



Conservation Courses Effects on Architecture Students Conservation Awareness: Analysis of Isparta and Burdur Houses

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Abstract

As in every part of Anatolia, the building typology is diversified in the Western Mediterranean Region. Isparta and Burdur houses located in this region, as in other Anatolian houses, the construction technique is observed with masonry stone walls on the ground floors and wooden structures plastered with gypsum plaster on the upper floors. Within the scope of this study, a database was created by examining the conservation status of 22 registered buildings in Burdur and Isparta provinces was restored. The study aims to learn the effects of historical residences on architecture students, to reveal the extent to which the state of preservation is assimilated and their approach to conservation. The subjective evaluations of architectural students of both Burdur Mehmet Akif Ersoy University and Suleyman Demirel University regarding the preservation status of these buildings were examined. The evaluation form was filled in by the students who took and did not take the conservation courses. The correct answers of the students were grouped under the headings of separate criteria for each structure and analyzed using SPSS software. As a result of the study, it has emerged that a different evaluation should be made with standard deviation and quarters analysis using SPSS software. The differences in the results of the students who took and did not take the conservation course were presented more clearly with statistical analyses.

Keywords: Conservation awareness, conservation education, architecture, cultural heritage, SPSS.

Koruma Derslerinin Mimarlık Öğrencilerinin Koruma Bilincine Etkileri: Isparta ve Burdur Evleri Üzerinden Analizi

Öz

Anadolu'nun her noktasında olduğu gibi Batı Akdeniz Bölgesi'nde de yapı tipolojisi çeşitlenmektedir. Bu bölgede yer alan Isparta ve Burdur evlerinde de diğer Anadolu evlerinde olduğu gibi, zemin katlarda yığma taş duvarlı, üst katlarda ise ahşap strüktürlü, kıtıklı sıva ile sıvanmış yapıım tekniği görülmektedir. Çalışma kapsamında Burdur ve Isparta illeri içerisinde restore edilmiş 22 adet tescilli konutun korunmuşluk durumları incelenerek bir veri tabanı oluşturulmuştur. Çalışmada amaç; tarihi konutların mimarlık öğrencileri üzerindeki etkilerini öğrenerek korunmuşluk durumu ve korumaya olan yaklaşımlarını ortaya çıkarmaktır. Hem Burdur Mehmet Akif Ersoy Üniversitesi, hem de Süleyman Demirel Üniversitesi mimarlık öğrencilerinin bu yapıların korunmuşluk durumlarına ilişkin öznel değerlendirmeleri incelenmiştir. Değerlendirme formu koruma dersi alan ve almayan öğrenciler tarafından doldurulmuştur. Öğrencilerin doğru cevapları her yapı için ayrı kriterlere ait başlıklar altında tablo haline getirilmiş ve SPSS yazılımı kullanılarak analiz edilmiştir. Çalışmanın sonucunda, standart sapma ve çeyrekler analizleri ile farklı bir değerlendirme yapılmış ve koruma dersi alan ve almayan öğrencilerin sonuçlarındaki farklılıklar istatistiki analiz ile daha net olarak sunulmuştur.

Anahtar Kelimeler: Koruma bilinci, koruma eğitimi, mimarlık, kültürel miras, SPSS.

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1. Introduction

The cultures harboured by contemporary societies reflect the heritage of those societies from the past to the present. This intersection of culture and heritage constitutes a historical environment that bears the traces of different periods (Güçlü, 1990, p. 60). Turkey is a country with very rich resources in terms of cultural heritage. The protection of the existing architectural environment is the responsibility of members of society and culture living on that land regardless of socio-demographic characteristics (Önal & Numan, 2000, p. 51).

When evaluating conservation based on actions and reactions, there is general agreement that raising awareness is one of the most important actions. Individuals who have an idea about what to conserve and for what purpose have clear perceptions of conservation and may show passive or active participation in studies related to the environment which with they interact. Awareness is made possible with preservation education given to all groups of society, from primary education to higher education levels.

Architecture education in an international context has developed with the use of various protocols, such as the Bologna Process of the European Union and the guidelines of the International Union of Architects (UIA). The UIA advocates an educational approach that will provide integrity by setting standards in architectural education (International Union of Architects, 2023). Educational curricula differ from country to country but, in essence, certain core subjects constitute the shared foundation of those curricula.

Srivastava (2015) stated that conservation awareness will only develop with awareness of responsibility and that educational institutions and instructors have important roles in this context. It is thought that the establishment of interdisciplinary working groups at the level of higher education and the incorporation of this awareness into students' educational processes will contribute to the development of conservation practices (Güner et al., 2012, p. 51).

When the curricula of higher education institutions in Turkey providing educational programs for undergraduate and associate degrees are examined, it is clear that architecture, archaeology, restoration, and other fields are directly related to conservation. Both theoretical and applied courses are included in the categories of compulsory and elective courses in these departments and programs. The course contents address topics such as international and national legislation, the structures of certain historical periods, and conservation techniques. In addition to conservation and survey-restoration courses, which are both theoretical and applied in architectural education, construction in historical environments and efforts to give new functions to existing structures are also addressed in studio courses throughout the educational period to pursue solutions to thematic problems. According to Güner et al. (2011), the curricula addressing conservation in Turkey should be reshaped in such a way as to provide support for agreements and contemporary criteria, and it is also argued that legislation should be included in classroom settings. At the Architecture and Education Congress held in Turkey in 2013, expectations were voiced that an individual who has received architectural education with such an approach in the field of conservation will be conscious and competent in the context of the conservation of cultural heritage (Esin, 2013).

The development and updating of educational models alone are not considered sufficient in this regard. Sustainable conservation will only be possible with the transformation of education into practice in professional life (Cody & Fogg, 2007, p. 266). Another important concept in architectural practice in this regard is the internship period when students receiving an education can experience applications of theoretical knowledge in practice. The internship period in Turkey is divided into two sub-periods of work, with one in the office and one at the construction site, and these internships are conducted with companies in the fields of design, planning, and restoration. Categorizing internship practices in similar ways according to the departments and the anticipated future work of individuals who plan to specialize in the field of conservation before they graduate will both support the theoretical education received by these students and increase their competence. Alkış & Oğuzoğlu (2005) argued that individuals with awareness and education regarding historical environments will play more influential roles in conservation than those educated based on laws and regulations alone

(Alkış & Oğuzoğlu, 2005). The present study, it is aimed to measure the historical and cultural awareness of traditional houses registered in the Burdur and Isparta Provinces of Turkey among students and to evaluate the level of awareness of the conservation of this historical environment in which the buildings are located.

2. Material

All residential units from the past to the present have their typologies with unique and distinctive characteristic features. Topographies of different regions, geographical features, and the socio-cultural and economic structures of different societies facilitated the emergence of various architectural products. Facade typologies, on the other hand, arose according to the relationships of structures with their specific streets, residential parcels, and other structures in the area. The relationships of entrances with their streets and plots, the locations of entrances in structures, the presence of closed and open exits, the type of materials used in walls and joinery, and the ratio, number, and shape of spaces such as doors and windows differ between buildings. In the present study, the protection statuses of registered houses in the Burdur and Isparta Provinces of the Western Mediterranean Region of Turkey before and after the repair of their facades are discussed. For this reason, general information about the relevant facade typologies should also be considered.

When the facade styles of the houses in question are considered, both closed and open exits can be seen. There are windows on all three fronts of the closed exits. These exits may be flat, triangular exits, corner exits, or mitre exits. Furthermore, these exits exist on one front for some houses and two fronts for other houses. The buildings have entrances from the street level in some cases and from higher levels in others. The windows and doors have different proportions and styles. The ground floors were constructed with stone masonry, while the upper floors were built around carrier systems with wooden skeletons. The walls of the ground floors reach 60-80 cm in height. There are courtyards behind or in front of the buildings (Urfalıoğlu, 2010, p. 55).

2.1. Method

In this research, qualitative research methods such as questionnaires and quantitative research methods such as statistics were used. Students from the architecture departments of Mehmet Akif Ersoy University in Burdur and Süleyman Demirel University in Isparta participated in this research. Students were grouped according to their backgrounds in awareness and conservation classes and open-ended and closed-ended questions were asked regarding photos of 22 distinct registered houses in Burdur and Isparta from different periods in terms of design, materials, workmanship, integrity, and value (historical value, aesthetic value, and the reflection of local culture). In the first stage of the research, the selected registered houses were evaluated by architecture students using the survey method and questionnaires. In the second stage, the evaluation forms completed by the students were reviewed and the statistical results of the obtained data were evaluated using the SPSS program which is a statistical software.

2.2. Data Collection by Questionnaire

For the first stage of this research entailing data collection with a questionnaire, an evaluation form was prepared. This form consisted of 3 parts. In the first part, data on age, year of enrolment, gender, whether students had previously taken a conservation course, and whether they knew about the concepts of 'sit' and 'registration' were collected and brief information about the general background of the students was obtained. In the second part, students' perspectives on concepts such as historical buildings, restoration and conservation, and cultural heritage were revealed with the use of historic photographs and subjective questions regarding previous exposure to restoration applications and street rehabilitation, attitudes toward historic structures and their restoration or destruction, attitudes toward buildings in a city being visited for the first time, history and archaeological sites or other places of interest, the preservation of cultural heritage in the students' cities of residence, and their feelings about taking active roles in such processes. Their ideas about the functions that should be given to historical buildings were also obtained with an open-ended question. In this process, the following questions were asked:

- Have you seen restoration work before?
- Have you ever seen street rehabilitation?
- Do you enjoy visiting historical buildings?
- Should historical buildings be restored?
- Should historical buildings be demolished and replaced with modern ones?
- I would like to see historical buildings in a city that I visit for the first time (yes/no).
- I enjoy walking through historical streets and areas (yes/no).
- I enjoy visiting archaeological sites (yes/no).
- I like to go to museums where historical items and objects are exhibited (yes/no).
- I have information about the cultural heritage of the city in which I live (yes/no).
- I would like to help preserve old photographs related to the history of the city in which I live (yes/no).
- What functions should be given to historical buildings?

In the third part of the questionnaire, students' views on the originality and value of historical houses were obtained based on photographs of 22 registered buildings from Burdur and Isparta before and after restoration. The student's views of unique designs, original materials, original workmanship and integrity, historical value, aesthetic value, and local characteristics were collected. Their replies were compared with the correct answers and accuracy rates were calculated. In examining the originality of the buildings after repair, the overall design, materials, and workmanship were described as 'original', 'partially original', or 'not original'. For the originality of the design, the aspect ratio of the building, whether openings such as windows and doors were overhanging, and whether floor heights were conserved or not was the main criteria.

For the uniqueness of the building materials, it was considered whether the wall and joinery materials were repaired with texture and quality of materials close to the original materials. For example, while the original materials of many joineries were wooden, they were later replaced with PVC materials. Cement-based plasters were also applied to some walls in the restoration process. In terms of original workmanship, the workmanship of the walls of the main body of the houses, the decorations and ornaments on the walls, and joinery such as windows and doors were considered. For example, old wooden guillotine windows were replaced with wooden windows made with today's craftsmanship and techniques in some cases. In examinations of the integrity of the buildings, the fragmentation of the main bodies of the buildings and changes in integrity with the addition of historically inappropriate annexes were considered. The students' opinions about the historical value, aesthetic value, and local value of the buildings were also discussed.

In examining the originality of the buildings based on their photographs, students were asked to choose among the following options in terms of design, material, and workmanship: 'The building has preserved its originality - The building has partially preserved its originality - The building has lost its originality'. Options for integrity were as follows: 'The integrity of the building has been positively affected - The integrity of the building has been adversely affected'. Regarding historical value, historical aesthetics, and local qualities, students were offered the following options: 'The historical value of the building has been preserved - The historical value of the building has deteriorated', 'The aesthetic value of the building has been positively affected - The aesthetic value of the building has been adversely affected', and 'The building has local characteristics - The building does not have local characteristics'. Conservation awareness and students' views regarding the protection of cultural heritage were evaluated within two groups including students who had taken conservation courses and those who had not.

2.3. Statistical Analysis Method with SPSS Program

With the help of the SPSS program for statistical analysis, many analysis techniques including reliability analysis, factor analysis, and variance analysis are applied in survey studies. Statistical analysis is used to reveal the distribution of data on a numerical basis. Descriptive statistics are used to obtain the mean, standard deviation, mode, and median values of data. For example, the means of two or more groups can be compared with frequency analysis. Statistical analysis results for multivariate data in survey studies can also be obtained with SPSS.

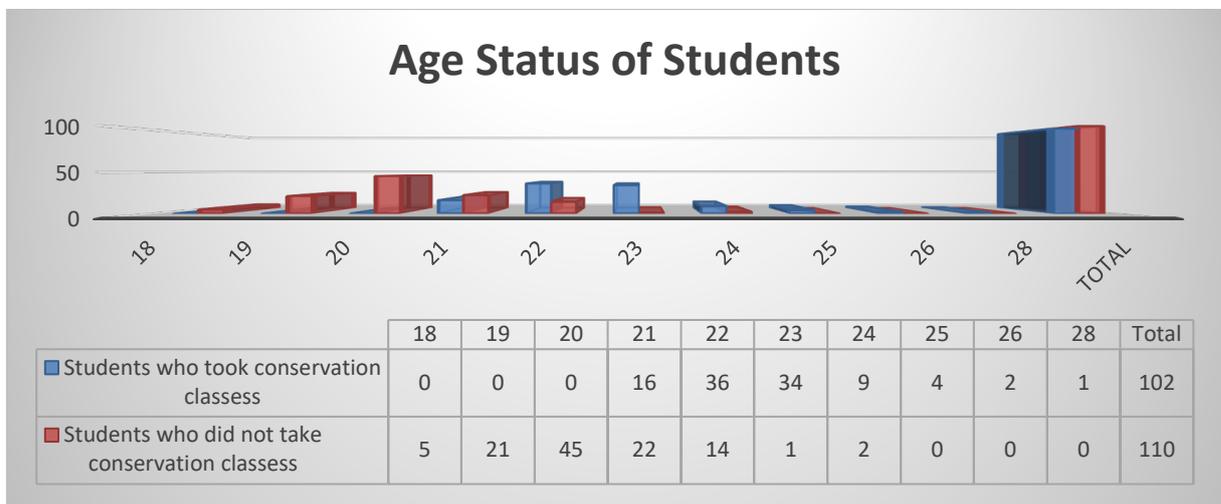
While summarizing study data, different methods such as quartile analysis may be used depending on whether the data are normally distributed or not (Cevahir, 2020, p. 6-12). With this method, the numbers (frequencies) of different variables, ratios of numbers of occurrences to the overall sample size, and percentages (%) of the obtained values can be summarized. Thresholds can then be found. In the present study, the standard deviation, variance, mean, mode, and quartile values of the students' answers in terms of accuracy were analyzed using SPSS. Thus, average values for both the whole population and average values for quartiles were obtained.

3. Evaluation

Open-and closed-ended questions were asked to two groups of students, including 100 from the Burdur Mehmet Akif Ersoy University Architecture Department and 112 from the Isparta Süleyman Demirel University Architecture Department. Some of these students had taken conservation courses and some had not. Students were asked about 22 specific registered houses selected from Burdur and Isparta. These buildings were evaluated by the students in terms of originality (design, material, workmanship), integrity, and value (historical value, aesthetic value, local characteristics) based on photographs of the houses taken before and after restoration. Subjective evaluations of the conservation status of houses that have undergone restoration in the neighbouring provinces of Burdur and Isparta, which have similar characteristics, were provided by these architecture students. It was hypothesized that awareness of conservation would improve with both theoretical and applied education, and this study thus aimed to determine perceptions of conservation among individuals receiving education in the field of architecture.

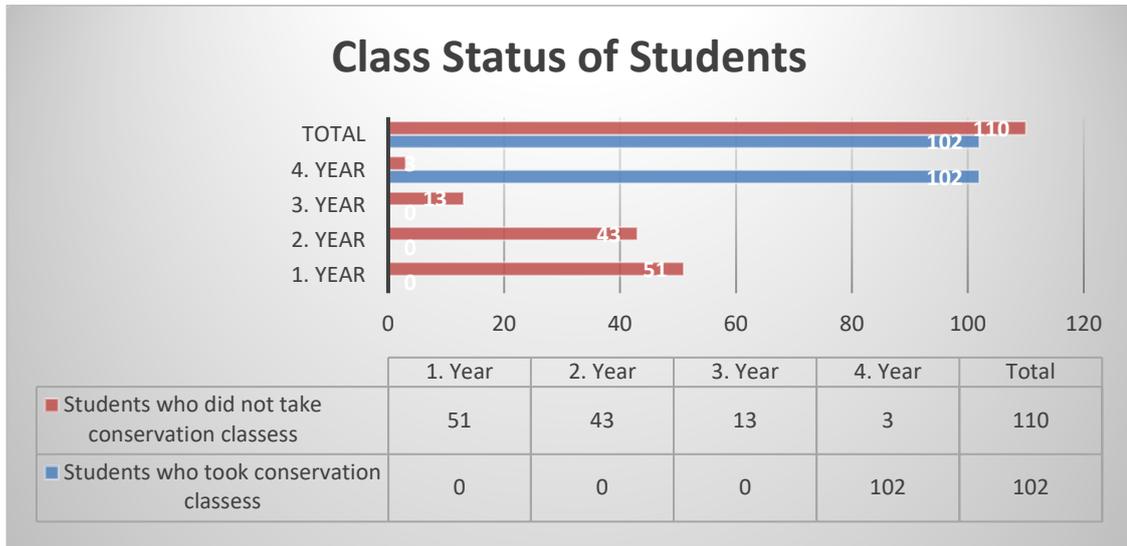
In the first part of the questionnaire, demographic and educational data of the students were collected. Students who had taken a conservation course were between the ages of 21 and 28, and the majority of these students were 22 years old (36 people) or 23 years old (34 people). Students who had not taken conservation courses were between the ages of 18 and 24, and the majority of these students were 20 years old (40 people). According to these findings, it seems that the average age of students who have taken conservation courses is higher and it may be the case that longer durations of architectural education and experience (internships, etc.) affect their perspectives on conservation (Table 1).

Table 1. Ages of students



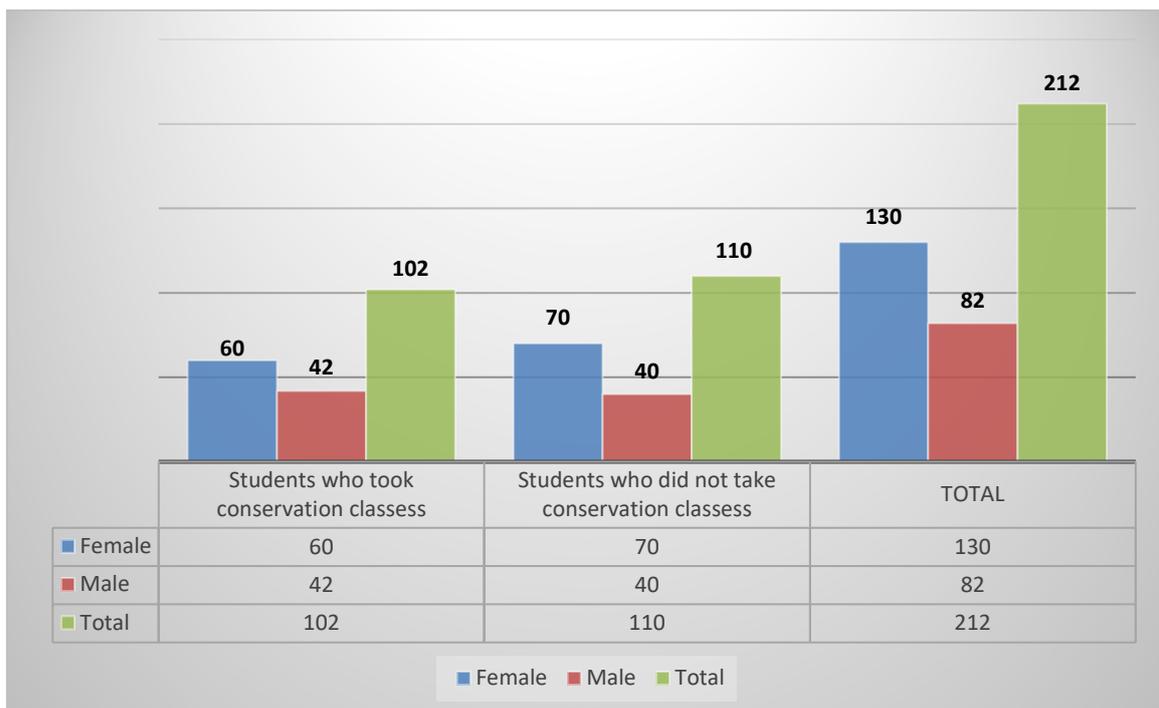
All of the students (102 people) who had taken a class on conservation were 4th-year students. The students who had not taken a class on conservation were 1st-year, 2nd-year, 3rd-year, and 4th-year students, and the majority of this group of students were in their 1st year (51 people) or 2nd year (43 people) of study. According to these findings, the students who had not taken conservation courses mostly took basic courses on topics such as technical drawing and building knowledge. These students were determined to have gaps in their exposure to courses on conservation awareness, traditional Turkish houses, and restoration, other than the basic required courses in architectural education (Table 2).

Table 2. The class status of students



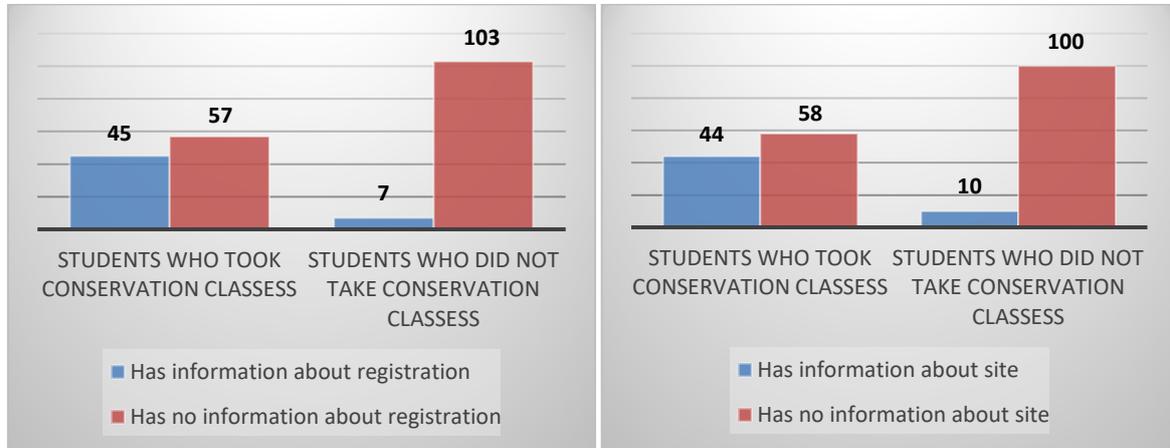
The majority of students who had taken conservation courses were female students and the majority of those who had not taken such courses were also female. The higher rate of female students in architectural education compared to male students is reflected in these findings. Specifically, 59% of the students who had taken conservation courses and 64% of those who had not were female students (Table 3).

Table 3. Gender of students



According to data on whether the students knew the concepts of 'site' and 'registration', 44% (45 people) of the students who took conservation courses and 6% (7 people) of the students who did not take conservation courses knew about the concept of registration. On the other hand, 43% (44 people) of the students who took conservation courses and 9% (10 people) of the students who did not take conservation courses knew about the concept of conservation (Table 4).

Table 4. Registration and site knowledge of students



The answers to the subjective questions in the second part of the questionnaire were subsequently evaluated. In response to 'Have you seen a restoration work before?', 74% (75 people) of the students who had taken conservation courses, 47% (53 people) of those who had not taken conservation courses, and 60% (128 people) of all students answered 'yes'. In response to 'Have you ever seen street rehabilitation?', 36% (37 people) of those who had taken conservation courses, 74% (81 people) of those who had not taken conservation courses, and 56% (118 people) of all students answered 'yes'. In response to 'Do you enjoy visiting historical buildings?', 98% (100 people) of those who had taken conservation courses, 92% (101 people) of those who had not taken conservation courses, and 95% (201 people) of all students answered 'yes.' In response to 'Should historical buildings be restored?', 98% (100 people) of those who had taken conservation courses, 84% (92 people) of those who had not taken conservation courses, and 91% (192 people) of all students answered 'yes'. In response to 'Should historical buildings be demolished and replaced with modern ones?', 3% (3 people) of those who had taken conservation courses, 2% (2 people) of those who had not taken conservation courses, and 2.3% (5 people) of all students answered 'yes.' In response to 'I would like to see historical buildings in a city that I visit for the first time (yes/no)', 96% (98 people) of those who had taken conservation courses, 95% (104 people) of those who had not taken conservation courses, and 95% (202 people) of all students answered 'yes'. In response to 'I enjoy walking through historical streets and areas (yes/no)', 98% (100 people) of those who had taken conservation courses, 97% (107 people) of those who had not taken conservation courses, and 98% (207 people) of all students answered 'yes'. In response to 'I enjoy visiting archaeological sites (yes/no)', 89% (91 people) of those who had taken conservation courses, 85% (93 people) of those who had not taken conservation courses, and 87% (184 people) of all students answered 'yes'. In response to 'I like to go to museums where historical items and objects are exhibited (yes/no)', 89% (91 people) of those who had taken conservation courses, 91% (100 people) of those who had not taken conservation courses, and 90% (212 people) of all students answered 'yes'. In response to 'I have information about the cultural heritage of the city in which I live (yes/no)', 83% (85 people) of those who had taken conservation courses, 75% (82 people) of those who had not taken conservation courses, and 79% (167 people) of all students answered 'yes'. Finally, in response to 'I would like to help preserve old photographs related to the history of the city in which I live (yes/no)', 89% (91 people) of those who had taken conservation courses, 91% of those who had not taken conservation courses (100 people), and 90% (212 people) of all students answered 'yes' (Tables 5 and 6).

Table 5. Responses to subjective questions

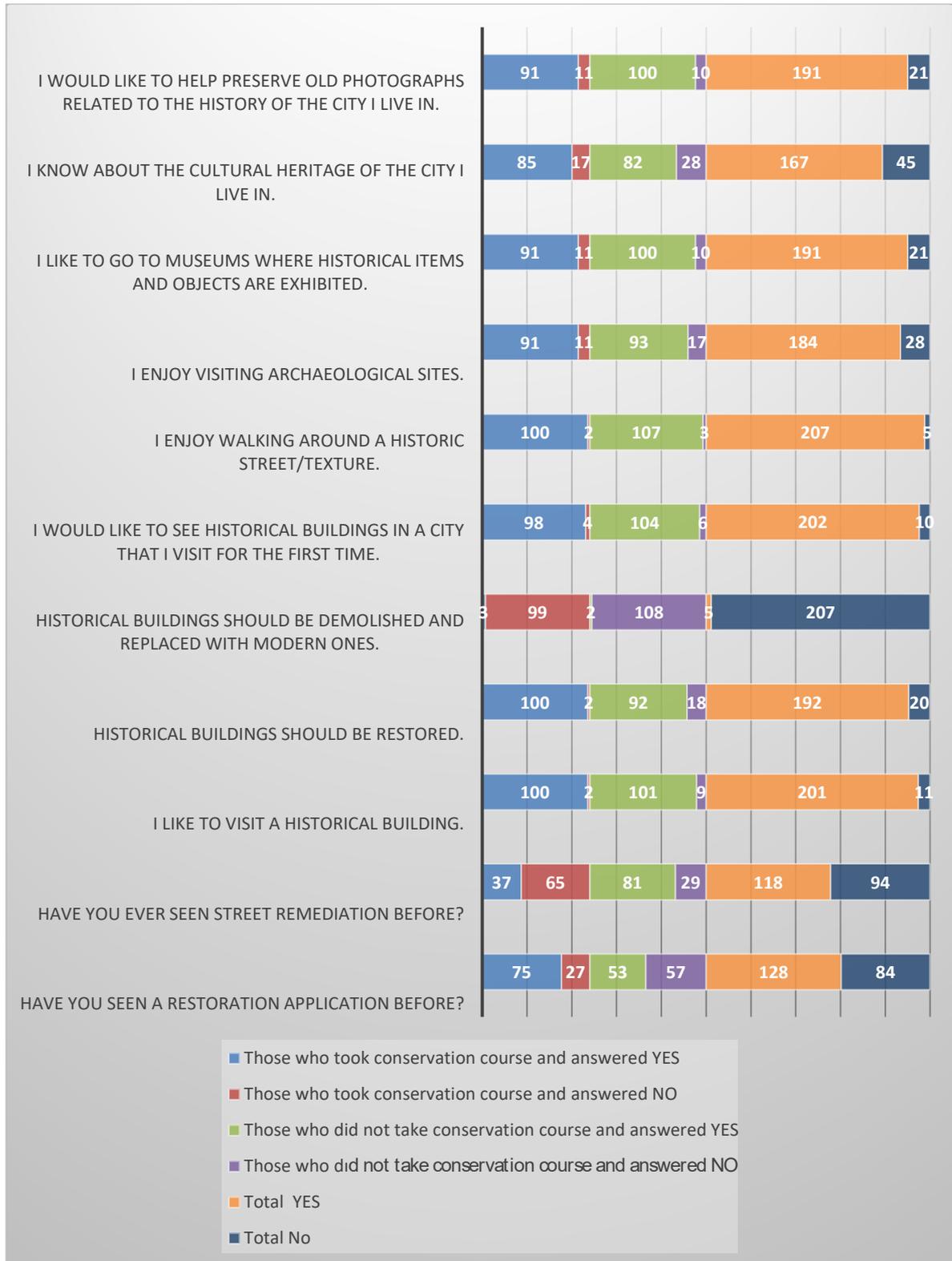


Table 6. Responses to subjective questions

	Answers of students who took conservation courses		Answers of students who did not take conservation courses			TOTAL
	YES	NO	YES	YES	NO	YES
Have you seen restoration work before?	75	27	53	57	128	84
Have you ever seen street rehabilitation?	37	65	81	29	118	94
Do you enjoy visiting historical buildings?	100	2	101	9	201	11
Should historical buildings be restored?	100	2	92	18	192	20
Should historical buildings be demolished and replaced with modern ones?	3	99	2	108	5	207
I would like to see historical buildings in a city that I visit for the first time (yes/no).	98	4	104	6	202	10
I enjoy walking through historical streets and areas (yes/no).	100	2	107	3	207	5
I enjoy visiting archaeological sites (yes/no).	91	11	93	17	184	28
I like to go to museums where historical items and objects are exhibited (yes/no).	91	11	100	10	191	21
I have information about the cultural heritage of the city in which I live (yes/no).	85	17	82	28	167	45
I would like to help preserve old photographs related to the history of the city in which I live (yes/no).	91	11	100	10	191	21

Students were also asked an open-ended question: ‘What functions should be given to historical buildings?’ Two students replied that such buildings should be used as libraries, cafes, restaurants, or offices; 1 as public structures; 2 as workplaces; 2 as cultural centres; 47 as museums, galleries, or exhibition areas; 3 as hotels or other accommodations; 1 as schools; 2 as social facilities or social areas; 1 as centres for commercial functions; and 2 as buildings that maintain functions close to their original functions. The idea that the original functions of historical buildings should be preserved was stated by very few (less than 1%) students, and it was also seen that very few students knew about the concept of functionalization. Considering the overall responses of the students, 84% (48 people) of the majority of the students (57 people) who answered this question thought that historical buildings should take on public cultural-social functions. These beliefs that small-scale traditional buildings designed as houses should be given such heavy social functions reveal that the student’s knowledge of and perspectives on this subject are insufficient.

The accuracy of the answers given by the students who had taken conservation courses regarding the authenticity, value, and integrity of historical buildings was analyzed. When the average results of these data are considered, 75% of the students in this group provided correct answers for ‘integrity’, 65% for ‘historical value’, 64% for ‘local characteristics’, 58% for ‘aesthetic value’, 45% for ‘originality of design’, 39% for ‘originality of the material’, and 35% for ‘originality of the workmanship’. Considering all the answers given by these students, it can be concluded that they do not have the competence to evaluate originality in terms of originality of design, original workmanship, and original materials in spite of the fact that they took conservation courses (Table 7).

Table 7. Accuracy rates of the answers given by students who had taken conservation courses regarding different criteria of historical houses (Students who answered yes ÷ Students who took conservation courses)

BUILDING NUMBER	Originality of the Design		Originality of the Material		Originality of the Craftsmanship		Integrity		Historical Value		Aesthetic Value		Local Characteristics	
	Number of People	Percent	Number of People	Percent	Number of People	Percent	Number of People	Percent	Number of People	Percent	Number of People	Percent	Number of People	Percent
1	84	0,82	63	0,62	60	0,59	98	0,96	86	0,84	84	0,82	84	0,82
2	33	0,32	30	0,29	27	0,26	58	0,57	52	0,51	44	0,43	61	0,60
3	62	0,61	16	0,16	5	0,05	71	0,70	47	0,46	42	0,41	20	0,20
4	52	0,51	44	0,43	43	0,42	75	0,74	65	0,64	63	0,62	62	0,61
5	30	0,29	41	0,40	28	0,27	65	0,64	54	0,53	49	0,48	50	0,49
6	35	0,34	20	0,20	48	0,47	67	0,66	50	0,49	60	0,59	59	0,58
7	43	0,42	35	0,34	53	0,52	91	0,89	80	0,78	72	0,71	76	0,75
8	64	0,63	37	0,36	50	0,49	91	0,89	76	0,75	74	0,73	73	0,72
9	16	0,16	34	0,33	36	0,35	88	0,86	81	0,79	79	0,77	77	0,75
10	51	0,50	37	0,36	40	0,39	71	0,70	72	0,71	64	0,63	73	0,72
11	35	0,34	28	0,27	16	0,16	67	0,66	54	0,53	35	0,34	55	0,54
12	37	0,36	57	0,56	49	0,48	76	0,75	59	0,58	60	0,59	65	0,64
13	44	0,43	43	0,42	44	0,43	61	0,60	58	0,57	54	0,53	57	0,56
14	63	0,62	39	0,38	56	0,55	90	0,88	71	0,70	69	0,68	82	0,80
15	61	0,60	41	0,40	49	0,48	87	0,85	76	0,75	77	0,75	74	0,73
16	43	0,42	49	0,48	54	0,53	74	0,73	68	0,67	73	0,72	74	0,73
17	57	0,56	38	0,37	11	0,11	85	0,83	77	0,75	69	0,68	83	0,81
18	40	0,39	57	0,56	10	0,10	84	0,82	69	0,68	71	0,70	77	0,75
19	39	0,38	45	0,44	52	0,51	72	0,71	69	0,68	34	0,33	74	0,73
20	55	0,54	46	0,45	47	0,46	85	0,83	84	0,82	71	0,70	80	0,78
21	48	0,47	43	0,42	16	0,16	78	0,76	59	0,58	30	0,29	23	0,23
22	48	0,47	54	0,53	13	0,13	74	0,73	69	0,68	61	0,60	76	0,75
		0,45		0,39		0,35		0,75		0,65		0,58		0,64

The accuracy of the answers given by the students who had not taken conservation courses regarding the authenticity, value, and integrity of historical buildings was also analyzed. When the average results of these data are considered, 58% of the students in this group provided correct answers for 'integrity', 50% for 'historical value', 51% for 'local characteristics', 54% for 'aesthetic value', 34% for 'originality of design', 31% for 'originality of the material', and 30% for 'originality of the workmanship'. Considering all the answers given by these students, it can be concluded that their knowledge of originality in terms of integrity, aesthetic value, local characteristics, and history is reasonably sufficient even though they did not take conservation courses (Table 8).

Table 8. Accuracy rates of the answers given by students who had not taken conservation courses regarding different criteria of historical houses (Students who answered yes ÷ Students who did not take conservation courses)

BUILDING	Originality of the Design		Originality of the Material		Originality of the Craftsmanship		Integrity		Historical Value		Aesthetic Value		Local Characteristics	
	Number People	Percent	Number People	Percent	Number People	Percent	Number People	Percent	Number People	Percent	Number People	Percent	Number People	Percent
1	59	0,54	20	0,18	10	0,09	10	0,09	19	0,17	43	0,39	50	0,45
2	37	0,34	35	0,32	25	0,23	53	0,48	47	0,43	50	0,45	58	0,53
3	50	0,45	32	0,29	38	0,35	65	0,59	62	0,56	49	0,45	37	0,34
4	10	0,09	42	0,38	41	0,37	15	0,14	12	0,11	38	0,35	71	0,65
5	44	0,40	35	0,32	37	0,34	69	0,63	42	0,38	42	0,38	44	0,40
6	26	0,24	17	0,15	31	0,28	72	0,65	53	0,48	64	0,58	66	0,60
7	36	0,33	42	0,38	40	0,36	25	0,23	7	0,06	49	0,45	27	0,25
8	47	0,43	29	0,26	35	0,32	86	0,78	74	0,67	86	0,78	77	0,70
9	29	0,26	36	0,33	30	0,27	18	0,16	14	0,13	25	0,23	38	0,35
10	55	0,50	38	0,35	42	0,38	88	0,80	84	0,76	48	0,44	38	0,35
11	37	0,34	39	0,35	31	0,28	69	0,63	59	0,54	39	0,35	61	0,55
12	42	0,38	38	0,35	41	0,37	75	0,68	61	0,55	71	0,65	67	0,61
13	34	0,31	49	0,45	37	0,34	57	0,52	50	0,45	57	0,52	53	0,48
14	10	0,09	15	0,14	34	0,31	33	0,30	25	0,23	88	0,80	17	0,15
15	10	0,09	46	0,42	32	0,29	99	0,90	87	0,79	83	0,75	19	0,17
16	26	0,24	49	0,45	35	0,32	90	0,82	76	0,69	81	0,74	82	0,75
17	10	0,09	31	0,28	14	0,13	92	0,84	81	0,74	81	0,74	86	0,78
18	49	0,45	42	0,38	26	0,24	92	0,84	76	0,69	89	0,81	74	0,67
19	46	0,42	8	0,07	44	0,40	86	0,78	67	0,61	24	0,22	74	0,67
20	71	0,65	15	0,14	38	0,35	88	0,80	84	0,76	84	0,76	92	0,84
21	41	0,37	46	0,42	34	0,31	62	0,56	64	0,58	42	0,38	29	0,26
22	48	0,44	43	0,39	23	0,21	64	0,58	69	0,63	65	0,59	67	0,61
		0,34		0,31		0,30		0,58		0,50		0,54		0,51

3.1. Statistical Analysis with SPSS Software

The results of the data obtained from survey studies may be interpreted with different statistical methods, such as quartile analysis, depending on whether the values display normal distribution or not. SPSS software is used here for this analysis. In this study, the numbers and percentages of students who gave correct answers for the relevant criteria of each building (the originality of the design, the originality of the material, the originality of the workmanship, integrity, historical value, aesthetic value, and local characteristics) were tabulated and then the value ranges, minimum and maximum values, mode values, mean values, standard deviations, variance, and quartile analysis results were obtained. At the end of the analysis process, the average numbers of correct answers, quartile analysis results (25% slices), and standard deviations were evaluated, and overall accuracy rates were thus revealed. Comparisons of these results between students who had taken and had not taken conservation courses are presented in this subsection.

The average accuracy answers of the students who took the protection course about the originality of the design is 47.27; the standard deviation is 14.69; the variance value is 215,636; according to the quarterly analysis, the breaking points are 36.50 in the 25% slices; 46.00; is 58.00; the average of accuracy answers is 37.14; standard deviation 16,762; variance value 280,981; according to the quarterly analysis, the breaking points are 27.00 in the 25% slices; 39.67; It turned out to be 48.00. It

was observed that the mean accuracy values of those who took conservation courses were similar according to quartile analysis, but the mean values obtained by quartile analysis for those who did not take conservation courses were higher than the normal mean values (Tables 9 and 10).

The average accuracy answers of the students who took the lesson about the originality of the material is 40.77; the standard deviation is 11.49; the variance value is 131,994; according to the quarterly analysis, the breaking points are 34.75 in the 25% slices; 41.00; is 46.75; the average of accuracy answers is 33.95; standard deviation 11.94; variance value is 142,617; according to the quarterly analysis, the breaking points are 29.00 in the 25% slices; 36.67; It turned out to be 42.50. It was observed that the mean accuracy values of those who took conservation courses were similar according to quartile analysis, but the mean values were higher than the quartile analysis results obtained for those who did not take conservation courses (Tables 9 and 10).

The average of the accurate answers of the students who took the protection course about the originality of workmanship is 36.68; the standard deviation is 17.60; the variance value is 309,465; according to the quarterly analysis, the breakpoints are 16.00 in the 25% slices; 43.50; is 50.50; the average of accuracy answers is 32.64; standard deviation 8.70; variance value is 75,671; according to the quarterly analysis, the breakpoints are 30,00b in 25% slices; 34.50; It turned out to be 38.67. It was observed that the mean accuracy values of those who took conservation courses and those who did not, as obtained by quartile analysis, were higher than the normal mean values (Tables 9 and 10).

The average of the accurate answers of the students who took the protection course about the integrity parameter is 77.64; the standard deviation is 10.86; the variance value is 117,766; according to the quarterly analysis, the breakpoints are 70.00 in 25% slices; 75.50; is 87.25; the average of accuracy answers is 64.00; standard deviation 27.53; variance value 757,810; according to the quarterly analysis, the breakpoints are 53.00b in 25% slices; 69.00; It turned out to be 87.50. The mean values of those who took conservation courses according to quartile analysis were lower than the normal mean values, while it was observed that the values for those who did not take such courses were higher (Tables 9 and 10).

The average of the accuracy answers of the students who took the conservation course about the historical value parameter is 67.09; the standard deviation 11.54; the variance value is 133,134; according to the quarterly analysis, the breakpoints are 57.00 in the 25% slices; 69.00; is 76.25; the average of accuracy answers is 55.14; standard deviation 25.30; variance value 639,933; according to the quarterly analysis, the breakpoints are 42.00b in 25% slices; 61.50; It turned out to be 75.33. It was observed that the mean values of those who took conservation courses and those who did not, as obtained by quartile analysis, were higher than the normal mean values (Tables 9 and 10).

The average accuracy answers of the students who took the protection course about the aesthetic value parameter are 60.68; the standard deviation is 15.57; the variance value is 242,513; according to the quarterly analysis, the breaking points are 47.75 in the 25% slices; 63.50; is 72.25; the average of accuracy answers is 59.00; standard deviation 21,051; variance value is 443,143; according to the quarterly analysis, the breakpoints are 42,33b in 25% slices; 53.50; It turned out to be 81.67. The mean values obtained by quartile analysis for those who took conservation courses were higher than the normal mean values, while for those who did not take such courses, the values were lower (Tables 9 and 10).

The average of the accurate answers of the students who took the protection course about the local value parameter is 66.14; the standard deviation is 17,335; the variance value is 300,504; according to the quarterly analysis, the breaking points are 58.50 in the 25% slices; 73.50; is 77.00; the average of accuracy answers is 55.77; standard deviation 22.06; variance value is 486,374; according to the quarterly analysis, the breakpoints are 37.67b in 25% slices; 59.50; It turned out to be 73.00. It was observed that the mean values of those who took conservation courses and those who did not, as revealed by quartile analysis, were higher than the normal mean values (Tables 9 and 10).

Table 9. Statistical analysis of answers of students who had taken conservation courses

	Range	Minimum	Maximum	Mode	Mean (Ort.)	Std. Deviation	Variance Statistic	Quartiles		
	Statistic	Statistic	Statistic					25	50	75
Originality of Design - Number of Students	68	16	84	35 ^a	47,27	14,685	215,636	36,50	46,00	58,00
Originality of Design - Percentage	,66	,16	,82	,34 ^a	,4622	,14136	,020	,3550	,4500	,5700
Originality of Material - Number of Students	47	16	63	37 ^a	40,77	11,489	131,994	34,75	41,00	46,75
Originality of Material - Percentage	,46	,16	,62	,36 ^a	,3983	,11044	,012	,3375	,4000	,4575
Originality of Workmanship - Number of Students	55	5	60	16 ^a	36,68	17,592	309,465	16,00	43,50	50,50
Originality of Workmanship - Percentage	,54	,05	,59	,16 ^a	,3591	,16795	,028	,1600	,4250	,4950
Integrity - Number of Students	40	58	98	67 ^a	77,64	10,852	117,766	70,00	75,50	87,25
Integrity - Percentage	,39	,57	,96	,66 ^a	,7613	,10177	,010	,6900	,7450	,8525
Historical Value - Number of Students	39	47	86	69	67,09	11,538	133,134	57,00	69,00	76,25
Historical Value - Percentage	,38	,46	,84	,68 ^a	,6583	,10986	,012	,5600	,6800	,7500
Aesthetic Value - Number of Students	54	30	84	60 ^a	60,68	15,573	242,513	47,75	63,50	72,25
Aesthetic Value - Percentage	,53	,29	,82	,59 ^a	,5948	,15048	,023	,4675	,6250	,7125
Local Value – Number of Students	64	20	84	74	66,14	17,335	300,504	58,50	73,50	77,00
Local Value - Percentage	,62	,20	,82	,75	,6491	,16470	,027	,5750	,7250	,7500

Table 10. Statistical analysis of the students who did not take the protection course

	Range	Minimum	Maximum	Mode	Mean (Ort.)	Std. Deviation	Variance Statistic	Quartiles		
	Statistic	Statistic	Statistic					25	50	75
Originality of Design - Number of Students	61	10	71	10	37,14	16,762	280,981	27,00 ^b	39,67	48,00
Originality of Design - Percentage	,56	,09	,65	,09	,3386	,15335	,024	,2467 ^b	,3600	,4400
Originality of Material - Number of Students	41	8	49	42	33,95	11,942	142,617	29,00 ^b	36,67	42,50
Originality of Material - Percentage	,38	,07	,45	,35 ^c	,3091	,10945	,012	,2600 ^b	,3350	,3850
Originality of Workmanship - Number of Students	34	10	44	31 ^c	32,64	8,699	75,671	30,00 ^b	34,50	38,67
Originality of Workmanship - Percentage	,31	,09	,40	,28 ^c	,2973	,07875	,006	,2700 ^b	,3150	,3533
Integrity - Number of Students	89	10	99	69 ^c	64,00	27,528	757,810	53,00 ^b	69,00	87,50
Integrity - Percentage	,81	,09	,90	,63 ^c	,5818	,25042	,063	,4800 ^b	,6300	,7950
Historical Value - Number of Students	80	7	87	76 ^c	55,14	25,297	639,933	42,00 ^b	61,50	75,33
Historical Value - Percentage	,73	,06	,79	,69 ^c	,5005	,22967	,053	,3800 ^b	,5550	,6833
Aesthetic Value - Number of Students	65	24	89	42 ^c	59,00	21,051	443,143	42,33 ^b	53,50	81,67
Aesthetic Value - Percentage	,59	,22	,81	,45	,5368	,19095	,036	,3833 ^b	,5025	,7433
Local Value – Number of Students	75	17	92	38 ^c	55,77	22,054	486,374	37,67 ^b	59,50	73,00
Local Value - Percentage	,69	,15	,84	,35 ^c	,5073	,20098	,040	,3467 ^b	,5400	,6633

Considering the standard deviation values, it was seen that students who had taken conservation courses had standard deviations ranging between 10 and 17, while those who had not taken such courses had standard deviations ranging between 8 and 27 (Tables 9 and 10). As a result of quartile

analysis and standard deviation values, it was concluded that average values alone do not provide a sufficiently clear understanding of the perspectives of students on the concept of conservation.

4. Conclusion

When the effects of conservation education given both theoretically and practically in architecture on the perception of conservation among students were examined, it was obvious that there was a significant difference in the levels of conservation awareness between students who had taken conservation courses and those who had not. Architecture education is related to the visual perception related to drawings, and models of the existing and non-existing structures (Yılmaz et al., 2022). It could be said that conservation education is also visual that consists of the reflection of several movements. Students determine the conservation principles and techniques both with the history and conservation courses. According to the results of the two-stage evaluation process applied in this study, the conservation awareness and knowledge of students who took conservation courses were prominent in both stages of the evaluation. The theoretical and practical experience gained from conservation courses, field studies, and internships included in the curriculum over a total of four semesters played an effective role in the development of students' perspectives on conservation. However, when the answers given to subjective questions by the students who had taken conservation courses were examined, it was observed that awareness of conservation should be encouraged from more basic educational levels.

The fact that the average age of those who had taken conservation courses was higher affected their perspectives on conservation as a result of their more extensive architectural education and experience (e.g., internships). On the other hand, students who had not taken conservation courses mostly took basic courses such as technical drawing and building knowledge. For this reason, it was found that these students had gaps regarding courses on topics such as Conservation Awareness, Traditional Turkish House, and Restoration, other than the basic required courses in architectural education. The majority of students who had taken conservation courses and those who had not were female students in both cases. The higher percentage of female students in architectural education compared to male students is thus reflected in the data of this survey. Furthermore, only 43% (44 people) of the students who had taken conservation courses and 9% (10 people) of those who had not reported knowing the concepts of registration and site. Thus, the effects of conservation courses on mastering technical terms related to this concept were also observed. However, in both groups, students had more correct answers regarding integrity and value and fewer correct answers regarding originality when comparing taking conservation courses. In addition to the international developments in today's world, it is necessary to take some steps at the national and local scale to improve the awareness and conservation culture for cultural assets.

It is obvious that every human is responsible to conserve and make the built environment sustainable in terms of heritage (Tuncer & Madran, 2012). When looking at the study even architecture students' conservation awareness needs to be increased with additional efforts. Students need to be thought to conserve the present to make it alive for the future (Madran, 2007). The accuracy rates of the answers given by students who had taken conservation courses regarding the authenticity, value, and integrity of historical buildings were also analyzed with SPSS and compared in terms of normal averages and quartile analysis. As a result, it was concluded that those who took conservation courses had more knowledge and competence regarding this information.

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The article complies with national and international research and publication ethics. Ethics committee approval was gained for the study. Ethics Committee approval in the study, Ethics Committee of the University of Mehmet Akif ERSOY, dated 07.09.2022, and decision no GO 2022/863.

Author Contribution and Conflict of Interest Declaration Information

All authors contributed equally to the article. There is no conflict of interest.

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