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Visual Quality Analysis of Educational Institutions and Their Surroundings: A Case Study of Ataturk University, Erzurum, Turkey

ABSTRACT

The study aimed to analyze the visual quality of the Educational Institutions and their Surroundings (EITS) in the campus of Ataturk University in Erzurum city of Turkey. Visual Quality Analysis Questionnaire was applied to 74 students studying at the Faculty of Architecture and Design. The questionnaire consisted of 21 EITS. Results were analyzed using Variance and Duncan multiple comparison. It was determined that Faculty of Fishery (EITS13) had the highest visual quality score (3.243), followed by Agriculture Faculty (EITS1: 3.134) and the Divine Faculty (EITS2: 2.906). The Faculty of Veterinary Medicine had the lowest visual quality score (EITS11: 2.165), followed by High-Tech Research Centre (EITS20: 2.243) and Faculty of Law (EITS16: 2.315). Statistically significant relationship was found between the department of the students and the scores they gave to Sports Science Faculty (EITS1), Education Faculty (EITS4), Faculty of Medicine (EITS10), Faculty of Veterinary Medicine (EITS11), Faculty of Fine Arts and Tourism (EITS15), and Rectorate Building (EITS19). Among the Visual Quality Criteria (VQC) of EITS, accessibility to the structure (VQC12) was the most effective criterion (2.927, $p<0.05$). This study recommended the correction of design deficiencies to compensate for the lack of visual quality of new buildings or to improve the entire landscape of the campus.

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INTRODUCTION

Public buildings have various functions according to their proposed use. Public buildings can meet aesthetical and psychological needs of their users because of their images, identity and meaning, memorable features, and being unforgetable and distinguished from surrounding structures. The public structures representing national authority must provide prestige and correspond to impressive visuality (*Celebi and Beyhan 2010*).

The status, specialty and manner of an institution determine its identity. Perceptibility of unidentified spaces is poor. Institutional building and the surrounding landscape should be given importance (*Atabeyoglu and Bulut 2007*). Due to the social structure and the economic conditions in Turkey, public services are provided by non-government organizations, in addition to the government's provision in education, health, transportation. Thus, a large number of public buildings were constructed for such services (*Ozdemir and Baskaya 2005; Celebi and Beyhan 2010*). *Atabeyoglu and Bulut* (*2007*) suggested that factors such as perceptibility, physical accessibility, spatial identity, parking lot sufficiency, entrance impact, and effective scenic beauty should be used in the evaluation of the outdoor qualifications of educational institutions. *Atabeyoglu and Bulut* (*2007*) stated that multidimensionality and simplicity should be at the forefront in the design of institutional gardens. *Atabeyoglu and Bulut* (*2007*) emphasized the importance of accessibility to the educational institution by means of vehicles or on foot; the site should have an entrance serving the whole area; and parking lots should be designed accurately and adequately.

Educational institutions, such as universities provide social and cultural spaces. Thus, the impact of the space where universities are established on the improvement of the quality of education should not be ignored. Aesthetics and functional characteristics of their surroundings are also very important in addition to educational functions (*Atabeyoglu 2014*). Universities are educational and cultural institutions that can contribute to the formation of

an effective social, cultural, and economic development in the identity of the city where the universities are established. It is necessary to establish the connection between the spaces within these educational institutions and to make appropriate landscape designs for the users to benefit from the public spaces. The quality of the design is one of the factors that can effectively increase the quality of education and training. In addition to the service in educational matters on some special subjects, the universities are also responsible for providing their workers, users, people in their immediate surroundings and the city contemporary lifestyle examples and environments (*Ertekin and Corbaci 2010*).

Universities aim to provide students with professional, social and psychological development. In this respect, the academic, physical and social quality of universities should be high. This quality can be achieved by planning, design and applications that will satisfy the users (*Yazici 2007; Aksu and Yilmaz 2018*). In order to increase the quality of education, it is necessary to determine the expectations of the students very accurately (*Okumus and Duygun 2008*). Universities are the highest level of the education system. These institutions provide for the development of human resources and other endeavors beneficial to the society such as scientific services. There should be integrity between educational institutions and other places. Recreation designs should also be included in the educational institution circles (*Gulturk and Sisman 2016*). Quality in education is one of the most important issues to be considered today.

When planning universities, the links between education and physical fields should be taken into account. The adequacy of spatial planning is important in the application of modern learning and teaching methods. Today, it has been seen that spatial innovations encourage education positively. Therefore, the role of architecture comes to the fore (*Campos and Luceno 2020*).

The excellence of a university depends on its architecture, spatial and social relationship with the city location. Today's universities should be planned creatively (*Campos and Luceno 2020*). Universities must fulfill their mission of teaching, research and social responsibility. Throughout history, it has been observed that the institutional models of universities have developed in parallel with urban and architectural models (*Turner 1984; Campos and Luceno 2020*). According to *Laredo* (2007), among the quality strategies in universities are intertwined with nature; compatible with the ecological environment; and being successful in terms of urban planning and architecture.

Visual and physical characteristics, philosophy, architectural design and environmental design constitute the identity of an institution. In other words, identity is provided by visual integrity (*Ertekin 1978; Erdal et al. 2013*). Visual integrity ensures the modernization of an institution and its respectability and quality. The rules in the use of colors and forms in visual integrity are indicators of power and self-confidence. Attention must be paid to the image and identity of the sectors (*Cerit 2006; Erdal et al. 2013*). Visual perception is a concept varying from person to person. The assessment of visual quality should be done formally without interpretation. In this context, the visual impact assessment of a structure should be analyzed according to the design elements used in the structure and the principles of meeting these principles (*Aydinli 1992; Celebi and Beyhan 2010*). *Celebi and Beyhan* (*2010*) defined the visual impact assessment criteria in order to examine the visual impact of public buildings on the roof and facade systems. These criteria are based on Gestalt principles: form-ground relationship, symmetry-balance, ratio-scale (visual hierarchy), repetition-rhythm, affinity-similarity, closeness (complementary), continuity (sustainability), contrast and articulation. In addition to these principles, they included the form, color and texture which are the basic design elements and play important role in the visual effect. According to *Ozguc* (*1999*), visual quality is the concept used to express how attractive or delightful a place is. Measurement of visual quality requires an appraisal for the resource (*Ozguc and Caglayan 2008*).

The number of studies on the visual quality of educational institutions and their environment is almost non-existent. Mostly, researches have been done on the service quality of educational institutions and the quality of the building and environment has been emphasized. These include *Nadiri et al.* (*2009*), *Parves and Ho Yin* (*2012*), and *Jain et al.* (*2010*).

Since the quality of the spatial conditions of the educational institutions and their environments in the universities increases the educational motivation of the students, the necessity of correct planning of the universities reveals the importance of the research. As *Campos and Luceno* (*2020*) stated, ideal spatial conditions are needed in universities for the formation of educational motivation and sense of belonging among students (*Campos and Luceno 2020*). Architecture and environmental design of universities play an important role in a qualified education process (*Kong et al. 2015;Campos and Luceno 2020*).

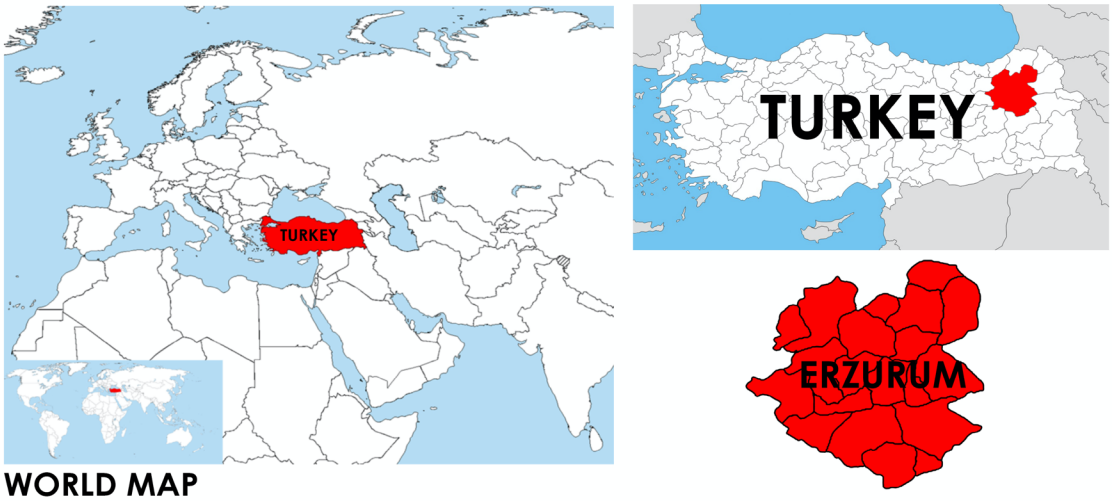
The visual quality of educational institutions and

their surroundings is also important for the functionality of public institutions and affects the quality of education.

This study aimed to perform visual quality assessment of educational buildings and their surroundings in Ataturk University campus, located in the city of Erzurum in Eastern Anatolia Region of Turkey. In addition, differences in the scores on the departments were also determined.

MATERIALS AND METHODS

This study was conducted on the buildings and university campus surrounding of Ataturk University, located in the city of Erzurum, Eastern Anatolia region of Turkey. Since Atatürk University is one of Turkey's largest campus, 15 institutional buildings were selected among educational buildings (**Figure 1**) and labeled as Educational Buildings and their surroundings



EITS 1: Sports Science Faculty
EITS 2: Faculty of Theology
EITS 3: Faculty of Economics and Administrative Sciences
EITS 4: Kazım KarabEITSir Faculty of Education
EITS 5: Science Faculty
EITS 6: Faculty of Health Sciences
EITS 7: Engineering Faculty
EITS 8: Faculty of Literature
EITS 9: Faculty of Dentistry
EITS 10: Medical School
EITS 11: Faculty of Veterinary Medicine
EITS 12: Faculty of Agriculture
EITS 13: Faculty of Fisheries
EITS 14: Faculity of Pharmacy
EITS 15: Faculty of Fine Arts
EITS 16: Faculty of Law
EITS 17: Distance Education Faculty
EITS 18: Faculty of Nursing
EITS 19: Rectorate Building
EITS 20: DAYTAM Building
EITS 21: Architecture and Design Faculty

Figure 1. Location of study area.

(EITS). Landscape assessment was used in selecting the buildings. Attention was also given to the relationship of the building with its landscape.

In order to perform visual quality assessment for the institutional buildings and their surroundings, a questionnaire was prepared and administered to the 3rd and 4th grade students under the departments of Architecture (ARCH), City and Regional Planning (CRP) and Landscape Architecture (LA), Architecture and Design Faculty, Ataturk University in November 2018. The Photo-questionnaire was displayed by showing the slides using high-resolution projectors. The visual quality criteria used in the study were based on the studies of *Gungor and Arslan* (*2004*), *Kaplan et al.* (*2006*), *Tufekcioglu* (*2008*), *Sezen and Yilmaz* (*2010*), *Irmak and Yilmaz* (*2010*), *Celebi and Beyhan* (2010) and *Guneroglu* (*2017*) (**Table 1**).

The number of students enrolled in the Architecture and Design Faculty for the academic year 2018-2019 was 784. Simple random sampling method was used to determine the sample size. (*Islamoglu 2003;Ozdamar 2003; Buyukozturk 2008;* and *Yazicioglu 2004*) and the equation used to determine the sample size is

Table 1. The visual quality analysis criteria used in the study.

Visual Quality Criteria (VQC) Number	Visual Quality Criteria
VQC1	Vegetative diversity around the building
VQC2	Landscape quality around the building
VQC3	Building and environmental harmony
VQC4	Roof and facade harmony
VQC5	Structure and topography harmony
VQC6	Color harmony of the building
VQC7	Authenticity of the building
VQC8	Detectability of the structure
VQC9	The spatial effect of the building
VQC10	Balance and symmetry in the building
VQC11	Structure ratio-scale relationship
VQC12	Accessibility to the building
VQC13	Parking adequacy and its relationship with the building
VQC14	A sense of belonging to the building
VQC15	Maintaining the building and its surroundings
VQC16	Feeling of security around the building
VQC17	Definition of focus and triangulation of the building and its surroundings
VQC18	Hard ground and green balance of the building environment
VQC19	Identity and perceptibility of structure input

Figure 2. The Educational Institutions and their Surroundings in Ataturk University Campus photographed for photo-questionnaire.

given below:

$$n = Z^2 NPQ / ND^2 + Z^2 PQ$$

Where:
n = sample size
Z = confidence interval (1.96)
P = possibility of finding mass for the property to be measured (95% = 0.95)
Q = 1-P (0.05)
D= Acceptable sampling error (5%= 0.05)
N = size of main mass (total number of students enrolled to Architecture and Design Faculty: 784)

The total sample size was n = 74 at 95% confidence interval.

To perform a visual quality assessment of the selected EITS in Ataturk University campus, the participants were asked to score the images based on the presented criteria and using a 5-point Likert Scale in the prepared questionnaire (**Figure 2**).

Survey results were analyzed using SPSS (Statistic Data Document) 20 package software. The Duncan Multiple Comparison Test was applied to determine if computed means were significantly different. The relationship between the scores given to the visual quality of the photographs and the students' department and gender was tested using ANOVA.

RESULTS AND DISCUSSION

The participants of the study were 61% (45) female and 39% (29) male, while 34% of the participants (25) were students from the Department of City and Regional Planning (CRP) and Architecture (ARCH) and 32% (24) were Landscape Architecture (LA) students. In addition, majority of the participants (98%) accepted the importance of visual quality in the educational institutions and their surroundings.

The highest average score was obtained from the Faculty of Fisheries (EITS13: 3.243) followed by the faculties of Agriculture (EITS12: 3.134), Theology (EITS2: 2.906) and Open Education (EITS17: 2.904) while the lowest mean score was given to Veterinary Faculty (EITS 11: 2.165) then to Eastern Anatolia High Technology Application and Research Center (EITS20: 2.243), Faculty of Law (EITS16: 2.315), Faculty of Fine Arts and Tourism (EITS15: 2.325) (**Table 2**).

The Faculty of Fisheries (EITS13), which received the highest visual quality score, is located within the Agriculture Faculty vicinity (EITS12) and one of the buildings belonging to the Faculty of Agriculture. Atatürk University, founded in 1957, is one of Turkey's oldest universities. The Faculty of Agriculture is the first faculty established in 1958.

Both EITS12 and EITS13 are located in an area where plant diversity is rich. The Faculty of Fisheries (EITS13) obtained high visual quality values from the following criteria: perceptibility (VQC8: 3.28), accessibility (VQC12: 3.34), parking adequacy (VQC13: 2.99), identification and perceptibility of entrance (VQC19: 3.20), landscape quality (VQC2: 3.69), plant diversity (VQC1: 3.66). As *Atabeyoglu and Bulut* (*2007*) stated, in the evaluation of the outdoor qualifications of educational institutions, perceptibility, physical accessibility, spatial identity, parking adequacy, entrance effect and effective landscape criteria are very important.

For the Veterinary Faculty, which received the lowest score (EITS11: 2.17), VQC1 (plant diversity around the building) and VQC2 (landscape quality surrounding the buildings) obtained the lowest mean score, 1.53 and 1.57, respectively. Since EITS11 is one of the newly constructed educational institution buildings at Ataturk University, its harmony with its surroundings, landscape and plant diversity is not effective. Indeed, *Arriaza et al.* (*2004*), *Kaplan et al.* (*2006*), *Irmak and Yilmaz* (*2010*), *Polat* (*2012*) and *Sari and Karasah* (*2015*) stated in their studies on different sites that plant diversity is an important evaluation criterion in the visual quality assessment studies.

Among the VQC, the highest mean score was given to VQC12 (2.93) followed by VQC8 (2.88), VQC10 (2.75), VQC11 (2.74), respectively while the lowest mean score was given to VQC1 (2.37) followed by VQC2 (2.39), VQC7 (2,45) and VQC3 (2.47), respectively.

Among the VQC, the highest scores were to VQ1 (2.37). Atatürk University is one of the Turkish Universities located on an area that provides a flexible planning, development, and growth opportunities (*Tutal 2018*). This situation also gave opportunities for the connection of faculty buildings using transport axes.

Among the VQC, the lowest scores were given to the plant diversity (VQC1: 2.37) in the surrounding area of the buildings. As *Irmak et al.* (*2018*) stated, educational institutions within the Ataturk University campus generally acted independently in planting their surrounding and used inconvenient planting techniques different from the plant design principles seen throughout

Table 2. Visual quality means of educational buildings and their environments (EITS) .

VQC	Educational Institutions and Their Surroundings ($EITS_1$……$EITS_{21}$)																					VQC_{MEAN}
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	
VQC1	2.03	2.84	2.47	2.00	2.45	2.14	2.45	2.86	2.82	2.62	1.53	3.27	3.66	2.45	1.69	1.68	3.11	2.64	1.77	2.00	1.39	**2.37**
VQC2	2.23	2.76	2.35	2.08	2.38	2.26	2.62	2.81	2.76	2.57	1.57	3.39	3.69	2.41	1.78	1.74	3.01	2.64	1.84	1.95	1.45	**2.39**
VQC3	2.18	2.93	2.41	2.20	2.23	2.46	2.64	2.64	2.70	2.57	1.84	3.18	3.55	2.69	2.01	1.84	3.08	2.58	2.16	2.07	1.84	**2.47**
VQC4	2.16	2.86	2.57	2.5	2.49	2.66	2.77	2.62	2.69	2.66	2.03	3.11	3.16	2.85	2.23	2.16	2.96	2.68	2.55	2.42	2.45	**2.60**
VQC5	2.68	2.92	2.77	2.73	2.65	2.85	3.04	2.78	2.72	2.70	2.26	3.11	3.14	2.89	2.26	2.32	2.92	2.80	2.50	2.44	2.2	**2.70**
VQC6	2.15	3.01	2.49	2.73	2.34	2.66	2.77	2.5	2.62	2.45	2.31	3.14	3.27	2.55	2.18	1.95	2.82	2.96	2.59	2.46	2.81	**2.61**
VQC7	1.65	2.53	2.34	2.23	2.2	2.38	2.45	2.45	2.57	2.24	2.34	2.85	3.11	2.61	2.18	2.15	2.46	2.73	2.46	2.14	3.34	**2.45**
VQC8	2.80	2.86	2.95	3.01	2.66	2.96	3.11	2.51	2.97	2.73	2.59	3.18	3.28	3.23	2.70	2.57	2.96	2.96	2.90	2.25	3.32	**2.88**
VQC9	2.39	2.97	2.70	2.69	2.45	2.85	2.91	2.43	2.84	2.70	2.55	3.2	3.14	2.99	2.62	2.45	2.96	2.68	2.79	2.16	2.92	**2.73**
VQC10	2.43	3.03	2.58	2.81	2.47	2.78	3.05	2.59	2.69	2.78	2.51	3.08	3.11	2.92	2.50	2.59	2.85	2.86	2.82	2.34	3.00	**2.75**
VQC11	2.54	2.97	2.68	2.51	2.50	2.57	2.97	2.70	2.65	2.69	2.45	3.16	3.01	3.12	2.51	2.59	2.93	2.97	2.78	2.36	2.82	**2.74**
VQC12	2.66	3.32	3.24	3.16	3.05	2.95	3.23	2.58	2.91	2.96	2.23	3.09	3.34	3.32	2.99	2.78	3.05	3.11	3.12	2.38	1.99	**2.93**
VQC13	2.51	2.50	2.41	2.78	3.05	2.47	3.24	2.35	2.53	2.43	2.57	3.14	2.99	3.32	2.78	2.77	2.65	2.73	2.78	2.26	2.70	**2.71**
VQC14	2.22	2.62	2.49	2.45	2.41	2.57	2.82	2.42	2.49	2.54	2.14	3.09	3.28	2.88	2.27	2.57	2.69	2.64	2.61	2.15	2.73	**2.58**
VQC15	2.81	3.11	2.58	2.66	2.65	2.62	2.88	2.43	2.65	2.69	2.27	3.05	3.24	2.96	2.28	2.36	2.9	2.70	2.82	2.34	1.70	**2.65**
VQC16	2.49	2.99	2.61	2.53	2.58	2.70	2.85	2.46	2.55	2.70	1.93	3.07	3.19	2.92	2.20	2.31	3.01	2.77	2.61	2.18	2.09	**2.61**
VQC17	2.23	2.92	2.65	2.50	2.41	2.82	2.73	2.5	2.45	2.49	1.95	3.08	2.88	2.82	2.27	2.35	2.73	2.66	2.57	2.22	2.23	**2.55**
VQC18	2.62	3.09	2.61	2.16	2.47	2.62	2.64	2.89	2.76	2.49	1.82	3.31	3.36	2.82	2.18	2.11	3.01	2.68	2.09	2.19	1.66	**2.55**
VQC19	2.58	2.97	3.01	2.64	2.37	2.63	2.92	2.08	2.93	2.82	2.26	3.05	3.20	3.07	2.55	2.68	3.05	2.69	2.65	2.34	2.38	**2.71**
$EITS_{MEAN}$	**2.16**	**2.90**	**2.63**	**2.55**	**2.52**	**2.63**	**2.85**	**2.56**	**2.70**	**2.62**	**2.17**	**3.13**	**3.24**	**2.89**	**2.33**	**2.32**	**2.90**	**2.76**	**2.55**	**2.25**	**2.37**	**2.62**

the campus. The mean scores of EITS and VQC were equal (**Table 1**).

VQC mean = EITS mean = 2.62

In the scope of the questionnaire survey study, images were prepared in order to perform a visual quality assessment over EITS in Atatürk University campus. Students selected and scored the images.

Multiple Comparison Test

Based to the results of the Analysis of Variance (ANOVA), the difference between the gender was not statistically significant, while the difference between the departments (Landscape Architecture, City and Regional Planning, Architecture) (**Table 3**) was found to be statistically significant for several EITS ($p < 0.01$). EITS4 (0.004), EITS11 (0.006), EITS15 (0.001), and EITS19 (0.000) were found to be statistically very significant, while EITS1 (0.015) and EITS 10 (0.053) were statistically significant ($p < 0.05$).

Sports Science Faculty (EITS1) received the highest mean value from LA students. While there was no statistically significant difference between the CRP and Landscape Architecture departments, there was a statistically significant difference between these two departments and Architecture ($p < 0.05$) (**Table 4**).

Perceptibility (VQC8) and compliance with topography (VQC5) seem to be very effective on the

Table 3. Variance analysis for the differences between departments.

EITS	Sum of Squares	df	Mean Square	F	Sig. (P)
EITS 1	2.607	2	1.303	4.456	0.015*
EITS 2	1.500	2	0.750	1.795	0.174
EITS 3	2.171	2	1.086	2.233	0.115
	4.413	2	2.207	6.020	0.004**
EITS 5	0.857	2	0.429	1.096	0.340
EITS 6	0.943	2	0.471	1.131	0.329
EITS 7	2.033	2	1.016	2.276	0.110
EITS 8	1.243	2	0.622	1.113	0.334
EITS 9	2.426	2	1.213	2.246	0.113
EITS 10	2.214	2	1.107	3.064	0.053*
EITS 11	6.012	2	3.006	5.583	0.006**
EITS 12	1.480	2	0.740	1.163	0.319
EITS 13	0.040	2	0.020	0.026	0.975
EITS 14	2.342	2	1.171	2.281	0.110
EITS 15	5.459	2	2.730	7.253	0.001**
EITS 16	2.081	2	1.040	2.345	0.103
EITS 17	1.060	2	0.530	1.254	0.291
EITS 18	1.943	2	0.971	2.222	0.116
EITS 19	8.040	2	4.020	9.936	0.000**
EITS 20	1.789	2	0.895	2.207	0.118
EITS 21	0.715	2	0.357	0.507	0.604

**Significant,*

***Very significant ($p<0.05$), Between Groups: Landscape Architecture, City and Regional Planning, Architecture*

mean score of LA students given to EITS1, (VQC8) and topography compliance (VQC5). The EITS1 is located on an active topography, perceptible and open space, away from the complexity of the campus, heavy traffic axes. Perceptibility and topography (*Kaplan 2006*) are

among the most important criteria for visual assessment in landscape architecture (*Güneroglu 2017*).

The highest visual quality values among three student groups belonged to LA (2.59), followed by CRP (2.44) and ARCH (2.14). In addition, the difference between City and Regional Planning and Landscape Architecture students was not statistically significant, while the difference between these two groups and Architecture students was significant ($p < 0.05$).

In the analysis in EITS4, the highest visual quality values among three student groups belonged to LA (2.70), CRP (2.65) and ARCH (2.22). In addition, the difference between City and Regional Planning and Landscape Architecture students was not statistically significant, while the difference between these two groups and Architecture students was very significant ($p < 0.01$) (**Table 5**).

For EITS10, the highest visual quality values among three student groups belonged to LA (2.75), CRP (2.74) and ARCH (2.38) (**Table 6**). In addition, the difference between City and Regional Planning and Landscape Architecture students was not statistically significant, while the differencebetween these two groups and Architecture students was significant ($p < 0.05$).

For EITS11, the highest average value belongs to LA students (2.56), while the lowest was from those of Architecture students (1.87) (**Table 7**).

For EITS 15, the highest average value belongs to LA students (2.70), while the lowest was from those of Architecture students (2.05) (**Table 8**).

On the visual quality values belonging to EITS19 for educational institutions and their environment, the highest average value among the departments is given by LA students (3.010) while the lowest one by ARCH (2.230) (**Table 9**). In addition for **Tables 7, 8** and **9**, no statistically significant difference was found between the means of ARCH and CRP students' scores while the difference between these two groups and those of LA students was found to be statistically very significant ($p < 0.01$).

There was no statistically significant difference in the scores of ARCH and CRP students while the difference between these two groups and those from Landscape Architecture students was statistically significant ($p < 0.05$). When considered the scores given by Landscape Architecture students for EITS1, EITS4, EITS10, EITS11, EITS15 and EITS19, it was evident that their scores given for the visual quality of the educational institutions and their environment are higher than those students from other departments.

Table 4. Mean visual assessment score of Educational Institutions and their Surroundings (EITS1).

Department	N	Mean	Sig. (P)
Architecture	25	2.140	0.015*
City and Regional Planning	25	2.440	
Landscape Architecture	24	2.590	

**Significant (P<0.05), **Very significant ((P<0.01)*

Table 5. Mean visual assessment score of Educational Institutions and their Surroundings (EITS) 4.

Department	N	Mean	Sig. (P)
Architecture	25	2.22 a	0.004**
City and Regional Planning	25	2.65 b	
Landscape Architecture	24	2.70 a	

**Significant (P<0.05), **Very significant ((P<0.01)*

Table 6. Mean visual assessment score of Educational Institutions and their Surroundings (EITS) 10.

Department	N	Mean	Sig. (P)
Architecture	25	2.38 a	0.053*
City and Regional Planning	25	2.74 b	
Landscape Architecture	24	2.75 b	

**Significant (P<0.05), **Very significant ((P<0.01)*

Table 7. Mean visual assessment score of Educational Institutions and their Surroundings (EITS) 11.

Department	N	Mean	Sig. (P)
Architecture	25	1.87 a	0.006**
City and Regional Planning	25	2.08 a	
Landscape Architecture	24	2.56 b	

**Significant (P<0.05), **Very significant ((P<0.01)*

Table 8. Mean visual assessment score of Educational Institutions and their Surroundings (EITS) 15.

Department	N	Mean	Sig. (P)
Architecture	25	2.05 a	0.001**
City and Regional Planning	25	2.24 a	
Landscape Architecture	24	2.70 b	

**Significant (P<0.05), **Very significant ((P<0.01)*

Table 9. Mean visual assessment score of Educational Institutions and their Surroundings (EITS) 19.

Department	N	Mean	Sig. (P)
Architecture	25	2.23 a	0.000**
City and Regional Planning	25	2.42 a	
Landscape Architecture	24	3.01 b	

**Significant (P<0.05), **Very significant ((P<0.01)*

Moreover, the visual quality scores given by the landscape architecture students were different from those from other departments. Depending on their undergraduate education, students from city and regional planning department focused on the entire city, while students from ARCH department focused on buildings. Landscape architecture students focused on buildings and their environment, their surrounding areas, landscape quality, natural and cultural environment. According to *Aran* (*1975*) and *Gul* (*2000*), landscape is the composition of the natural and cultural environment through a view frame. Therefore, it is an expected result that students of LAscore the building as a whole with its surroundings.

Due to their education at undergraduate level, LA students consider the entire area and the quality of the landscape. Although the relationship between the institutional buildings in the campus with their surroundings is weak and therefore their visual quality is low, the campus is among Turkey's largest and well-planned high value landscapes.

According to *Ozguc and Caglayan* (*2008*), determining the visual quality of a place has a direct effect on the perception of the environment in a good or bad way and, consequently, whether the users have pleasure from the area or not. In this context, educational institutions and their environments in Ataturk University were studied and their visual quality was determined.

CONCLUSIONS AND RECOMMENDATIONS

Ataturk University, established in 1957, is still in the process of structural change. The faculties established during the first years had the chance to expand in larger areas. For this reason, the quality of the buildings, plant diversity, landscape quality, compliance with topography, perceptibility, accessibility, parking qualification in their surroundings were evaluated high by the participants. The faculty buildings and their environments constructed during the first years of the establishment of the university received the highest visual quality score. The space began to shrink and sufficient open space were not retained when new faculties started to be established in the university campus. Since the faculties established in recent years are very close to each other, the area to be allocated for plant design is almost negligible hence, landscape quality is poor. The fact that the structures are too close to each other prevented them from beingperceivable. There was also not enough space for parking. The newly established faculty buildings and their environment have received the lowest visual quality scores.

It is a requirement in Ataturk University, open to physical development, to establish reserve areas. As *Gulturk and Sisman* (*2016*) pointed out, reserve areas should be established to ensure integrity between the buildings in the university campuses and the open spaces; create the necessary areas for the circulation system; and arrange outdoor spaces that will allow recreation.

Recommendation on how to compensate for the lack of visual quality of new buildings or to improve the entire landscape of the campus are as follows: educational institutions should have plant diversity, high landscape quality, and be in harmony with the environment; attention should be paid to the roof and facade, topography, color harmony of the educational institution buildings; the perceptibility, space effect, ratio-scale relationship, balance and symmetry of the buildings should be strong; buildings must be accessible and have adequate parking; educational institution and its environment should be reliable, well-maintained, and should give students a sense of belonging; and the entrances of the educational institution and its environment should be interesting.

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