The majority of the students (approximately 50%) gave the answer "yes'' for "It gives me pleasure to use the activity areas outside the classroom, such as the library, laboratory, music/painting classroom and sports fields in the school''. Half of the students gave the answer "yes'' for "When I look out of the classroom window, seeing parks, other public green areas make me feel joyful''.
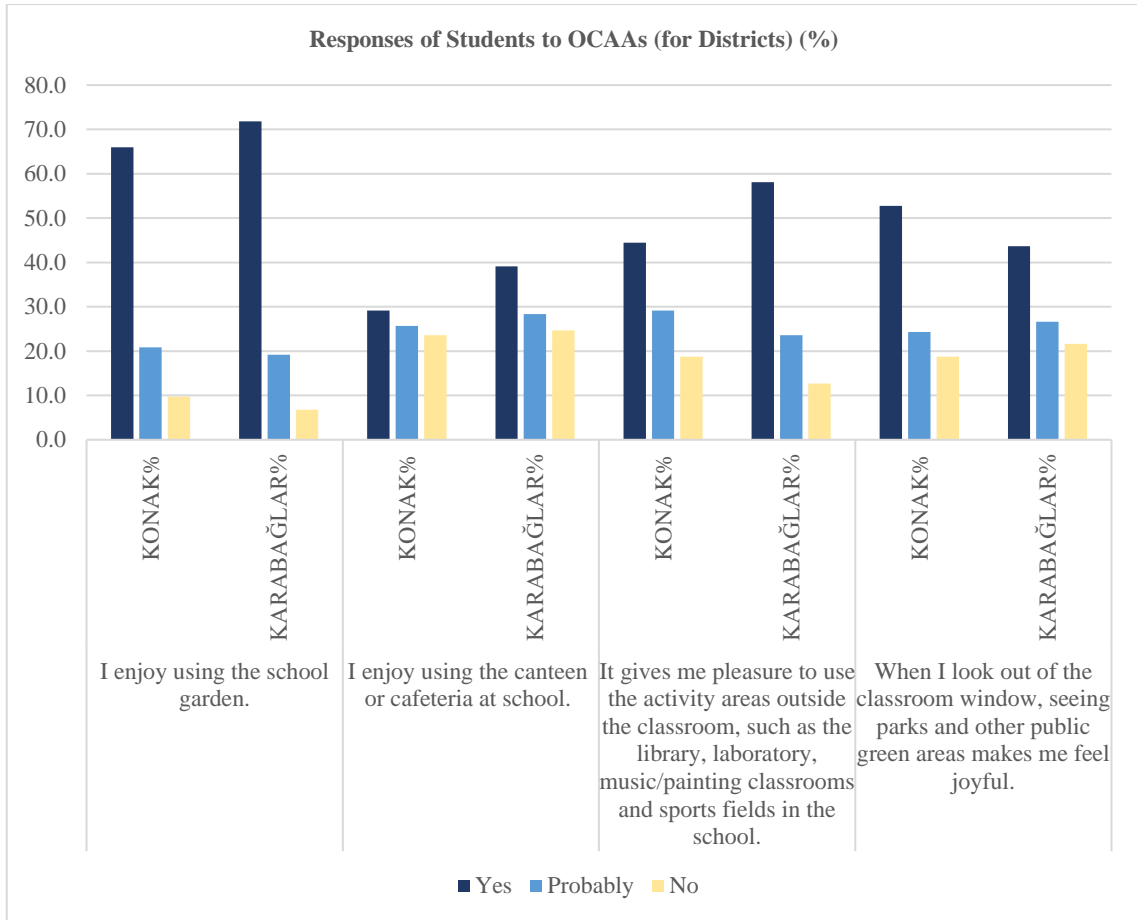
Figure 32: Responses of Students to OCAAs (for Districts) (%)

As a result, the majority of students want to go to school when they wake up in the morning and feel good at school. The school garden makes students feel enjoyed at school. At the same time, it makes students feel pleasant to using the canteen and cafeteria. Using out-of-activity areas makes students feel enjoyable. Seeing parks or other public green areas made of windows makes students feel enjoyable.

7.2 Analyzing the Effects of Positive Feelings About Coming to School in Terms of Regression

The data obtained from the user survey were also analyzed by the linear regression method and ordered logistic regression. The biggest difference between logistic regression and linear regression is that logistic regression, the target (independent) variable is to be categorical, mostly binary (yes-partly-no). Since our dependent variables were in the yes-partially-no category, we were also able to evaluate the results with the

ordered logistic regression method. "When I wake up in the morning, I want to go to school" and "I feel good at school" were chosen as dependent variables. We will examine the regression results under three headings. (Individual/Parental/House Characteristics, Out-of-Classroom Activity Areas, Land Use Around the School). Table 49 shows how we coded the dependent variables in the regression analysis.

Table 49: Abbreviations, Data Sources, and Codes of the Dependent Variable

Dependent Variable	Data	Abbreviation	Data Source	Coding
When I wake up in the morning, I want to go to school.	'When I wake up in the morning, I want to go to school."	go_to_school	User Survey	• No:0 • Partially:1 • Yes:2
I feel good at school.	'I feel good at school."	feel_good_at_school	User Survey	• No:0 • Partially:1 • Yes:2

In Table 50, hypotheses and the data used to measure these hypotheses in the regression analysis, the abbreviations we used in the regression analysis of these data, and the sources and coding of the data are given.

Table 50: Abbreviations, Data Sources, and Codes of the Hypothesis

	Hypothesis	Data	Abbreviation	Data Source	Coding
Individual Characteristics	As students' age increases, positive feeling about coming to school decreases.	Age	age	User Survey	10-12 Age:1 13-15 Age: 0
	Girls have more positive feelings about coming to school than boys.	Gender	gender	User Survey	Girls:1 Boys:0
Parental Characteristics	As parents' income increases, their children's positive feelings about coming to school increase.	Education level	education_level	User Survey	Illiterate:0 Literate:1 Primary School: 2 Middle School: 3 High School: 4 University:5
	As parents' education level increases, their children's positive feelings about coming to school increase.	Education level	education_level	User Survey	Illiterate:0 Literate:1 Primary School: 2 Middle School: 3 High School: 4 University:5
House Characteristics	Students with private rooms have more positive feelings about coming to school.	'Do you have a place in your home where you can spend your private time?"	private_room	User Survey	Has own room: 3 There's the room she/he shares with siblings: 2 None, using the living room: 3 No, the parents are using their room: 4

(Con. on the next page)

(Table 50. Cont.)

OCAAs	As the OCAA variety of the school increases, students' positive feelings about coming to school increase.	The number of OCAAs	number_ocaa	Site Observations	Number of OCAA(1): 0 Number of OCAA(2): 1 Number of OCAA(3): 2 Number of OCAA(4): 3
	As the areas that students enjoy using during the lesson increase, their positive feelings about coming to school increase.	The number of OCAAs students enjoy during the lesson	enjoy_during	User Survey	Number of OCAA(1): 0 Number of OCAA(2): 1 Number of OCAA(3): 2 Number of OCAA(4): 3
	As the areas that students enjoy using outside the lesson increase, their positive feelings about coming to school increase.	The number of OCAAs students enjoy outside the lesson	enjoy_outside	User Survey	Number of OCAA(1): 0 Number of OCAA(2): 1 Number of OCAA(3): 2 Number of OCAA(4): 3
	As the frequency of use of the school garden increases, students' positive feelings about coming to school increase.	Frequency of use of the school garden	frequency_schoolgarden	User Survey	Never: 0 Rarely: 1 Sometimes: 2 Usually: 3 Often: 4
	Students in schools with green areas have more positive feelings about coming to school.	Schools with or without green spaces	green_space	Site Observations	With:1 Without:0

(Con. on the next page)

(Table 50. Cont.)

Land Uses Around the School	Students who have a library and internet cafe around their school have more positive feelings about coming to school.	Schools environment with or without library and internet cafe	library_internetcafe	Site Observations	With: 1 Without: 0
	The high number of commercial uses in the school environment decreases positive feelings about coming to school.	The number of the commercial uses around the school	commercial_uses	Site Observations	The high number of commercial uses: 0 The low number of commercial uses: 1
	According to students' perceptions, if there is noise around the school, noise around the school decreases positive feelings about coming to school.	Schools environment have or don't have noise according to students' perception	noise	User Survey	No: 0 Partially: 1 Yes: 2
	The increase in the number of eating places around the school increases the positive feelings about coming to school.	The number of the eating places around the school	eating_places	Site Observations	Number of eating places (3): 0 Number of eating places (8): 1 Number of eating places (16): 2 Number of eating places (29): 3
	The increase in the number of parks and green areas around the school increases the positive feelings about coming to school.	The number of the parks and green areas around the school	park_greenareas	Site Observations	None: 0 Number of parks and green areas(1): 1 Number of parks and green areas(3): 2

In Table 51, regression results are given for all students. According to all, there is a negative relationship between the to be girls of the students and the positive emotional tendencies of the students about coming to school. There is a positive relationship between the increasing age of students and their tendency of students to feel positive about coming to school. There is a negative relationship between the high-income level of the parents and the positive emotional tendencies of the students about coming to school. There is a negative relationship between the high level of education of the parents and the positive emotional tendencies of the students about coming to school. There were no significant results from the hypotheses about house characteristics. No significant results were found for the hypotheses related to the increase in the number of OCAAs used by students, the increase in the number of OCAAs used by students outside of the classroom, the increase in the frequency of use of the school garden, or the presence of green space in the school garden. There is a negative relationship between the increase in the number of OCAAs that students enjoy using during the lesson and their positive emotional tendencies about coming to school. No significant results were found for the hypotheses regarding the presence of libraries, internet cafes and noise in the school environment. There is a positive relationship between the land use density around the school being predominantly residential and the positive emotional tendencies about coming to school. There is a positive relationship between the increase in the number of eating places, parks, and public green space around the school and the positive emotional tendencies of students about coming to school.

Table 51: Regression Results According to All Students

Independent Variables	When I wake up in the morning, I want to go to school.				I feel good at school.			
	Linear Regression		Logistic Regression		Linear Regression		Logistic Regression	
	B	Sig.	Coef.	P>IzI	B	Sig.	Coef.	P>IzI
Individual Characteristics (data taken from user survey)								
gender	-,326	,000	-1.016	0	-,141	,047	-0.653	0.031
age	,071	,399	0.229	0.379	-,162	,020	-0.59	0.053
Parents Characteristics (data taken from user survey)								
education_level	-,134	,001	-0.465	0	-,287	,000	-1.472	0
House Characteristics (data taken from user survey)								
private_room	-,008	,887	-0.001	0.994	-,072	,120	-0,213	0.291
OCAAs (data taken from user survey and observations)								
number_ocaas	,001	,977	0.014	0.898	,046	,134	0.151	0.249
enjoy_during	-,153	,009	-0.449	0.012	-,078	,102	-0.289	0.147
enjoy_outside	,081	,177	0.256	0.167	,010	,832	0.099	0.635
frequency_schoolgarden	-,068	,474	0.213	-0.469	-,033	,670	-0.18	0.67
green_space	x	x	x	x	x	x	x	x
The Land Uses Around the School (data taken from user survey and observations)								
library_internetcafe	x	x	x	X	x	x	x	x
commercial_uses	,160	,115	0.451	0.155	,533	,000	2.337	0
noise	-,014	,806	-0.061	0.727	,006	,899	0.081	0.689
eating_places	,170	,002	0.568	0.002	,232	,000	1.170	0
parks_greenareas	,444	,000	1.370	0	,755	,000	3.483	0

Table 52 shows that no significant results were found for the hypotheses related to the fact that the students are girls, the income level of the parents is high, and the education level is high. There is a negative relationship between students' having a private space and their positive emotions about coming to school. No significant results were found for the hypotheses related to the increase in the number of OCAAs used by the students, the increase in the frequency of use of the school garden, and the presence of green space in the school garden. There is a negative relationship between the increase in the number of OCAAs that students enjoy using during and outside the classroom and their positive emotion tendencies about coming to school. No significant results were found for the hypotheses about the presence of library, internet cafe, parks, and green areas around the school and the residential density of the school environment. There is a positive relationship between the increase in noise in the school environment and the positive emotional tendencies of students about coming to school. There is a positive

relationship between the increase in the number of eating places around the school and the positive emotional tendencies of students about coming to school.

Table 52: Regression Results According to the Konak

	Dependent Variables							
	When I wake up in the morning, I want to go to school.				I feel good at school.			
	Linear Regression		Logistic Regression		Linear Regression		Logistic Regression	
Independent Variables	B	Sig.	Coef.	P>IzI	B	Sig.	Coef.	P>IzI
Individual Characteristics (data taken from user survey)								
gender	-,038	,880	-0.291	0.643	,244	,395	0.722	0.398
age	-,304	,218	-0.982	0.154	-,246	,388	-0.938	0.285
Parents Characteristics (data taken from user survey)								
education_level	,071	,462	0.302	0.245	,120	,289	0.433	0.199
House Characteristics (data taken from user survey)								
private_room	-,100	,420	-0,346	0.319	-,277	,056	-0.940	0.051
OCAAs (data taken from user survey and observations)								
number_ocaa	x	x	x	x	x	x	x	X
enjoy_during	-,214	,186	-0.686	0.099	-,301	,110	-0.860	0.189
enjoy_outside	-,404	,078	-1,389	0.034	-,351	,189	-1.109	0.176
frequency_schoolgarden	-,343	,350	0.810	0.608	-,624	,197	-1.712	0.426
green_space	x	x	x	x	x	X	x	X
The Land Uses Around the School (data taken from user survey and observations)								
library_internetcafe	x	x	x	x	X	x	X	x
commercial_uses	x	x	x	x	x	x	x	X
noise	-,357	,088	-1.007	0,081	,106	,658	0.417	0.536
eating_places	,253	,003	0.805	0.002	,246	,014	0.800	0.017
parks_greenareas	x	x	X	X	x	x	X	x

Table 53 shows that, there is a negative relationship between the to be girls of the students and the positive emotional tendencies of the students about coming to school. There is a negative relationship between the increasing age of students and their tendency to feel positive about coming to school. There is a negative relationship between the high income and education level of the parents and the positive emotional tendencies of the students about coming to school. There is a positive relationship between students' having a private space and their positive emotional tendencies about coming to school. No significant results were found for the hypotheses related to the increase in the number of OCAAs used by the students, the number of OCAAs they used with pleasure during the lesson, and the presence of green space in the school garden. There is a positive

relationship between the increase in the number of OCAAs that students enjoy using outside of the classroom and the positive emotional tendencies of students about coming to school. There is a negative relationship between the increase in the frequency of use of the school garden and the positive emotional tendencies of the students about coming to school. No significant results were found for the hypotheses about the land use around the school.

Table 53: Regression Results According to the Karabağlar

	Dependent Variables							
	When I wake up in the morning, I want to go to school.				I feel good at school.			
	Linear Regression		Logistic Regression		Linear Regression		Logistic Regression	
Independent Variables	B	Sig.	Coef.	P>IzI	B	Sig.	Coef.	P>IzI
Individual Characteristics (data taken from user survey)								
gender	-,417	,000	-1.460	0.000	-,127	,006	X	X
age	,136	,104	0.531	0.094	,047	,318		
Parents Characteristics (data taken from user survey)								
education_level	-,170	,000	-0.736	0.000	-,324	,000	X	X
House Characteristics (data taken from user survey)								
private_room	,058	,321	0.188	0.820	,063	,062	X	X
OCAAs (data taken from user survey and observations)								
number_ocaa	X	X	-0.117	0.922	X	X	X	X
enjoy_during	-,061	,265	-0.262	0.205	-,002	,961	X	X
enjoy_outside	,118	,027	1.412	0.052	,039	,196	X	X
frequency_schoolgarden	,008	,938	0.101	0.756	-,105	,062	X	X
green_space	X	X	X	X	X	X	X	X
The Land Uses Around the School (data taken from user survey and observations)								
library_internetcafe	X	X	X	X	X	X	X	X
commercial_uses	X	X	X	X	X	X	X	X
noise	-,019	,731	-0.046	0.822	,016	,605	X	X
eating_places	X	X	X	X	X	X	X	X
parks_greenareas	-,025	,789	X	X	,000	,996	X	X

7.3 Summary of Chapter 7

In summary, the data that linear and logistic regression mean together are very important for us. It would be more meaningful to focus on these data in the study. When evaluating the regression results for all students, including those from Konak and

Karabağlar, we observe a negative relationship between being a girl and students' positive emotional tendency to come to school, for all students and among those from Karabağlar. There is a positive relationship between the increasing age of students and their tendency to feel positive about coming to school for Karabağlar. The opposite is true for all students. There is a negative relationship between the high-income level of the parents and the positive emotional tendencies of the students about coming to school for all students and Karabağlar. There is a negative relationship between the high level of education of the parents and the positive emotional tendencies of the students about coming to school all students and Karabağlar. There is a positive relationship between students' having a private space and their positive emotional tendencies about coming to school for Karabağlar. The opposite is true for Konak. There is a negative relationship between the increase in the number of OCAAs that students enjoy using during the lesson and the positive emotional tendencies of students about coming to school for all students and Konak. There is a negative relationship between the increase in the number of OCAAs that students enjoy using outside the lesson and the positive emotional tendencies of students about coming to school for Karabağlar. The opposite is true for Konak. There is a negative relationship between the increase in the frequency of use of the school garden and the positive emotional tendencies of the students about coming to school for Karabağlar. There is a positive relationship between the land use density around the school being predominantly residential and the positive emotional tendencies about coming to school for all students. There is a positive relationship between the increase in noise in the school environment and the positive emotional tendencies of students about coming to school for Konak. There is a positive relationship between the increase in the number of eating places around the school and the positive emotional tendencies of students about coming to school for all students and Konak. There is a positive relationship between the increase in the number of parks and public green spaces around the school and the positive emotional tendencies of students about coming to school for all students.

CHAPTER 8

CONCLUSIONS AND RECOMMENDATIONS

8.1 Conclusions

This study explains the factors affecting positive feelings about coming to school and student' perceptions and expectations about students' of out-of-classroom activity areas and land use around the school. A literature review was conducted based on research on students' learning processes and their relationship with the physical environment. As a result, the research data were collected in four secondary schools (KO1, KO2, KA1, and KA2) in four neighborhoods in Konak and Karabağlar, using quantitative and qualitative research methods. In the study, data were analyzed in order to reveal the factors affecting students' positive feelings about coming to school through the example of land use in and around four schools in Konak and Karabağlar. This study is the first in Turkey to investigate the factors related to the social and physical environment that shape students' positive feelings about coming to school, their out-of-classroom activity areas, and their perceptions and expectations about land use around the school (10-15 age). The findings of the study are important in terms of developing policies for school location selection and planning. Results of research show in Table 54. They are summarized and discussed under the following headings.

- **Effects of Individuals, Parents, and House/Households on Positive Feelings About Coming to School**

In the descriptive statistics, we saw that the girls participating in the survey were more than the boys, the 13-year-old group had the highest participation, and the 7th grade students were in the majority (Table 9). Students in Konak live in their neighborhoods longer than students in Karabağlar (Figure 16). At the same time, the education level of parents in Karabağlar is higher than in Konak (Figure 17, Figure 18) and the number of working mothers is higher in Karabağlar. We expected these results because Karabağlar has a higher education level and, therefore, a higher income than Konak. The number of households in Karabağlar is less than in Konak (Figure 19). In Karabağlar, other family elders live with the family (Figure 20). The amenities of the houses are more in

Karabağlar (Figure 21). At the same time, students have a private space (Figure 22). In Konak, students usually use the hall. We can say that we expect these results because the education and, therefore, income level of Konak are lower than Karabağlar. When we evaluated the results for hypotheses, results were obtained only for hypotheses related to individual characteristics. Students aged 13-15 feel better at school than students aged 10-12, and students aged 13-15 want to go to school more than students aged 10-12 when they wake up in the morning. These results contradict the hypothesis that "As students' age increases, positive feelings about coming to school decreases". In addition to that, girls want to go to school more than boys when they wake up in the morning and girls feel better at school than boys. These results confirm the hypothesis that "Girls have more positive feelings about coming to school than boys". There are no descriptive statistics to question other hypotheses.

Table 54: Results of Descriptive Statistics for Individual, Parental and House Characteristics

	Hypothesis	Data	Results of Descriptive Statistics		
			Age	Gender	Districts
Individual Characteristics	As students' age increases, positive feeling about coming to school decreases.	Age	-Students aged 13-15 want to go to school more than aged 10-12 when they wake up in the morning. -Students aged 13-15 feel better at school than students aged 10-12.	X	X
	Girls have more positive feelings about coming to school than boys.	Gender	X	-Girls want to go to school more than boys when they wake up in the morning. -Girls feel better at school than boys.	X
Parental Characteristics	As parents' income increases, their children's positive feelings about coming to school increase.	Education level	X	X	X
	As parents' education level increases, their children's positive feelings about coming to school increase.	Education level	X	X	X
House Characteristics	Students with private rooms have more positive feelings about coming to school.	'Do you have a place in your home where you can spend your private time?"	X	X	X

Table 55: Results of Regression Analysis for Individual, Parental and House Characteristics

	Hypothesis	Data	Results of Regression Analysis		
			Total	Konak	Karabağlar
Individual Characteristics	As students' age increases, positive feeling about coming to school decreases.	Age	**increasing** age of students → **decreasing** positive feelings about coming to school		**increasing** age of students → **decreasing** positive feelings about coming to school
	Girls have more positive feelings about coming to school than boys.	Gender	when students are girls → **decreasing** positive feelings about coming to school		when students are girls → **decreasing** positive feelings about coming to school
Parental Characteristics	As parents' income increases, their children's positive feelings about coming to school increase.	Education level	**increasing** income level of the parents → **decreasing** positive feelings about coming to school		**increasing** income level of the parents → **decreasing** positive feelings about coming to school
	As parents' education level increases, their children's positive feelings about coming to school increase.	Education level	**increasing** level of education of the parents → **decreasing** positive feelings about coming to school		**increasing** level of education of the parents → **decreasing** positive feelings about coming to school
House Characteristics	Students with private rooms have more positive feelings about coming to school.	'Do you have a place in your home where you can spend your private time?'		when students' having a private space → **decreasing** positive feelings about coming to school	when students' having a private space → **decreasing** positive feelings about coming to school

According to the linear and ordered logistic regression analyses we made, it would be more meaningful to focus on the data that gives meaningful results in the two regression types. There is a negative relationship between being a girl and students' positive emotional tendency to attend school, for all students and among those from Karabağlar. This result contradicts with the study of Martin (2004) and the hypothesis. There is a negative relationship between the increasing age of students and the tendency of students to feel positive about coming to school for all students. These results agree with the hypothesis. As the age of the students increases, the lessons become more difficult, their perception of the environment develops, their ties with the family begin to break, they move more freely, and as a result of the development of friendship relations, they prefer the areas where they can socialize instead of going to school, resulting in a decrease in the students' engagement with the school and their positive feelings about coming to school. For all students, there is a negative relationship between the high education level and, therefore, high income level of the parents and the positive emotional tendencies of the students about coming to school. These results contradict the studies of Yanpar (1994), Connel (1991) and hypothesis. Children with parents with a high-income level may feel financially secure as a result of obtaining their wishes more easily, and therefore, going to school may not be important to them. Also, for these children, their family may put pressure on them in terms of education, which may cause the students to be alienated from school. There is a negative relationship between students' having a private space and their positive emotions about coming to school for Konak. This result contradicts the study by Gelbal (2008) and the hypothesis. Since students with private space are away from their families' supervision, they might have the opportunity to do other activities instead of school-related activities such as doing homework and studying. This may negatively affect positive feelings about coming to school.

- **Effect of OCAAs on Positive Feelings About Coming to School**

When we evaluate according to the descriptive analysis, KO1 has 4 out-of-classroom areas in Konak, while KO2 has 6. While KA1 has 6 out-of-classroom areas in Karabağlar, KA2 has 10 (Table 10). Awareness of out-of-classroom activity areas in schools is high, except for KO2 (Figure 23). The school garden is generally used for "for playing game" and "to breathe". However, as the age of the students decreases, they use it for the purpose of "to have fun with my friends". The students in Konak use the school

garden for "for playing games" more than the students in Karabağlar (Table 11). The smaller size of the schools in Konak compared to Karabağlar may affect this situation. At the same time, the most frequently used areas are the school garden and library (Table 15). Girls use the school garden more often than boys. The reason for this may be that the qualifications of these areas in the school garden are insufficient, as boys generally prefer games played with a ball. 13–15-year-olds students use the school garden more often than 10-12 years old. Students aged 13-15 may use the school garden more often than the 10-12 age group because they use the school garden for "to breathe" because this activity does not require a specially planned area. In addition to that, 13-15 years of age and Karabağlar use the sports field more often than 10–12-year-olds and Konak, respectively, because the sports fields in Karabağlar are more qualified than Konak and older students adopt of these fields may affect this situation. At the same time, the lack of activity areas that will appeal to the 10-12 age group may affect it. The areas where they spend the longest time are the school garden, sports field, and laboratory (Table 17). 13–15-year-olds of age use the school garden longer than 10–12-year-olds and the 13-15 age group may use these areas more actively. 13–15-year-olds students use the sports field longer than 10–12-year-olds. It may be that the age of 13-15 uses these areas more actively. Boys use the laboratory longer than girls and students aged 13-15 use it longer than students aged 10-12. In addition to that, students in Karabağlar use the laboratory and library longer than students in Konak. Although students spend a lot of time in sports field and laboratory, they cannot use these areas frequently. The reason for this may be that it is used under the supervision of the teacher. The areas they enjoy using during and outside of the lessons are the school garden and the laboratory (Table 19 and Table 20).

Students enjoy using the school garden outside of lessons more in Konak than in Karabağlar. The better quality of school gardens in Karabağlar may be the reason. When we looked at the expectations of the students from the school, we saw that there were sports field expectations in the answers about closed space, park/playground, and other public green areas. Expectations in the answers about open green areas, and the expectations of increasing the recess in the answers about the lesson came to the fore. Students in Konak want more sports fields than students in Karabağlar. This result is in agreement with the literature review. Similar results were found in the study of Çopur (2017). We have seen that the internet cafe response among boys is also prominent. We can say that students expect green spaces in their schools to be designed as public spaces. At the same time, we can say that the 10-minute break in schools is not enough to meet

their needs and to perform different activities, such as playing games. Although students have sports fields in their schools, they want sports fields. We can say that the reason for this is related to the qualities of these fields. Or it may be that there is not enough recess time to use these areas or that materials, such as balls, are not provided by the school to use these areas. While the number of students who want areas such as sports field, park/playgrounds and other public green areas is high, the number of students who want to increase the lesson hours of physical education is very low. In this case, we can say that students want to use these areas according to their own wishes, not for the lesson. In the design of these areas, the wishes of the students should be taken into consideration, not the educational purposes. When we look at the descriptive analyses of the questions that directly affect the positive feelings about coming to school, the students enjoy using the school garden, canteen or cafeteria, and out-of-classroom activity areas. So, we can understand from here that the many types of out-of-activity areas have positive feelings about coming to school (Table 53). In addition, it makes it enjoyable for students to see parks or other public green areas when they look through the window. We can understand that positive feelings about coming to school affect students positively (Table 53).

According to the descriptive analyses made, students stated in KO1, KO2, and KA1 that there is not enough green space in the school garden (Figure 25, Figure 26, Figure 27, and Figure 28). Students at KA2 gave the answer partially (Figure 25, Figure 26, Figure 27, and Figure 28). Since this situation will increase the stress of students, according to the literature (Lin and Van Stan, 2020), we can say that it negatively affects positive feelings about coming to school. At the same time, according to KO1, KO2, and KA2, public green spaces partially protect students from the sun (Figure 25, Figure 26, Figure 27, and Figure 28). It protects from the sun only in KA1 (Figure 25, Figure 26, Figure 27, and Figure 28). This situation may negatively affect students' different activities in the school garden. Thus, positive feelings about coming to school can be negatively affected. Students in all four schools say that the lessons would be more enjoyable if they were in the school garden. This situation will positively affect positive feelings about coming to school. The improvement of friendship relations by the school garden positively affects the positive feelings about coming to school. In the results, school gardens positively affect the friendships of students in all schools (Figure 25, Figure 26, Figure 27, and Figure 28). When we look at the expectations of the students from the school garden, they answered public green areas and sports fields. In addition to that, the students in Konak want a bigger school garden more than the students in

Karabağlar (Table 28). This aligns with their expectations from the school. Students expect school gardens to have more public green spaces and to be designed like public spaces. When we evaluated the results according to the hypotheses, significant results were found for two hypotheses. If the difference between gender, age, and district data is 10%, it is entered in the table. Values less than 10% are not included in the table. The number of areas that students in Karabağlar enjoy during the lesson is higher than the that of students in Konak. According to this result, the hypothesis "As the areas that students enjoy using during the lesson increase, their positive feelings about coming to school increase." was confirmed. In addition to that, for the hypothesis "Students in schools with other public green areas have more positive feelings about coming to school.", the results differ according to age, gender, and district. Students aged 13-15 answered more than students aged 10-12: "If there were more other public green spaces in the gardens of the schools, positive feelings about coming to school would increase". More girls than boys answered, "If there were more other public green spaces in the gardens of the schools, positive feelings about coming to school would increase". The students in Konak gave the answer, "If there were more other public green spaces in the gardens of the schools, their positive feelings about coming to school would increase." more than the students in Karabağlar.

Table 56: Results of Descriptive Statistics for OCAAs

		Hypothesis	Data	Results of Descriptive Statistics		
				Age	Gender	Districts
OCAAs		As the OCAA variety of the school increases, students' positive feelings about coming to school increase.	The number of OCAAs	x	x	x
		As the areas that students enjoy using during the lesson increase, their positive feelings about coming to school increase.	The number of OCAAs students enjoy during the lesson	x	x	The number of areas that students in Karabağlar enjoy during the lesson is higher than the students in Konak.
		As the areas that students enjoy using outside the lesson increase, their positive feelings about coming to school increase.	The number of OCAAs students enjoy outside the lesson	x	x	x
		As the frequency of use of the school garden increases, students' positive feelings about coming to school increase.	Frequency of use of the school garden	x	x	x
		Students in schools with other public green areas have more positive feelings about coming to school.	Schools with or without other public green spaces	Students aged 13-15 answered more than students aged 10-12, "If there were more other public green spaces in the gardens of the schools, positive feelings about coming to school would increase".	More girls than boys answered, "If there were more other public green spaces in the gardens of the schools, positive feelings about coming to school would increase".	The students in Konak gave the answer, "If there were more other public green spaces in the gardens of the schools, their positive feelings about coming to school would increase" than the students in Karabağlar.

Table 57: Results of Regression Analysis for OCAAs

	Hypothesis	Data	Results of Regression Analysis		
OCAAs			**Total**	**Konak**	**Karabağlar**
	As the OCAA variety of the school increases, students' positive feelings about coming to school increase.	The number of OCAAs			
	As the areas that students enjoy using during the lesson increase, their positive feelings about coming to school increase.	The number of OCAAs students enjoy during the lesson	enjoy during the lesson **increasing →decreasing** positive feelings about coming to school		
	As the areas that students enjoy using outside the lesson increase, their positive feelings about coming to school increase.	The number of OCAAs students enjoy outside the lesson		enjoy outside the lesson **increasing → decreasing** positive feelings about coming to school	enjoy outside the lesson **increasing -- → decreasing** positive feelings about coming to school
	As the frequency of use of the school garden increases, students' positive feelings about coming to school increase.	Frequency of use of the school garden			
	Students in schools with other public green areas have more positive feelings about coming to school.	Schools with or without other public green spaces			

According to the regressions analyzes made, as the number of areas that students enjoy during the lesson increases, the tendency for positive emotions to coming school decreases for all students. These results contradict with the study of Çopur (2017). The areas that students enjoy may draw their attention to different things outside of the lesson. For Karabağlar, as the number of areas that students enjoy outside of the lesson increases, positive feelings about coming to school increase. These results are in agreement with the study of Çopur (2017). Students' enjoyment of the areas outside the classroom may strengthen their engagement with the school. For Konak, it is the opposite and contradicts Çopur's work.

- **Effect of Land Use Around the School on Positive Feelings About Coming to School**

While there are 4 different types of land use in Konak and KO1 around the school, there are 2 different types of land use in KO2. There are 6 different types of land use in KA1 and KA2 (Table 29) in Karabağlar. Awareness of land uses around the school is high, except for the KO2 (Figure 30). Within the out-of-classroom activity areas, awareness in KO2 was low. The purpose of using parks is generally "for playing" and "for fun" (Table 31). As the age increases, "to sit" is added to the purpose of the use of the parks. Public green areas are "to sit" and "for playing" (Table 32). As the age increases, "for playing" is replaced by "to walk around". Street is mostly used for "to walk around" and "for playing" purposes (Table 33). As the age of the students increases, "for playing" is replaced by "to walk around". The purpose of using markets is generally "to get snack" and "to get my needs" (Table 34). While it is used for "to get my needs" in Konak, it is used for "to get snack" in Karabağlar. We expected this situation as Konak has a lower income level. When we look at the frequency of use of areas, eating places, streets, squares, sports area, market/grocery and bus stops are usually used (Table 36). The most enjoyable areas to use are eating places and parks (Table 37). As the age of the students increases, parks are replaced by eating places. The reason for this may be the friendlier environment in these environments and the decrease in interest in playing games. The same difference exists for boys and girls. Boys prefer eating places to parks. The areas that are not enjoyed are construction/empty areas, and industrial areas (Table 39). While students enjoy using parks and other public green areas around the school,

they also partially enjoy using sports fields (Table 41). We can say that parks, other public green areas, and sports fields positively affect the positive feeling about coming to school.

Eating places or grocery/market around the school attract students' attention more than the canteen or cafeteria (Table 43). This situation causes the students to socialize in these areas, reducing their engagement with the school and negatively affecting their positive feelings about coming to school. At the same time, students enjoy the friendship environment in internet cafes, eating places, and shopping malls. This environment of friendship can motivate students to go to school or cause them to stay away from school. Students do not prefer internet cafes instead of coming to school. This can increase positive feelings about coming to school by increasing their engagement with the school. Girls and boys want to spend time in eating places and shopping areas around the school instead of coming to school. This can decrease positive feelings about coming to school by decreasing their engagement with the school (Table 43). The expectations of the students from the school environment are parks, other public green areas, shopping center, eating places, and sports field. As with the expectations from the school garden and school, students have more green space expectations. We can understand the importance of public green spaces around the school (Table 45). When we evaluated the results according to the hypotheses, only one hypothesis gave meaningful results. If the difference between gender, age, and district data is 10%, it is entered in the table. Values less than 10% are not included in the table. The hypothesis that "The increase in the number of parks and other public green areas around the school increases the positive feelings about coming to school." differs for the district. The students in Karabağlar gave more answers than the students in Konak: "Increasing the number of parks and other public green areas increases positive feelings about coming to school".

Table 58: Results of Descriptive Statistics for the Land Uses Around the School

	Hypothesis	Data	Results of Descriptive Statistics		
			Age	Gender	Districts
Land Uses Around the School	Students who have a library and internet cafe around their school have more positive feelings about coming to school.	Schools environment with or without library and internet cafe	x	x	x
	The high number of commercial uses in the school environment decreases positive feelings about coming to school.	The number of the commercial uses around the school	x	x	x
	According to students' perceptions, if there is noise around the school, noise around the school decreases positive feelings about coming to school.	Schools environment have or don't have noise according to students' perception	x	x	x
	The increase in the number of eating places around the school increases the positive feelings about coming to school.	The number of the eating places around the school	x	x	x
	The increase in the number of parks and other public green areas around the school increases the positive feelings about coming to school.	The number of the parks and other public green areas around the school	x	x	The students in Karabağlar gave more answers than the students in Konak, "Increasing the number of parks and other public green areas increases positive feelings about coming to school".

Table 59: Results of Regression Analysis for the Land Uses Around the School

	Hypothesis	Data	Results of Regression Analysis		
			Total	**Konak**	**Karabağlar**
Land Uses Around the School	Students who have a library and internet cafe around their school have more positive feelings about coming to school.	Schools' environments with or without library and internet cafe			
	The high number of commercial uses in the school environment decreases positive feelings about coming to school.	The number of the commercial uses around the school	The number of the commercial uses is **high →** **decreasing** positive feelings about coming to school		
	According to students' perceptions, if there is noise around the school, noise around the school decreases positive feelings about coming to school.	Schools' environments have or don't have noise according to students' perception		**increase** in noise in the school environment → **increasing** positive feelings about coming to school	
	The increase in the number of parks and green areas around the school increases the positive feelings about coming to school.	The number of the eating places around the school	**increase** in the number of eating places around the school → **increasing** positive feeling about coming to school	**increase** in the number of eating places around the school → **increasing** positive feeling about coming to school	
	The increase in the number of parks and other public green areas around the school increases the positive feelings about coming to school.	The number of the parks and other public green areas around the school	**increase** in the number of parks and other public green areas → **increasing** positive feeling about coming to school		

There is a positive relationship between the land use density around the school being predominantly residential and the positive emotional tendencies about coming to school for all students. This result coincides with the study of Çiloğlu (2006) and the hypothesis. This result may be due to the fact that in a residential dense, students have nothing to attract their attention outside of school. There is a positive relationship between the increase in noise in the school environment and the positive emotional tendencies of students about coming to school for Konak. This result contradicts the study of Kara (2007) and the hypothesis. The noise caused by the high pedestrian and traffic density around the school indicates that the school environment is active. The lively school environment can motivate students to come to school. There is a positive relationship between the increase in the number of eating places around the school and the positive emotional tendencies of students about coming to school for all students and Konak. This result contradicts the the study of Çiloğlu (2006). In descriptive statistics, we saw that the friendly atmosphere in eating places around the school attracted the attention of students. The friendly atmosphere in eating places around the school can motivate students go to school. There is a positive relationship between the increase in the number of parks and public green spaces and the positive emotional tendencies about students about coming to school for all students. This result in Beere and Kingham (2007) and Benfield et al., (2015) coincides with the studies. The fact that students relieve their stress in parks and green spaces may cause them to be more motivated go to school.

As a result, while evaluating the regression results, we focused on the data that linear and logistic regression gave meaningful results together. For us, age, gender, education level of parents and private room data are important in the individual, parental, and house characteristics section. In the OCAAs section, enjoy during and enjoy outside data are important. In the land use around the school section, residential, eating places, park/green areas and noise data are important. These regression results mostly contradict the literature.

8.2 Recommendations

As a result of the analyzes made, recommendations about city planning were developed. These recommendations are:

- Students use the school garden for "for playing", "to breathe" and "to have fun with my friends". When planning school gardens, areas suitable for different activities should be planned, such as areas where students can play, relax in the shade, or have fun with their friends.

- Girls use the school garden more often than boys. The gender of the students should be considered when planning the school garden. For example, areas where boys can play with balls and running games should be designed. Areas can be designed considering that boys can play with the ball and play running games.

- 13–15-year-olds use the school garden more often than 10–12-year-olds. This age group also uses the school garden to "to breathe". The 10-12 age group was using it for "for playing" and "to have fun with my friends". Therefore, age groups should be considered when planning the school garden. While planning different areas where the 10-12 age group can play, areas for the 13-15 age group should be planned for "to breathe".

- The library is one of the most frequently used areas by students at school. The presence of the library is important when designing schools. At the same time, it should be designed considering the individual characteristics of students such as age and gender.

- Students spend long periods in the sports field and laboratory. At the same time, the sports field is OCAA, which is used with pleasure during and outside the lesson. However, students do not use these areas frequently. It is important to have these areas in schools and to increase the use of students.

- 13–15-year-olds use the sports field longer than 10–12-year-olds. Age groups should be considered when planning the sports field, and areas that will appeal to all age groups should be planned.

- The expectation of the students from the school is to increase the sports field, park/playground, other public green areas, and recess times. In addition, the number of students who want to increase the duration of the physical lesson is low. Accordingly, the students want to use these areas for their own purposes, not for the lesson. In this direction, the sports field, park/playground, and other public green areas to be designed in schools should be designed to function as public spaces, and recess times should be increased for activities such as meeting the needs of students and playing games.

- Although students have sports fields in their schools, they still want to have a sports field. This situation is insufficient for the students' demands for the quality of the sports fields and should be developed in accordance with the students' expectations.

- When students look out the window, they want to see the green areas. When planning school gardens, public green areas should be emphasized.

- Students find the green areas in their schools insufficient and say that they cannot be protected from the sun. When designing schools, green areas should be at the forefront, and the sun factor should be considered in their design.

- Students have public green areas, flowers, and sports field expectations for the school garden. These expectations should be considered when designing schools.

- As the areas that students enjoy using during the lesson increase, positive feelings about coming to school increase. It is important to have a school garden and laboratory that students enjoy using. At the same time, it is important to design other OCAAs in a way that students will enjoy and to increase students' interaction with these areas.

- Parks are generally used for "for playing" and "for fun" purposes. However, as the age of the students increases, the use of "to sit" comes to the fore. When planning parks, areas that will allow different activities such as sitting areas, and playgrounds should be planned.

- Public green areas are used for "to sit" and "for playing" purposes. However, as the age of the students increases, it is also used for "for playing" and "to walk around" purposes. When planning these areas, they should be planned in accordance with activities such as sitting, walking, and playing.

- The areas that students enjoy and use around the school are parks, other public green areas, sport fields, and eating places. This should be considered in location selection.

- Students do not enjoy having construction/empty areas, and industrial areas around the school. This should be considered in location selection.

- Eating places and markets around the school attract students more than the canteen and cafeteria at school. The quality of the canteen and cafeteria in schools should be increased so that eating places and markets do not negatively affect students' engagement with the school.

- The friendly environment in the internet cafe, eating places and shopping center makes students feel enjoyable. This can motivate students towards school. It should be considered in location selection.

- Students expect parks, other public green areas, shopping centers, eating places and sports fields around the school. It should be considered in location selection.

- The number of the commercial uses increases in the school environment positive feelings about coming to school decreases. It should be considered in location selection.

- As the number of eating places around the school increases, positive feelings about coming to school are positively affected. It should be considered in location selection.

- The increase in the number of parks and playgrounds around the school positively affects the positive feelings about coming to school. It should be considered in location selection.

8.3 Limitations

In this study, some results were obtained as suggestions for future studies. These results:

- A user survey was done with students. Since we could not ask questions about the income level of the students, we accepted the income level as the parents' education level. However, making the part about parental characteristics more detailed with parents may help to obtain more data and expand the framework of the study.

- Students' perceptions of these areas can be discussed in more detail by making drawings about the school garden, out-of-classroom activity areas, and land use around the school.

- According to the results of the meeting with the Psychological Counselor Denizhan Kazancık, she stated that the personality formation of the age group between 10 and 15 years, which is the research group of the thesis, is just beginning, and children are seeking answers to self-related questions such as "Who am I?", "What do I like?", and "What do I not like?". At the same time, she pointed out that this age group can state that they love something, but shortly after, they may say they don't like it anymore. Therefore, we can define the answers given by this age group as "unreliable".

Finally, in studies in Turkey and abroad, there were no studies on students' positive feelings about coming to school in the field of city planning. The aim of this study is to investigate how out-of-classroom activity areas, land use around the school, individual, parental, house / households' characteristics affect positive feelings about coming to school in Turkey and in the world. This study serves as a steppingstone for further studies.

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APPENDICES

APPENDIX A

USER SURVEY

İZMİR YÜKSEK TEKNOLOJİ ENSTİTÜSÜ
OKUL İÇİ ALANLAR VE ÇEVRE ARAZİ KULLANIMLARI ÖĞRENCİLERİN
OKULA GELME MOTİVASYONUNU NASIL ETKİLİYOR?
5.-6.-7.-8. SINIF ÖĞRENCİ ANKETİ

BÖLÜM. 1: Size ve ailenize dair genel bilgiler

1.Kaçıncı sınıfa gidiyorsun? ……..   **1b. Kaç yaşındasın?**.............   **1c. Cinsiyetin**……..
2. Hangi mahallede yaşıyorsunuz?..............................
3.Kaç yıldır bu mahallede yaşıyorsunuz?........
3b. Annen ücretli bir işte çalışıyor mu?   __Evet   __Hayır
4. Çalışıyor ise işini yazınız…………………………………..
4b. Baban ücretli bir işte çalışıyor mu?   __Evet   __Hayır
5. Çalışıyor ise işini yazınız………………………………
6. Annenin eğitim durumu:
__Okuma yazması yok   __ Okuma yazması var   __ İlkokul   __ Ortaokul
__Lise   __ Üniversite   __Diğer, yazınız…………………………..
7. Babanın eğitim durumu:
__Okuma yazması yok   __ Okuma yazması var   __ İlkokul   __ Ortaokul
__Lise   __ Üniversite   __Diğer, yazınız…………………………..
8. Evinizde toplam kaç kişi yaşıyorsunuz? …………………………………………
9. Evinizde kimlerle yaşıyorsunuz?
__Anne - baba (sadece biri)   __ Anne-baba(Her ikisi)   __Anne, baba, kardeşler
__ Anne, baba ve diğer aile büyükleri   __Sadece diğer aile büyükleri   __Diğer, yazınız……………
10.Yaşadığınız konutta bulunan olanakların tümünü işaretleyiniz.
__ Evime ait bahçe   __ Yaşadığım binaya ait/ortak kullanımlı bahçe   __ Balkon
                __ Havuz   __ Güvenlik görevlisi   __ Apartman/site hizmetleri   __Hiçbiri   __Diğer,yazınız………………
11. Evinde (ders çalışma, oyun, uyku gibi) özel zamanını geçirebileceğin bir yer var mı?
__Var, kendi odası   __ Var, kardeşleriyle paylaştığı oda   __Yok, salon/oturma odasını kullanıyor   __ Yok, anne- baba odasını kullanıyor   __ Diğer (yazınız)…………………………………

Bölüm-2: Derslik dışı aktivite alanları ile ilgili sorular

12. Aşağıdaki tabloda derslik dışı aktivite alanlarıyla ilgili uygun olanları işaretleyiniz.

	Okulunuzda hangileri var?	En çok kullandığın 3 tanesi hangileri?	Hangilerini ders sırasında kullanmaktan keyif alıyorsun?	Hangilerini ders dışında kullanmaktan keyif alıyorsun?
Okul bahçesi				
Spor salonu				
Çok amaçlı salon				
Laboratuvar				
Teknik atölyeler				
Kütüphane				
Diğer, yazınız……..				

13. Aşağıdaki tabloda derslik dışı aktivite alanları ile ilgili soruları yazarak cevaplayınız.

	Hangi sıklıkla kullanıyorsun?	Hangi amaçla kullanıyorsun?	Bu alanlarda günde kaç saat geçiriyorsun?
Okul bahçesi			
Spor salonu			
Çok amaçlı salon			
Laboratuvar			
Teknik atölyeler			
Kütüphane			
Diğer, yazınız……..			

14. Aşağıdaki soruları okulunuzda bu alanlar varsa cevaplayınız. Yoksa boş bırakınız.

Sorular	Evet	Biraz	Hayır
Sabahları kalktığımda okula gitmek istiyorum			
Okulda kendimi iyi hissediyorum.			
Ders sırasında dışarıdan gelen gürültü dikkatimi dağıtıyor. (Gürültü yoksa boş bırakınız)			
Okuldaki kötü kokudan rahatsız oluyorum. (Koku yoksa boş bırakınız)			
Okul bahçesini kullanmaktan keyif alıyorum.			
Okul bahçesinin büyüklüğü oyun oynamak için yeteri kadar alan var.			
Okul bahçesinin oturmak için yeterli oturma alanı var.			
Okul bahçesinde dolaşmak ve koşturmak için yeteri kadar alan var.			
Okul bahçesinde oyun oynamak için yeteri kadar ağaçlık ve çim alan var.			
Okul bahçesindeki gölgelik alanlar güneşten ve yağmurdan korunmamı sağlıyor. (Gölgelik alanlar yoksa boş bırakınız)			
Dersleri okul bahçesinde işleseydik o derslerden daha çok keyif alırdım.			
Okul bahçesi benim arkadaşlık ilişkilerimi geliştiriyor.			

Okuldaki kantin ve yemekhaneyi kullanmaktan keyif alıyorum. (Kantin ve yemekhane yoksa veya bu alanları kullanmıyorsanız boş bırakınız)			
Okuldaki kütüphane, laboratuvar, müzik/resim derslikleri ve spor alanları gibi derslik dışındaki aktivite alanlarını kullanmak bana keyif veriyor.			
Okulda daha fazla ağaç, çim çiçek gibi yeşil alanlar olsaydı okuldan daha fazla keyif alırdım.			
Sınıf penceresinden dışarı baktığımda ağaçlık ve yeşil alanları görmek bana keyifli hissettiriyor.			
Okuldaki teneffüs süresi dinlenmek, bahçede dolaşmak, oyun oynamak vb. için yeterli.			

Bölüm-3 Okul çevresindeki alanlara dair bilgiler

15. Aşağıdaki tabloda okul çevresindeki alanlarla ilgili uygun olanları işaretleyiniz.

	Okul çevresinde ne tür alanlar var?	En çok kullandığın 3 tanesi hangileri?	En çok hangilerini kullanmaktan keyif alıyorsun?	Hangilerini kullanmaktan keyif almıyorsun?
Yeme-içme yerleri				
Parklar				
Ağaçlık ve çim alanlar				
Sokak				
Meydan				
İnternet kafe				
Kırtasiye				
Spor alanları				
Sanayi alanları				
Çoğunlukla ev				
Bakkal/Market/Büfe				
Otobüs/dolmuş durağı				
İnşaat alanı/Boş alan				
Avm/Alışveriş merkezi				
Diğer, yazınız……..				

16. Aşağıdaki tabloda okul çevresindeki alanlarla ilgili soruları yazarak cevaplayınız.

	Hangi sıklıkla kullanıyorsun?	Ne amaçla kullanıyorsun?	Bu alanlarda kaç saat geçiriyorsun?
Yeme-içme yerleri			
Parklar			
Ağaçlık ve çim alanlar			
Sokak			
Meydan			
İnternet kafe			
Kırtasiye			
Spor alanları			
Sanayi alanları			
Çoğunlukla ev			
Bakkal/Market/Büfe			
Otobüs/dolmuş durağı			
İnşaat alanı/Boş alan			
Avm/Alışveriş merkezi			
Diğer, yazınız……..			

17. Aşağıdaki soruları okulunuzun çevresinde bu alanlar varsa cevaplayınız. Yoksa boş bırakınız.

Sorular	Evet	Biraz	Hayır
Okul çevresinde bulunan yeme içme yerleri , büfe/market/bakkal gibi yerler okul kantini ve yemekhaneden daha çok hoşuma gidiyor. (büfe/market/bakkal gibi yerler yoksa veya kullanmıyorsanız boş bırakınız)			
Okul çevresinde bulunan internet kafe, yeme-içme yerleri ve avm/alışveriş merkezi gibi yerlerdeki arkadaş ortamından keyif alıyorum. (İnternet kafe, yeme-içme yerleri ve avm/alışveriş merkezi gibi yerler yoksa veya kullanmıyorsanız boş bırakınız)			
Okula gitmek yerine çevresindeki internet kafede vakit geçirmekten daha çok hoşlanırım. (İnternet kafe yoksa veya kullanmıyorsanız boş bırakınız)			
Okula gitmek yerine okul çevresindeki yeme içme mekanları ve avm/alışveriş merkezlerinde vakit geçirmekten daha çok hoşlanırım (Yeme içme mekanları ve avm/alışveriş merkezi yoksa veya kullanmıyorsanız boş bırakınız.)			
Okul çevresindeki parkları ve yeşil alanları kullanmak okulda daha keyifli hissetmemi sağlıyor. (Park yoksa veya kullanmıyorsanız boş bırakınız)			
Okul çevresindeki spor alanlarını kullanmak okulda daha keyifli hissetmemi sağlıyor. (Spor alanları yoksa veya kullanmıyorsanız boş bırakınız)			

"ÇİZ VE YAZ" (11-14 yaş öğrenciler için)

1-) Okulda neler olsaydı okuldaki zaman daha keyifli olurdu? Çizerek veya yazarak anlatınız.

2-) Okul bahçeniz nasıl olsa hoşunuza giderdi? Çizerek veya yazarak anlatınız.

3-) Okul çevresinde nasıl alanlar olsaydı hoşunuza giderdi? Çizerek veya yazarak anlatınız.

Bu ankete katılarak araştırmamıza koyduğunuz katkı için teşekkür ederiz.
Ankete veya çalışmaya dair her hangi bir sorunuz veya isteğiniz olması durumunda proje yürütücüsü Doç.Dr. Fatma Şenol'u arayabilirsiniz (cep:0554 553 92 32)

APPENDIX B

LINEAR REGRESSION RESULTS

- All students: (Dependent-1)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,386	,428		3,235	,001
	gender	-,326	,086	-,220	-3,800	,000
	Age	,071	,084	,049	,845	,399
	edu_level	-,134	,038	-,217	-3,503	,001
	private_room	-,008	,056	-,009	-,142	,887
	number_ocaa	,001	,037	,002	,028	,977
	enjoy_during	-,153	,058	-,174	-2,641	,009
	enjoy_outside	,081	,060	,086	1,355	,177
	frequency_sgarden	-,068	,094	-,042	-,717	,474
	residential_density	,160	,101	,110	1,580	,115
	noise	-,014	,058	-,014	-,246	,806
	eating_places	,170	,055	,200	3,072	,002
	parks_grareas	,444	,075	,465	5,943	,000
a. Dependent Variable: goto_school						

- All Students: (Dependent-2)

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,097	,355		3,091	,002
	gender	-,141	,070	-,096	-1,999	,047
	Age	-,162	,069	-,112	-2,336	,020
	edu_level	-,287	,032	-,463	-9,031	,000
	private_room	-,072	,046	-,081	-1,560	,120
	number_ocaa	,046	,030	,087	1,505	,134
	enjoy_during	-,078	,048	-,090	-1,643	,102
	enjoy_outside	,010	,049	,011	,212	,832
	frequency_sgarden	-,033	,078	-,021	-,427	,670
	residential_density	,533	,083	,372	6,390	,000
	noise	,006	,048	,006	,126	,899
	eating_places	,232	,046	,272	5,070	,000
	parks_grareas	,755	,062	,794	12,279	,000
a. Dependent Variable: feel_good						

- Konak: (Dependent-1)

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,899	1,621		1,789	,081
	gender	-,038	,246	-,020	-,152	,880
	Age	-,304	,243	-,174	-1,249	,218
	edu_level	,071	,095	,105	,742	,462
	private_room	-,100	,123	-,104	-,815	,420
	enjoy_during	-,214	,159	-,179	-1,344	,186
	enjoy_outside	-,404	,224	-,268	-1,806	,078
	frequency_sgarden	-,343	,363	-,133	-,946	,350
	noise	-,357	,205	-,227	-1,742	,088
	eating_places	,253	,081	,452	3,138	,003
a. Dependent Variable: goto_school						

- Konak: (Dependent-2)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3,583	2,110		1,698	,097
	gender	,244	,284	,117	,858	,395
	Age	-,246	,282	-,128	-,873	,388
	edu_level	,120	,111	,163	1,074	,289
	private_room	-,277	,141	-,266	-1,964	,056
	enjoy_during	-,301	,185	-,232	-1,631	,110
	enjoy_outside	-,351	,263	-,215	-1,335	,189
	frequency_sgarden	-,624	,476	-,205	-1,312	,197
	noise	,106	,238	,062	,445	,658
	eating_places	,246	,096	,402	2,566	,014
a. Dependent Variable: feel_good						

- Karabağlar: (Dependent-1)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,910	,450		4,240	,000
	gender	-,417	,081	-,329	-5,167	,000
	Age	,136	,083	,106	1,634	,104
	edu_level	-,170	,034	-,308	-4,924	,000
	private_room	,058	,059	,063	,994	,321
	enjoy_during	-,061	,054	-,081	-1,117	,265
	enjoy_outside	,118	,053	,149	2,224	,027
	frequency_sgarden	,008	,098	,005	,078	,938
	noise	-,019	,054	-,022	-,344	,731
	parks_grareas	-,025	,095	-,020	-,269	,789
a. Dependent Variable: goto_school						

- Karabağlar: (Dependent-2)

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2,776	,257		10,819	,000
	gender	-,127	,046	-,127	-2,757	,006
	Age	,047	,047	,047	1,001	,318
	edu_level	-,324	,020	-,748	-16,496	,000
	private_room	,063	,033	,086	1,878	,062
	enjoy_during	-,002	,031	-,003	-,049	,961
	enjoy_outside	,039	,030	,063	1,297	,196
	frequency_sgarden	-,104	,056	-,085	-1,874	,062
	noise	,016	,031	,024	,518	,605
	parks_grareas	,000	,053	,000	,005	,996
a. Dependent Variable: feel_good						

APPENDIX C

ORDERED LOGISTIC REGRESSION RESULTS

- All Students: (Dependent-1):

```
Ordered logistic regression                    Number of obs   =        246
                                               LR chi2(12)     =      68.58
                                               Prob > chi2     =     0.0000
Log likelihood = -219.50462                    Pseudo R2       =     0.1351

   goto_school |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
        gender |  -1.016482   .2703894    -3.76   0.000    -1.546436   -.4865284
           age |   .2296343    .261053     0.88   0.379    -.2820202    .7412888
     edu_level |  -.4652837   .1222988    -3.80   0.000    -.7049849   -.2255825
  private_room |   -.001371   .1739598    -0.01   0.994     -.342326    .339584
   number_ocaa |  -.0143284   .1119015    -0.13   0.898    -.2336512    .2049945
  enjoy_during |  -.4496637    .178844    -2.51   0.012    -.8001915   -.0991359
   enjoy_outs~e |   .2566929     .18554     1.38   0.167    -.1069588    .6203447
   frequency_~n |  -.2134781   .2949526    -0.72   0.469    -.7915745    .3646183
  residentia~y |   .4513007   .3174357     1.42   0.155    -.1708618    1.073463
         noise |  -.0616904   .1764728    -0.35   0.727    -.4075708     .28419
  eating_pla~s |   .5688519   .1794207     3.17   0.002     .2171938     .92051
   parks_grar~s |   1.370048   .2498043     5.48   0.000     .8804411    1.859656
         /cut1 |  -2.489314   1.344518                       -5.12452    .1458931
         /cut2 |  -.0566557   1.335905                      -2.674981    2.561669
```

- All Students: (Dependent-2):

```
Ordered logistic regression                    Number of obs   =        244
                                               LR chi2(12)     =     170.24
                                               Prob > chi2     =     0.0000
Log likelihood = -163.11787                    Pseudo R2       =     0.3429

     feel_good |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
        gender |  -.6537074   .3024914    -2.16   0.031     -1.24658   -.0608351
           age |  -.5900488    .304536    -1.94   0.053    -1.186928    .0068308
     edu_level |    -1.4728   .1900211    -7.75   0.000    -1.845234   -1.100365
  private_room |  -.2139853   .2028083    -1.06   0.291    -.6114822    .1835117
   number_ocaa |   .1511619   .1311255     1.15   0.249    -.1058393    .4081631
  enjoy_during |  -.2890888   .1991798    -1.45   0.147    -.6794741    .1012964
   enjoy_outs~e |   .0994528     .20932     0.48   0.635    -.3108067    .5097124
   frequency_~n |  -.1805354   .4229646    -0.43   0.670    -1.009531    .6484599
  residentia~y |   2.337704   .4078443     5.73   0.000     1.538344    3.137064
         noise |   .0815523   .2039234     0.40   0.689    -.3181302    .4812348
  eating_pla~s |   1.170475   .2488441     4.70   0.000     .6827492     1.6582
   parks_grar~s |   3.483501   .3909466     8.91   0.000      2.71726    4.249742
         /cut1 |  -2.016984   1.878892                      -5.699545    1.665577
         /cut2 |    1.35426   1.882809                      -2.335978    5.044497
```

- Konak: (Dependent1)

```
Ordered logistic regression                    Number of obs   =          54
                                               LR chi2(9)      =       20.39
                                               Prob > chi2     =      0.0156
Log likelihood = -47.169792                    Pseudo R2       =      0.1777

  goto_school |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      gender |  -.291993   .6296123    -0.46   0.643    -1.52601    .9420244
         age | -.9820054   .6887704    -1.43   0.154   -2.331971    .3679598
   edu_level |  .3023525   .2599435     1.16   0.245   -.2071273    .8118324
private_room | -.3462314   .3473282    -1.00   0.319   -1.026982    .3345193
enjoy_during | -.6869601   .4160303    -1.65   0.099   -1.502364    .1284443
enjoy_outs~e | -1.389661   .6559349    -2.12   0.034    -2.67527   -.1040522
frequency_~n |  .8106419   1.578538     0.51   0.608   -2.283236    3.904519
       noise |  -1.00753   .5779836    -1.74   0.081   -2.140357    .1252971
eating_pla~s |  .8057161   .2621474     3.07   0.002    .2919167    1.319516
-------------+----------------------------------------------------------------
       /cut1 |  .6868489   6.198695                    -11.46237    12.83607
       /cut2 |   2.19045   6.195237                    -9.951992    14.33289
```

- Konak: (Dependent-2)

```
Ordered logistic regression                    Number of obs   =          53
                                               LR chi2(9)      =       15.59
                                               Prob > chi2     =      0.0760
Log likelihood = -24.666341                    Pseudo R2       =      0.2401

   feel_good |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      gender |  .7225823   .8541279     0.85   0.398   -.9514778    2.396642
         age | -.9386367   .8774505    -1.07   0.285   -2.658408    .7811347
   edu_level |  .4334276     .33752     1.28   0.199   -.2280995    1.094955
private_room | -.9404105   .4814416    -1.95   0.051   -1.884019    .0031977
enjoy_during | -.8603605   .6556187    -1.31   0.189    -2.14535    .4246286
enjoy_outs~e | -1.109245   .8194058    -1.35   0.176   -2.715251    .4967608
frequency_~n | -1.712148   2.152038    -0.80   0.426   -5.930064    2.505768
       noise |  .4172766   .6750371     0.62   0.536   -.9057718    1.740325
eating_pla~s |  .8002983    .336462     2.38   0.017    .1408449    1.459752
-------------+----------------------------------------------------------------
       /cut1 | -7.137093   8.908878                    -24.59817    10.32399
```

- Karabağlar: (Dependent-1)

```
Ordered logistic regression                    Number of obs   =         204
                                               LR chi2(9)      =       60.16
                                               Prob > chi2     =      0.0000
Log likelihood = -154.77833                    Pseudo R2       =      0.1627

  goto_school |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
      gender | -1.460324   .3183061    -4.59   0.000   -2.084192   -.8364553
         age |  .5316691   .3173132     1.68   0.094   -.0902532    1.153592
   edu_level | -.7362731   .1471123    -5.00   0.000   -1.024608   -.4479383
private_room |  .1883822   .2294079     0.82   0.412    -.261249    .6380133
 number_ocaa | -.0117052   .1200425    -0.10   0.922   -.2469841    .2235737
enjoy_during | -.2629519   .2075351    -1.27   0.205   -.6697132    .1438093
enjoy_outs~e |  .4125902   .2126581     1.94   0.052   -.0042121    .8293925
frequency_~n |  .1018537   .3273801     0.31   0.756   -.5397994    .7435068
       noise | -.0464709   .2062133    -0.23   0.822   -.4506415    .3576997
-------------+----------------------------------------------------------------
       /cut1 | -4.800667   1.571891                    -7.881517   -1.719816
       /cut2 | -1.903129    1.53645                    -4.914514    1.108257
```

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- Karabağlar: (Dependent-1)

```
Ordered logistic regression                    Number of obs   =        205
                                               LR chi2(9)      =     240.04
                                               Prob > chi2     =     0.0000
Log likelihood = -21.192722                    Pseudo R2       =     0.8499

    feel_good |      Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]

       gender |  -17.59996          .        .      .            .          .
          age |   1.843396          .        .      .            .          .
    edu_level |  -38.46611          .        .      .            .          .
 private_room |   .8137866          .        .      .            .          .
  number_ocaa |   .0388025          .        .      .            .          .
 enjoy_during |  -.0954179          .        .      .            .          .
 enjoy_outs~e |   1.384352          .        .      .            .          .
 frequency_~n |  -4.453636          .        .      .            .          .
        noise |   .8219881          .        .      .            .          .

        /cut1 |  -146.2389          .                            .          .

Note: 166 observations completely determined.  Standard errors questionable.
Warning: convergence not achieved
r(430);
```

APPENDIX D

RESEARCH ETHICS COMMITTEE APPROVAL

İZMİR YÜKSEK TEKNOLOJİ ENSTİTÜSÜ
SOSYAL VE BEŞERİ BİLİMLER
BİLİMSEL ARAŞTIRMA VE YAYIN ETİK KURULU

DEĞERLENDİRME FORMU

Çalışmanın Başlığı:

How school facilities and surrounding land uses affect students' motivation for coming to school
(Okul içi alanlar ve çevre arazi kullanımları öğrencilerin okula gelme motivasyonunu nasıl etkiliyor?)

Sorumlu Araştırmacının Adı Soyadı:

Doç. Dr. Fatma ŞENOL

Karar Tarihi:

29.04.2022

ETİK KURUL DEĞERLENDİRME SONUCU

✓ Kabul
☐ Düzeltme Gerekli
Düzeltmeler hakkındaki görüş, tavsiye
☐ Ret
Ret ile ilgili gerekçe, görüş, tavsiye

BAŞKAN

Prof. Dr. İpek AKPINAR AKSUGÜR

ÜYE	ÜYE	ÜYE
Prof. Dr. Başak İPEKOĞLU	Prof. Dr. Bünyamin AKGÜL	Prof. Dr. Ali Can DEMİRKESEN

ÜYE	ÜYE	ÜYE
Prof. Dr. Mustafa Emre İLAL	Prof. Dr. Zehra Tuğçe KAZANASMAZ	Prof. Dr. Fehmi DOĞAN

APPENDIX E

DESCRIPTIVE STATISTICS

What Are You Using the School Garden for? (for Schools) (%)
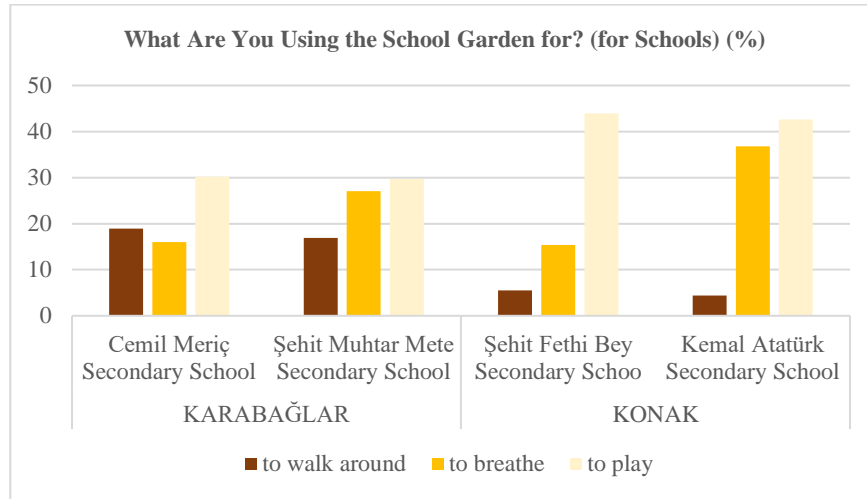
Figure 1: What Are You Using the School Garden for? (for Schools) (%)
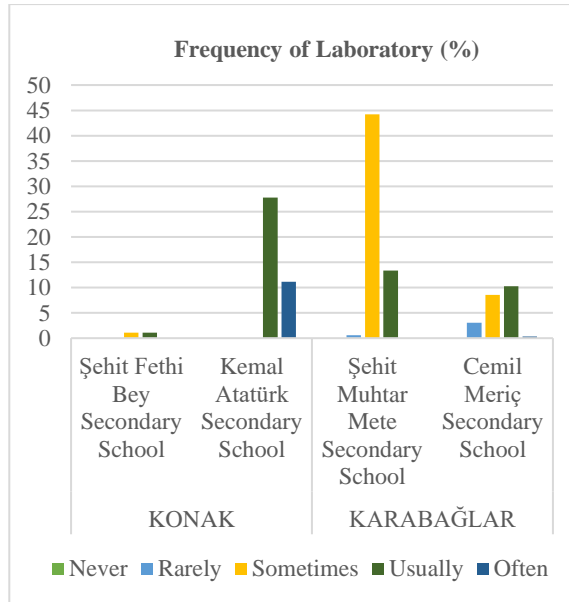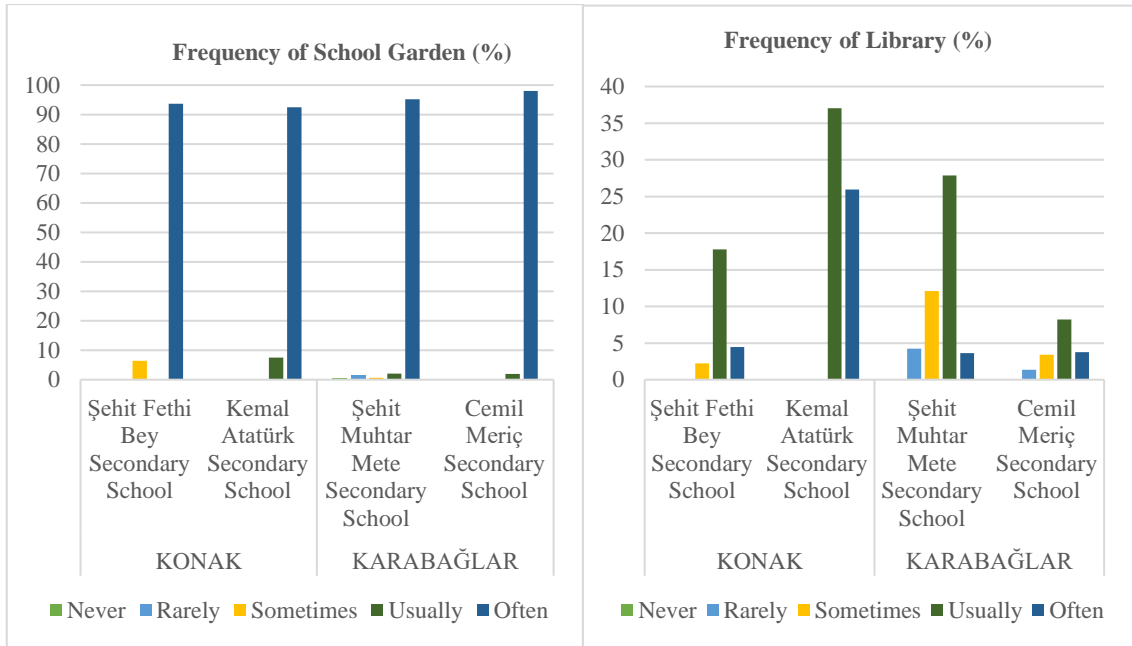
Figure 2: Frequency of School Garden, Laboratory, and Library (%)
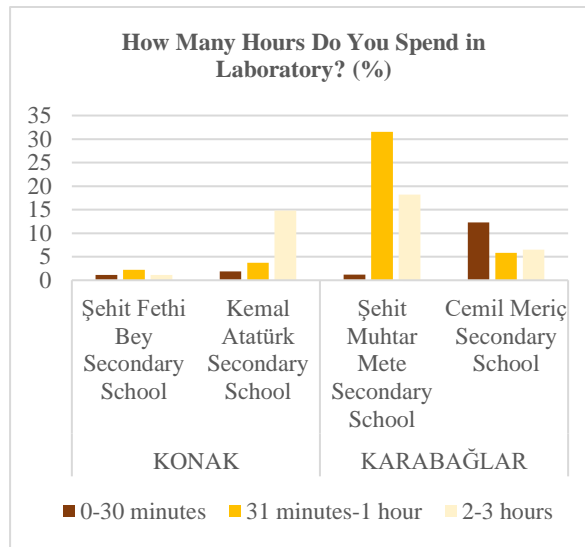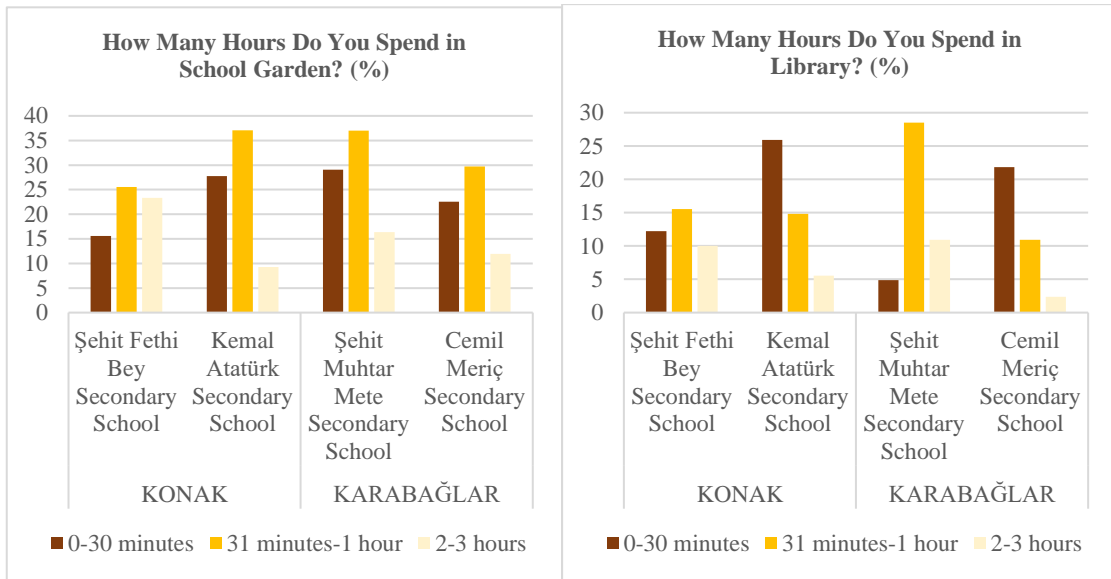
Figure 3: How Many Hours Do You Spend in School Garden, Library and Laboratory? (%)
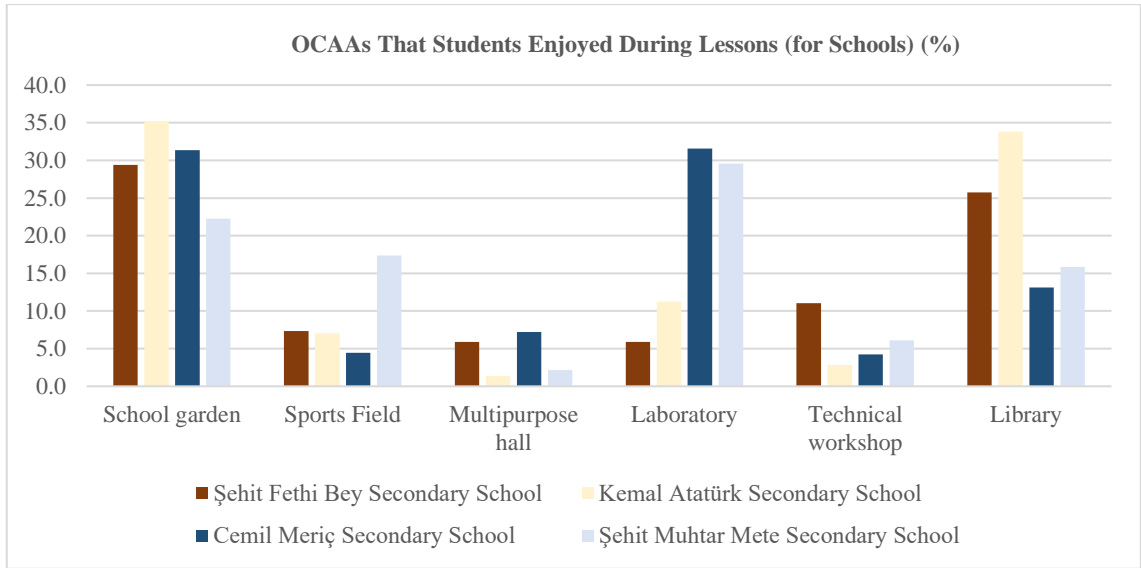
Figure 4: OCAAs That Students Enjoyed During Lessons (for Schools) (%)
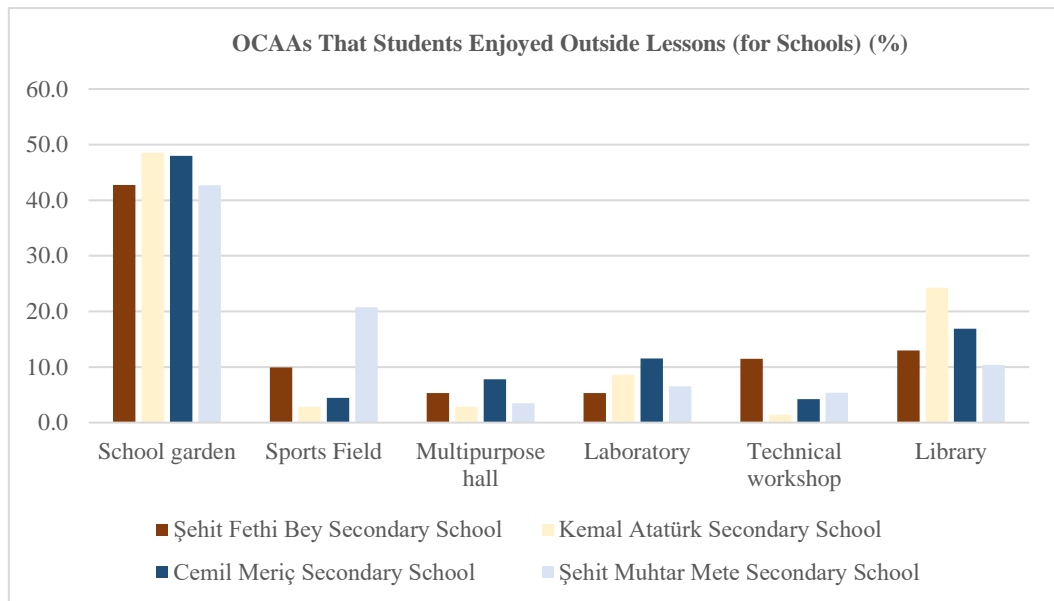
Figure 5: OCAAs That Students Enjoyed Outside Lessons (for Schools) (%)
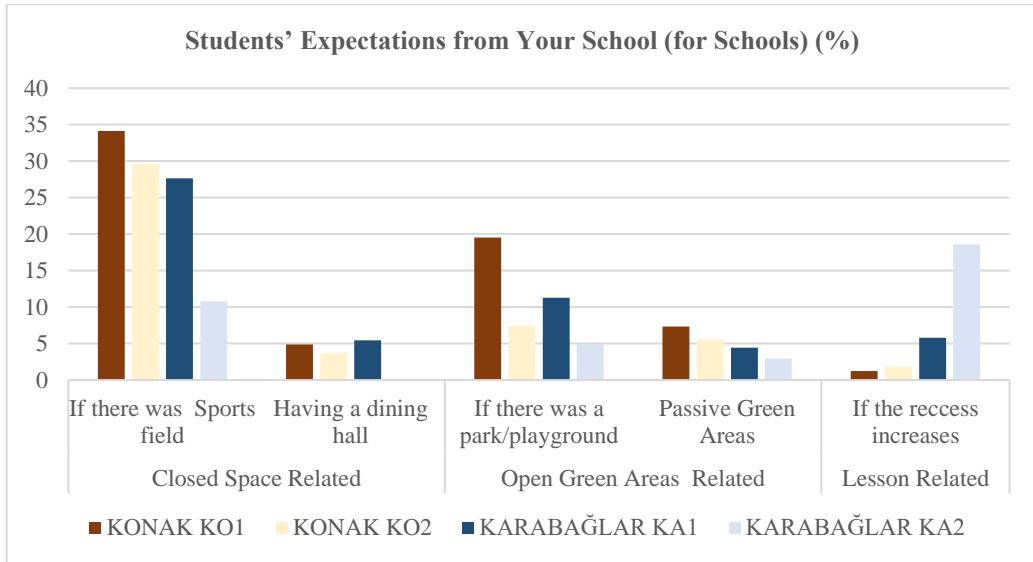
Figure 6: Students' Expectations from Your School (for Schools) (%)
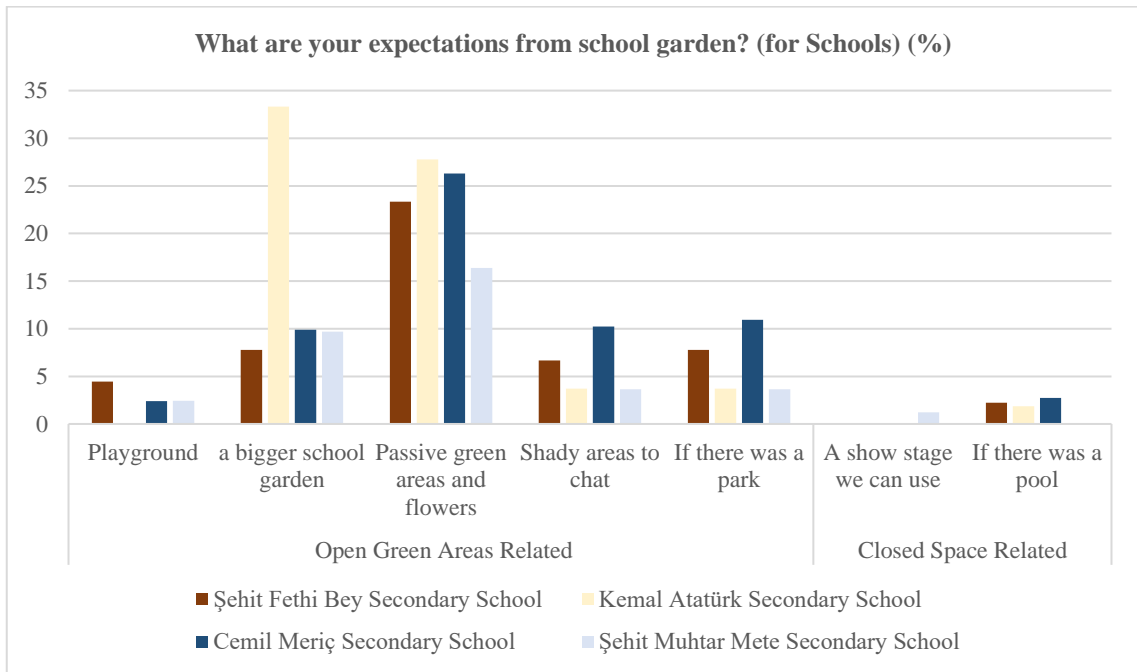
Figure 7: What Are Your Expectations from Your School Garden? (for Schools) (%)
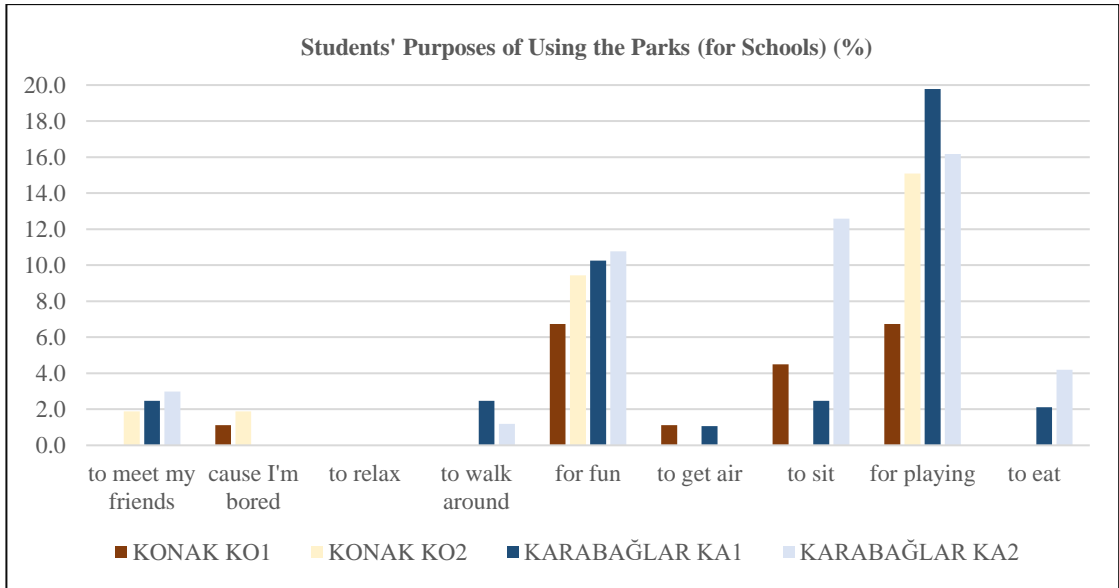
Figure 8: Students' Purposes of Using the Parks (for Schools) (%)
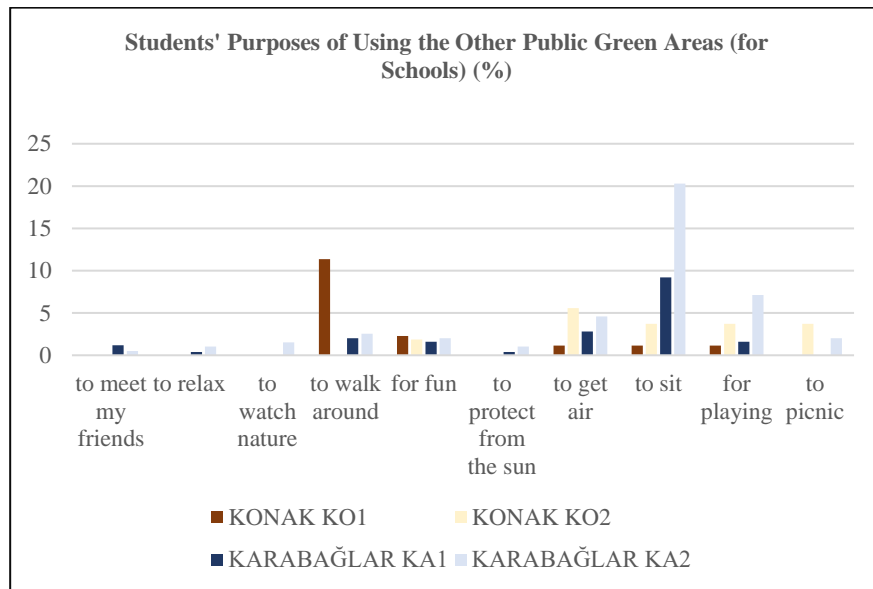
Figure 9: Students' Purposes of Using the Other Public Green Areas (for Schools) (%)
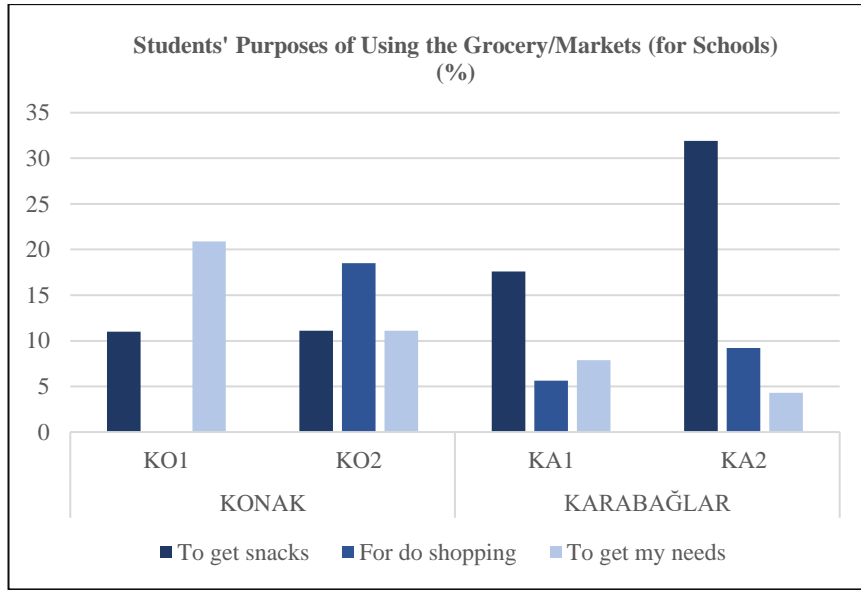
Figure 10: Students' Purposes of Using the Grocery/Markets (for Schools) (%)
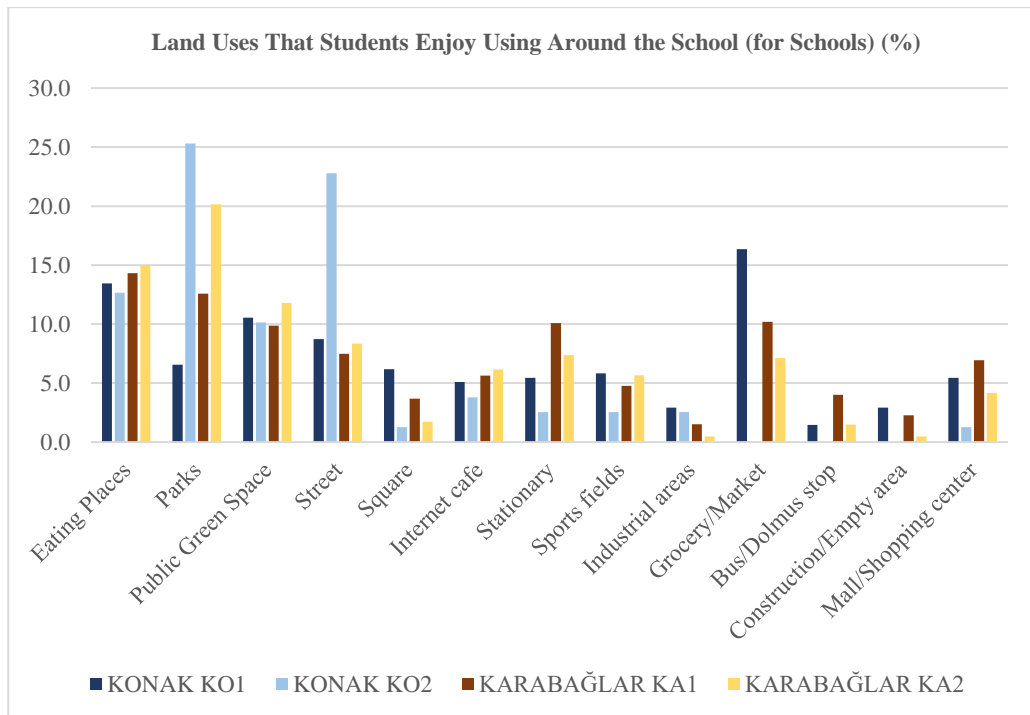
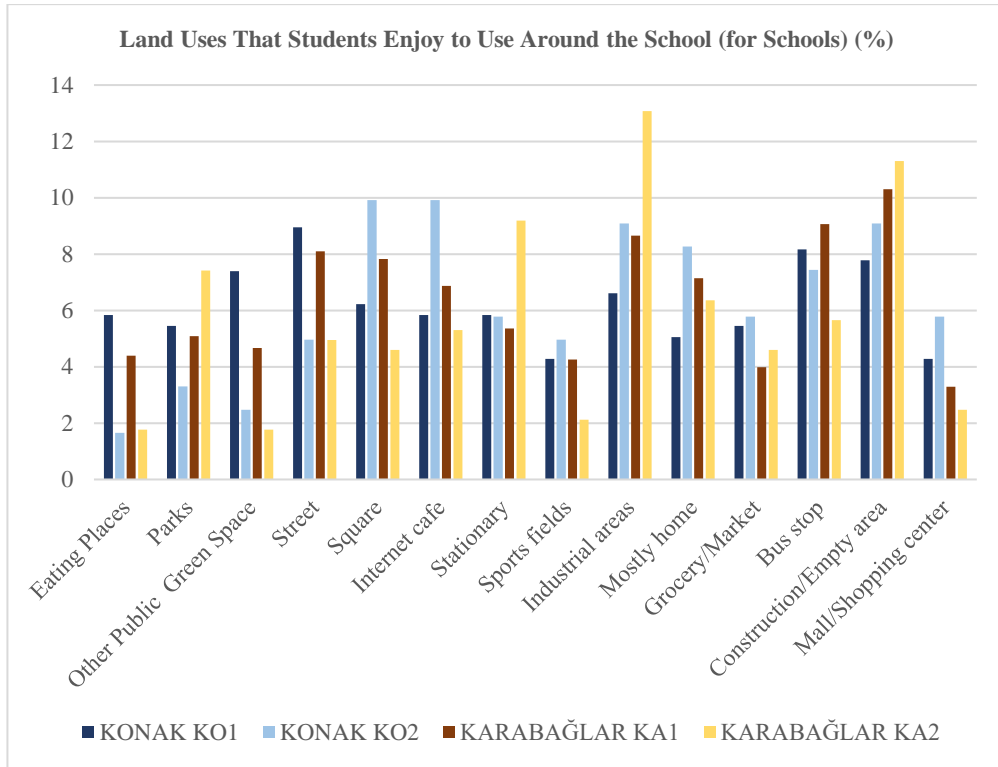Figure 11: Land Uses That Students Enjoy Using Around the School (for Schools) (%)

Figure 12: Land Uses That Students Don't Enjoy Using Around the School (for Schools) (%)
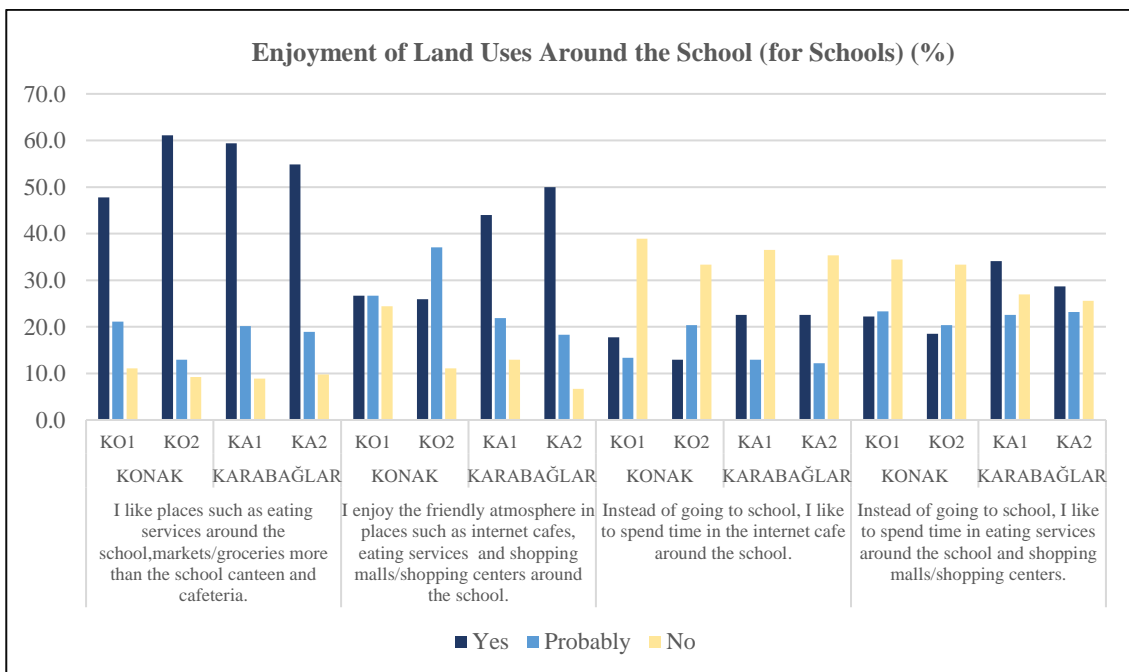

Figure-13: Enjoyment of Land Uses Around the School (for Schools) (%)
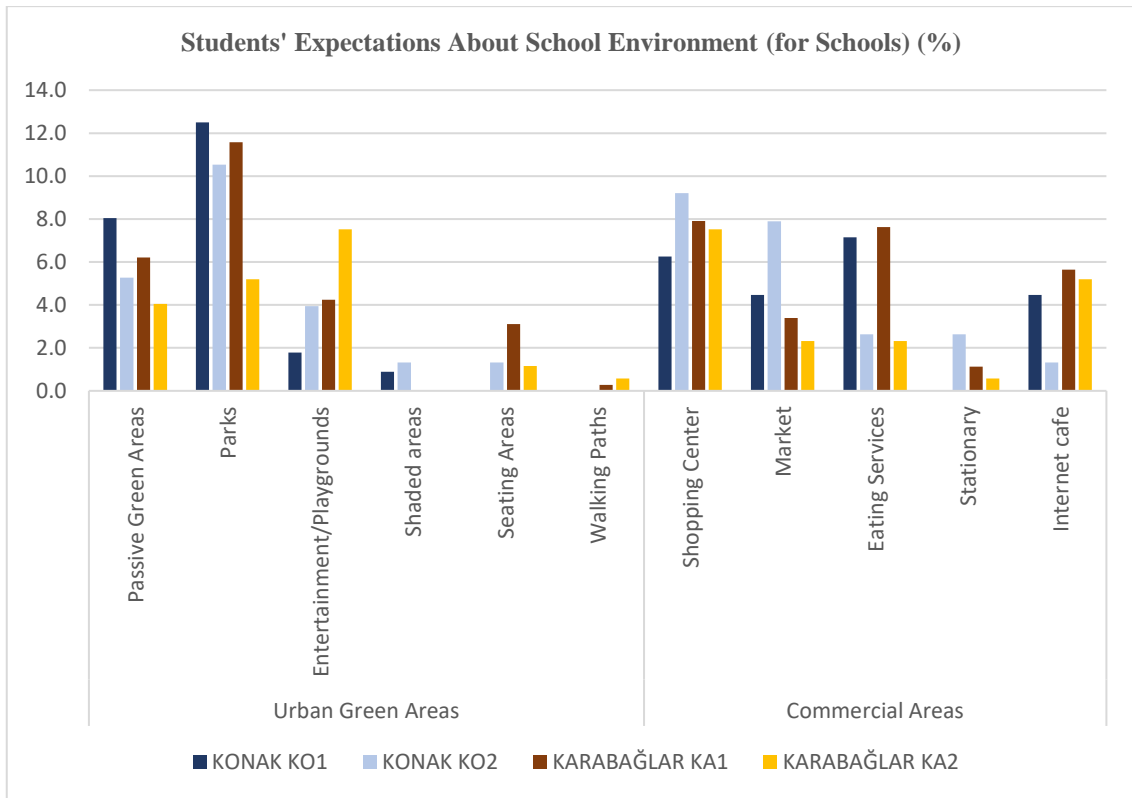
Figure-14: Students' Expectations About School Environment (for Schools) (%)