Evaluating the urban cultural spaces based on environmental quality components (Case study: Tabriz City)

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Abstract

Integrating art, industry, and architecture and creating outstanding urban cultural spaces make attractive viewpoints for citizens and travellers, and raise the position of urban elements as the elements of the city's identity. Therefore, this study aimed to evaluate the urban cultural space based on structural, perceptual, and functional-social identity. This analytical survey study was conducted on eight cultural spaces in Tabriz, Iran, using a questionnaire and descriptive and inferential statistics. Based on the descriptive findings, the elements of the traditional Bazaar and Ali Monsieur's house scored the highest and lowest points regarding structural and functional-social identity. Among other elements, the El Goli Building of Tabriz was more successful regarding perceptual identity. In addition, architectural style and behavioral diversity had the most and least roles in selecting urban elements, respectively. A group t-test was used to check the position of each component of the studied styles. The results indicated the favorable condition of the Municipal Palace, Traditional Bazaar, and Eel Goli in all three styles. The urban cultural space was compared based on the identity components between the pairs of existing groups using the parametric t-test. The results showed a significant difference between the average evaluation of the examined couples based on gender, education, and frequency of visits. However, no significant difference was observed between the purpose of the couple's reference in evaluating the urban cultural environment. The Pearson correlation results confirmed a relationship between structural and perceptual identity components at less than 0.01. In contrast, no significant relationship was observed between functional-social identity components.

Keywords: Urban cultural spaces, structural identity, perceptual identity, functional-social identity
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1 Introduction

The urban space is an objective arising from integrating social relations in a physical and semantic context along with the functions required by the collective human being [5]. The urban space is not created to look at but to be in it, which draws people deep into themselves and experiences motion and participation [9]. The domain of public space refers to all accessible spaces used by people. Based on the realm's physical, social, and cultural division, public spaces include external public spaces, internal public spaces, and semi-public internal and external spaces [7]. According to the above definition and the placement of cultural collections in the public and civic spaces category, the social

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dimensions of these spaces can be recognized by generalizing and revising the theoretical foundations proposed in the field of public spaces [27]. On the other hand, cultural structures are part of the material cultural elements of society, and people use them over time and become attached [56].

Urban cultural spaces (UCS) have different uses and specific architecture, requiring special devices, equipment, and design [65]. Hence, the spaces should provide a suitable platform for collective and social activities and have the characteristics of a desirable public space. Cultural functions with informal spaces, programs, and other functions create a suitable context for establishing social interactions and have different activity systems than other urban public spaces (squares, parks, and station spaces) [35].

These differences are in the scale of spaces, gender, and the way social interactions are established [1]. Therefore, people's need for places for social interactions and meeting psychological needs has become one of the necessities of urban life [12]. Urban cultural spaces are essential for sustainable development from an economic and social point of view, and the existing research on them mainly focuses on specific aspects such as historical heritage or cultural service facilities. However, UCS has not been quantitatively evaluated as an independent system with a clear definition and comprehensive classification [60]. Cultural spaces in cities have been less the focus of attention of specialists and urban designers, and less have been able to provide suitable contexts for organizing the needs and normative and behavioral patterns of their audiences. Therefore, designing an efficient behavior management strategy is one of the most significant urban planning and management needs for such spaces [2]. Cultural spaces help people create a sense of trust and confidence and increase the sense of solidarity and belonging. In a study on more than a thousand urban public spaces in different countries, four accessibility and connectivity, comfort and scenery, uses and activities, and sociability [20].

Environmental quality is an essential preoccupation of urban design knowledge, and many theoreticians consider "enhancing the quality of the environment" as the most critical task of urban design activity [37]. There are several definitions of environmental quality in the theoretical texts of urban planning and design [9]. These different perceptions were formed based on the intellectual background of the experts or the way they choose indicators, the lack of a comprehensive, accurate, and agreed-upon definition of the concept of environmental quality, or the method they select different indicators in the theoretical foundations of urban design, stands out. The mentioned perceptions can result from the connection or overlap of this concept with other vague and complex concepts, such as quality of life, social cohesion, and sustainability [63]. A study on more than a thousand urban public spaces in different countries revealed four accessibility and connectivity, comfort and scenery, uses and activities, and sociability [20].

Therefore, many theorists consider "enhancing the quality of the environment" as the most critical task of urban design activity [37]. There are several definitions of environmental quality in theoretical texts, planning, and urban design. These different perceptions were formed based on the intellectual background of the experts or the way they chose indicators. Therefore, the lack of a comprehensive, accurate, and agreed-upon definition of the concept of environmental quality or the way they select different indicators on theoretical bases shows the priority of this issue in urban design research [31]. The governing literature on human and environment studies shows that studying physical space requires considering the activities. Barker emphasized the collective-behavioral nature of activity spaces and emphasized collective interactions in activity spaces as a capability for space [6]. According to these opinions, attachment to a place is strengthened by physical aspects, and the quality of behaviors and social interactions in space also affect attachment to it [49]. Therefore, the functional characteristics of public spaces can influence the quality and quantity of attracting people to stop and interact in these spaces [15].

Many recent researches have focused on the relationship between the physical characteristics of space and collective interactions. In these studies, the dimensions of environment quality and physical space act as a spatial system, and the features of this spatial system are effective in the collective interactions of users [50]. The physical environment provides facilities and space organization that reinforces the systems and special patterns of activity in the space and makes other activities faint [42].

In other words, the physical environment facilitates collective relationships and provides an optimal level of solitude in the activity space, including dimensions, space geometry, relationships, and spatial communication in activity spaces. Finally, the human environment generates and guarantees symbolic and aesthetic feelings, experiences, and perceptions, which affect users' perception of qualities in the environment. Access position for riding and walking, organizing spaces, form, geometry, order, coordination, individuality, harmony, variety of dimensions and proportions, and other aesthetic dimensions are dimensions of the body of public space and its capabilities about the sociability of the space [26].

Space has a socio-collective logic, and the organization of space by architects can be understood by analyzing the spatial structure and users' activities [61]. In the human-made environment, collective patterns play a role in the

environment with spatial systems, and the spatial content of the environment has collective patterns [23]. Human and environmental studies show that studying physical space requires considering activities (43). Barker emphasized the collective-behavioral nature of activity spaces and collective interactions in activity spaces as a capability for space [10]. According to these opinions, attachment to a place is strengthened by physical features, and the quality of behaviors and social interactions in space are also adequate on extension [36]. Therefore, the functional characteristics of public spaces can affect the quality and quantity of attracting people to stop and interact in these spaces. Knowing the practical dimensions of social activity components and their physical provision increases collective life, which can be referred to the evaluation of the performance of spaces in different seasons, the use of public spaces by users, the characteristics of leisure, and the problems and obstacles of pedestrian movements [11].

Spatial organization can strengthen desired social cohesion and solidarity [15] and directly affect creating desired solitude [16]. Through the proper organization of spaces and spatial arrangement, a suitable level of communication and appropriate privacy can be achieved with spaces of interest [4]. Therefore, the design of cultural spaces should also address the cultural needs of users to increase their social cohesion [40]. [34] showed that the choice of space affects the perceived ability to play a role in non-interactive environments, followed by the sense of place and presence of users and creating solidarity [24]. Paying attention to the green space in cultural places is considered an integral indicator of cultural places, including waste and garbage management and contextual and ecological features [19].

This study effectively preserves the national culture with cultural activities and social interactions, cultural space, and access to information and news by predicting the desired places, performing special cultural and traditional ceremonies, expressing opinions, and creating collective communication as one of the basic human needs. Promoting cultural spaces is critical in reducing traffic and its adverse effects, such as waste of time and energy and mental health. Communication in cultural spaces, which is the place of connection, communication, gathering, and arrangement of different public spaces and activities, encourages the presence of people in this space. Cultural spaces are the manifestation and mirror of urban life, and promoting the presence of tourists and users makes tourists and users familiar with the culture, customs, and traditions of the people of this area. Preserving society's values about cultural spaces causes correlation, belonging, and social unity. The economic necessity of the current study regarding the region's use of potential historical and tourism resources has little opportunities for development, makes it more likely, and provides the basis for generating income among the indigenous people. The environmental necessity is that air pollution due to motor vehicle traffic in cities is one of the essential issues in big cities. The transportation sector causes 70% of air pollution in cities. The traffic of motor vehicles in the city to perform various services is reduced by creating desirable cultural spaces and encouraging people to use the facilities of these spaces. Revising the principles of urban uses and densities requires examining the scientific-professional necessity, scientifically considering the conditions of users of cultural spaces, and creating unique and optimal urban spaces. The awareness of today's designers on the past structure of cities is necessary for creating cultural spaces and strengthening the relationship between humans and the urban environment. Experiences and records of optimization plans for cultural spaces in other countries and the use of practical standards in them are scientific and professional necessities of the plan. Table 1 shows a summary of some studies related to the research:

Table 1: Summary of studies

Author	Year	Title
[58]	2022	Explaining the concept of spatial resilience in urban design: a qualitative systematic review
[52]	2022	Urban design with the approach of increasing physical resilience against earthquakes; Case study: Labab neighborhood located in District 8 of Shiraz
[54]	2022	A meta-analysis on the relationship between physical indicators and sociability in Iran's educational spaces
[57]	2022	Analysis of pedestrian capability; A movement in strengthening the identity and social cohesion of cities, a case study: a comparative analysis of the central context of the cities of Naqdeh and Qorveh.

[33]	2022	The effect of the body and function of the entrance spaces of the city in creating a feeling of inviting citizens; Case study: entrances in the east of Tehran
[53]	2021	Investigating urban resilience using Waspas and WP models (case example: Sari city)
[41]	2020	Physical and social resilience of residential neighborhoods of historical context (the example of the 12th district of Tehran)
[25]	2020	Analysis of social resilience based on social capital indicators in Tehran
[43]	2019	Evaluation of the role of urban parks in the social sustainability of cities, a case study (Freedom Park in Shiraz)
[27]	2019	Comparative assessment of the effect of social characteristics on the level of social cohesion in the old and new neighborhoods of Yazd city (Case study: Posht Bagh and phase one of Azadshahr)
[38]	2017	Evaluating the effect of social and physical aspects of the neighborhood environment on the mental health and sense of well-being of residents (a case study of Rushdieh neighborhood, Tabriz)
[3]	2017	Investigating social cohesion and the factors affecting it in urban spaces
[48]	2016	Urban design and social resilience, case study: Jolfa neighborhood of Isfahan
[39]	2015	Investigating the role of sustainable design and identifying the effective components of sidewalks in urban social life
[27]	2015	Evaluation of the physical components of public spaces and their effect on the feeling of social security of the citizens of Babolsar
[51]	2015	The role of social and physical characteristics of urban public spaces in improving the social security of citizens
[45]	2014	Identifying the factors influencing the increase of social interactions in urban public spaces
[29]	2014	Evaluating the impact of environmental quality components on behavioral patterns in urban parks
[22]	2013	Investigating the effect of physical identity on social cohesion, a case study; Evin neighborhood of Tehran
[47]	2022	Resiliency morphologies: towards an approach to studying urban spatial resilience
[62]	2022	The resilience of human settlements against climate change requires the convergence of urban planning and urban climate science.
[55]	2022	Strengthening urban resilience assessment systems through automatic simulations of logical and adaptive decision making
[32]	2021	The role of nature-based solutions to improve the quality, health, and well-being of the environment
[44]	2020	The built environment, urban vitality, and social cohesion: do vibrant neighborhoods foster strong communities?
[46]	2020	Beyond Near-Zero Energy Urban Design: Microclimate and Environmental Energy Overall Assessment Workflow
[28]	2019	Investigating the relationship between social cohesion and urban green spaces: a health promotion avenue
[18]	2019	Rethinking Social Cohesion: A New Definition and How to Describe It
[14]	2019	Use of green spaces, self-satisfaction, and social contacts in Adolescents: a cohort-based study of Caspian-5
[59]	2018	Examining the psychosocial pathways of the effect of parks on health: a qualitative study
[30]	2015	The importance of proximity to resources, social support, transportation, and neighborhood safety for mobility and social participation in older adults: results from a scoping study.
[8]	2014	Green schoolyards as shelters from pressure and resources for resilience in childhood and adolescence
[13]	2013	The importance of neighborhood social cohesion and social capital for the elderly in the community

The activity dimension of the spaces is also related to the role and uses around them. Such activities and many other physical and activity characteristics give personality to public spaces and impact, providing comfort and the possibility of people enjoying being in the space. In addition, spaces successfully establish social interactions that support dynamic interaction, environmental education, and the possibility of creative expression of individuals and groups, which leads to increased social solidarity and greater satisfaction [21].Many recent studies have focused on the relationship between the physical characteristics of space and collective interactions based on which the physical space acts as a spatial system, and the characteristics of this spatial system are effective in the collective interactions of users [50]. Urban cultural spaces, the historical antiquity of Tabriz, the existence of influential buildings and structures, and the lack of similar research in Tabriz regarding evaluating urban cultural spaces are essential. Therefore, several of Tabriz's monuments and cultural spaces were examined in this study from the perspective of aesthetics and the structural, perceptual, and functional-social aspects of identification. Then, solutions were presented to improve these elements after analyzing the samples. The research objectives can be listed as follows:

1. Evaluation of Tabriz urban cultural space based on structural (physical) identity
2. Evaluation of Tabriz urban cultural space based on perceptual identity
3. Evaluation of Tabriz urban cultural space based on functional-social identity
4. Determining the factors affecting the evaluation of urban cultural space by citizens

Figure 1 shows the conceptual model of the current research.

2 Method

Table 1 presents the evaluation criteria for structural (physical) identity, perceptual identity, and functional-social identity of urban cultural spaces in the form of survey questions from the users and visitors. In the first part of the questionnaire, the respondents' demographic information, such as gender, age group, education, frequency of visits to the desired cultural spaces, and the purpose of the visit, are examined. The second part evaluates the desired cultural
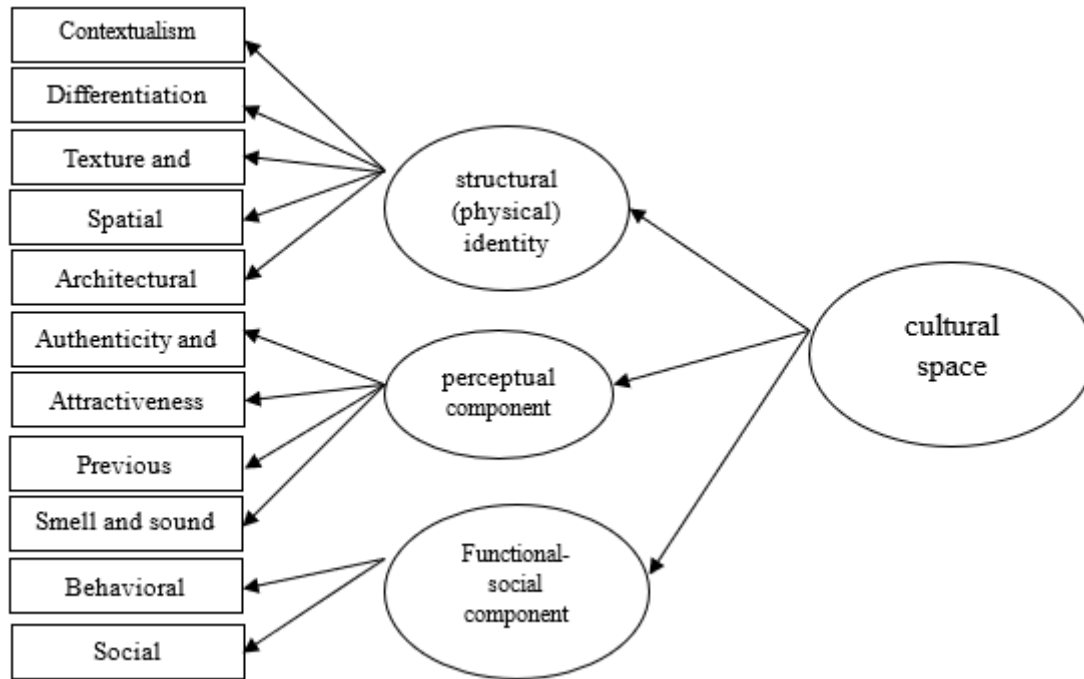
Figure 1: Research conceptual model

spaces based on three structural, perceptual, and functional-social identity components. This study was conducted on 80 visitors selected by the convenient sampling method. The scoring of the questionnaire was based on a range of five options from one (lowest) to five (highest) points. A comparison of mean scores was used to analyze the data after testing the normality of the distribution of scores. A one-group t-test was used to investigate the position of physical, perceptual, and functional-social style components in the studied cultural spaces, including the Municipal Palace, the traditional Bazaar, Maqbaratoshoara, the Blue Mosque, Ali Monsieur House, El Goli, and the Catholic Church. In addition, an independent t-test was used to compare the evaluation of urban cultural spaces based on the differences in the respondents, and Pearson's correlation test was used to check the correlation between identity components. SPSS-24 software was used to analyze the data obtained from the questionnaires.

Table 2: Structural, perceptual, and functional-social identity evaluation components of urban cultural spaces (resource: author)

Identity component	Factors	Description
Physical (structural)	Contextualism	Connection with the geography and culture of Tabriz
	Differentiation	Special characteristics and the possibility of distinguishing from the surrounding urban context
	Texture and decorations	Suitable materials, color, body, and texture
	Spatial confinement	Size and observance of human scale, height, size proportion, spacing, and color
	Architectural style	Differentiation in terms of architectural style having a specific form, relationships, and arrangement.
Perceptive	Authenticity and historicity	Connection with the history of Tabriz and its residents
	Attractiveness and greenery	Additional facilities and the creation of green space, the possibility of access and exploitation of the surrounding urban space
	Previous memories and relationships	Permanence and memorability, historical protection and urban restoration
	Smell and sound	Olfactory and auditory perception of environmental tissue
Social-performance	Behavioral diversity	Diversity and appropriate distribution of uses and the occurrence of diverse activities
	Social interactions	Occurrence of social behaviors and dynamic social interactions

The case study was eight urban cultural spaces in Tabriz, Iran, including Tabriz Municipal Palace (Clock Square), Tabriz Traditional Bazaar, Maqbaratoshoara, the Blue Mosque, Ali Monsieur House, El Goli, and the Catholic Church. The mentioned spaces were examined based on the mentioned factors for structural, perceptual, and functional-social

identity components.

3 Municipal Palace (Clock Square)

Tabriz Municipal Palace is one of the most beautiful, strong, and spectacular buildings of Tabriz which was built from 1935 to 1939 by order of Reza Shah Pahlavi in the abandoned and dilapidated Koi Nobar cemetery under the supervision of German engineers and during the presidency of Haj Arfaol Molk Jalili with a budget of 2,500,000 Rials. In 2007, this palace became the first museum of the city and municipalities of the country on the occasion of commemorating the 100th anniversary of the establishment of the first city and municipality association of Iran in Tabriz. Currently, the Islamic Council of Tabriz is also located in a part of this building in addition to the first museum of the city and municipalities of the country, and the official meetings of the council are held in the amphitheater in the building. Tabriz's mayor also conducts official diplomatic meetings with high-ranking officials at this palace. In addition to the attractions of a historical monument, this palace has a good place among citizens, tourists, and travelers as one of Tabriz's cultural, social, and historical spaces. As shown in Table 1, this element has the most examples of structural, perceptual, and functional-social identity and plays an influential role in Tabriz due to its location and unique view.

4 Traditional Bazaar of Tabriz

Tabriz Bazaar is the largest and essential covered Bazaar in the world, located in Iran with an area of about one square kilometer. Tabriz Bazaar was registered on the UNESCO World Heritage List in August 2010. This building has many bazaars, corridors, timchehs, serahs, and caravanserais. Tabriz and its Bazaar have been very prosperous previously due to the location of Tabriz at the crossroads of the Silk Road and the daily passage of thousands of caravans from different Asian, African, and European countries. This bazaar is known as the main trading center of the people of Tabriz and Iran, having about 5,500 stalls, shops, and stores, 40 types of jobs, 35 serahs, 25 timchehs, 30 mosques, 20 stalls, 11 corridors, five bathrooms, and 12 schools. In addition to having identity components, this element is known as a spiritual element in the identity of Tabriz due to its unique characteristics, vitality, and economic impact.

5 Maqbaratoshoara

Maqbaratoshoara, or the tomb of the poets, Sorkhab cemetery, is one of the historical cemeteries of Tabriz in the Sorkhab neighborhood, which was also called by the names of Hazira Al-Shaara, Hazira Al-Qadaa, and Sorkhab Cemetery. Maqbaratoshoara is currently located around Tekiyeh Heydar at the intersection of Seghat Al-Eslam and Aref streets and on the eastern side of Seyyed Hamzeh's tomb and Ghaem Magham and Mollabashi's tombs. The passage of time and, more importantly, natural events such as floods and earthquakes have destroyed Maqbaratoshoara's appearance. In September 1971, a competition was held for the design of a monument in Maqbaratoshoara by the newspapers of Information Etelaat, Kayhan, and Yaghma magazine due to its abandonment after the earthquakes of 1193 and 1194 AH and due to the burial of many great poets and mystics in this cemetery. After some time, the proposal of "Gholam Reza Farzan Mehr" was chosen, and the monument's construction started. This beautiful and unique building evokes cultural richness in the identity of Tabriz.

6 Blue Mosque

According to its inscription, this mosque was built in 845 AH during the reign of Sultan Jahanshah, the most powerful ruler of the Qara Qoyunlu dynasty, and by the order of his daughter Saleheh Khanum. In the past, Pascal Kost mentioned this mosque as a Sunni mosque and a mosque that Shiites do not want to use. A tiled inscription on the main door of the Blue Mosque was installed in 870 AH. This inscription and other inscriptions on the front of the mosque are in the handwriting of Nematullah ibn Muhammad al-Bawab, a famous calligrapher of the 9th century, and Izzuddin ibn Malik Qapouchi was the official and supervisor of its construction. In December 2014, a group of 50 people moved towards this mosque under the pretext of holding congregational prayers, and they could occupy the mosque without any interference from the responsible institutions and the police. After capturing this historical building, the protesting crowd performed congregational prayers in this historical place and covered the tiled floor of the mosque. With the beginning of the cold season, a part of the historical walls of the mosque was destroyed by the improper piping of city gas, and the restoration of its tiling was also left unfinished due to the occupation of the mosque.

7 Ali Monsieur's house

This house is attributed to "Karbalai Ali Monsieur," the intellectual leader of Azerbaijan's constitutionalists, among historians, and is known as Ali Mesio's second home. Karbalai Ali Monsieur was a Tabrizi-born businessman who had many trips to European countries, especially France, so he was nicknamed "Monsieur." Comparing the noble houses of that period, with the small area of this house and its special architecture, which is not similar to the noble houses of that time, strengthens the assumption that it was the second house of Ali Monsieur. However, the fact is that this was a secret place, so the secret decisions of the constitutionalists were made there. This house's basement was discovered during the restoration, which led to the back alleys, and there was also a hidden stable to keep the horses so they could escape with the horses if the meeting place were discovered. The experience of Monsieur Ali's European travels and his political sham had realized such a building. Later this place became known as the "occult center of Tabriz." Some researchers speculate that Monsieur Ali did not live in Tabriz at all due to the absence of any sign of him except this house, lived in Istanbul or France, and came to Tabriz during the constitutional process to be an intellectual leader in this process.

8 Eel Goli of Tabriz

Eel Goli is one of the essential tourist spots in Tabriz, located in the southeast and 7 km from the city center. The octagonal Kolahferangi mansion in the center of Shahgoli Lake, known as Shahgoli Palace, is a reception hall today. This building used to be a dilapidated one-story brick building. In 1967, Tabriz municipality demolished the previous building and built a new, durable two-story building. Shahgoli Palace was built during the reign of Sultan Yaqub Aq Qoyunlu and expanded during the Safavid dynasty. Kahraman Mirza (the eighth son of Abbas Mirza) also completed this mansion and turned it into a royal resort for Qajar courtiers. The depth of Shahgoli Lake is 12 meters, and boating is done in its area. There is an amusement park (Lunapark), restaurants, fast food, and numerous coffee shops inside this promenade, and it has a hotel, an inn, and an active tourist office. This resort has gained a global aspect by constructing the Pars Il Goli Hotel.

9 Catholic Church

The Catholic Church of Tabriz (Mighty Ezra) belongs to the Catholic Christians of Iran. This building was built in 1785, and its facade is brick. The length of the Catholic church is 30 meters, its width is 15 meters, and the church's bell tower is on top of a small balcony. This church is used for Catholic ceremonies and celebrations in the Miyarimyar neighborhood of Tabriz.

Table 3: Images of studied elements in Tabriz (resource: author)

| Municipal Palace | Traditional Bazaar | Maqbaratoshoara Blue | Mosque |
| Ali Monsieur's house | Eel Goli | Catholic Church | Sāheb ol Amr Mosque |

10 Findings and discussion

Table 4 indicates the questionnaire results, completed by 80 visitors from eight urban cultural spaces.

Table 4: Descriptive findings of questionnaire respondents

Variable		Frequency	Frequency percentage
Gender	Female	51	64
	Male	29	36
Age	40-20 year	48	60
	60-40 year	32	40
Education	Diploma and below	22	5.27
	Bachelor's degree and higher	58	5.72
Number of visits to places	Less than five times	38	5.47
	Five times and more	42	5.52
Purpose of reference	Recreational, sports	47	7.58
	Activity and residence in the region	33	3.41

According to Table 4, 51% of the respondents were female, and the rest were male. The respondents were reported to be 60% in the young age group and 40% in the middle age group. With a Bachelor's degree or higher, 72.5% showed the highest frequency of participants. The number of people visiting the desired places five times or more was 52.5%, and the purpose of visiting was 58.7% of the respondents for recreation and sports, and the rest for activity and residence in the area. The descriptive statistics obtained from the questionnaire about structural, perceptual, and functional-social identity components are reported in Table 4. According to Table 5, element 1, municipal palace; element 2, traditional Bazaar; element 3, Maqbaratoshoara; element 4, blue mosque; element 5, Ali Monsieur's house; element 6, Eel Goli; element 7, the Catholic church and element 8, Sāheb ol Amr Mosque was considered. As shown

Table 5: The average score of the components in the examined elements

Component	Element 1	Element 2	Element 3	Element 4	Element 5	Element 6	Element 7	Element 8	Mean
Contextualism	3.8	4.9	3.6	2.4	1.8	4.7	2.3	1.8	25.3
Differentiation	4.4	5	3.3	2.8	1.9	4.5	2.5	2.4	26.8
Texture and decorations	4.6	5	2.8	3.4	2.3	4.8	3.7	2.1	27
Spatial confinement	3.4	5	4.4	4.1	2.8	3.8	3.3	3.4	30.2
Architectural style	4.7	4.9	4.1	3.6	1.3	4.6	4.1	3.4	30.4
Authenticity and historicity	3.9	4.8	3.2	3.7	3.7	4.1	3.1	2.7	29.2
Attractiveness and greenery	3.6	4.4	3	2.1	1.4	4.9	1.2	1.7	22.3
Previous memories and relationships	4.7	4.8	2.8	1.4	1	4.5	1.1	1.1	21.4
Smell and sound	3.2	3.9	3.6	1.5	1.2	4.6	2.3	4.3	24.6
Behavioral diversity	4.1	4.8	1.2	1.2	1	3.7	2.4	1.4	19.8
Social interactions	3.2	4.9	1.5	2.3	1	3.6	1.6	2.6	20.7
Total	36.3	52.4	33.5	28.5	19.4	47.8	27.6	26.9	-
Mean	3.3	4.8	3.04	2.6	1.8	4.3	2.5	2.4	-
Structural component	20.9	24.8	18.2	16.3	10.1	22.4	15.9	13.1	-
Perceptual component	15.4	17.9	12.6	8.7	7.3	18.1	7.7	9.8	-
Social functional component	3.7	9.7	2.7	3.5	2	7.3	4	4	-

in Table 4, the traditional Bazaar is the most successful and has obtained the most points in terms of structural identity and functional-social identity among the urban cultural spaces, and Ali Monsieur's House has obtained the least points. Tabriz's El Goli element was more successful than other elements regarding perceptual identity. The first to eighth place was assigned to Tabriz Bazaar, Eel Goli, Municipal Palace, Maqbaratoshoara, Blue Mosque, Catholic Church, Sahib ol-Amr Mosque, and finally, Ali Monsieur's House to classify the elements according to the total score for all three components of identity. Architectural style played the most role, and behavioral diversity played the least role in selecting urban elements. All the studied cultural spaces were considered representatives of the city of Tabriz. However, these elements can be classified as architectural style, spatial confinement, originality and historicity, texture and decorations, contextualism, smell and sound, attractiveness and greenness, precious memories and relationships, social interactions, and behavioral diversity.

A group t-test was used to analyze the components of the three identity styles compared to the average of the

measured spectrum and the perceptual status of the population regarding the elements.

$$t = \frac{m - \mu}{s/\sqrt{n}}$$

In which, t is the t statistic, m is the group mean, μ is the theoretical mean value, s is the standard deviation, and n is the sample size. First, the assumption of normality of the distribution of scores was tested before analysis. This research used a five-point scale, with the options numbered 1 to 5. The null hypothesis was that the value of the test is $\mu \leq 3$, and the society's perception of that variable is unfavorable because their answers are around the average and do not tend to a specific direction. Table 5 represents the results of the one-sample t-test for the research variables. The significance level was considered equal to 0.05, and when the significance value is less than 0.05, the null hypothesis of the test is rejected, and the perception status of the society for the desired variable is confirmed. Whenever the significance value for a variable is less than 0.05, and the t value is more than 1.96, the null hypothesis is rejected, and the perception status of the society is confirmed for all variables.

Table 6: Group t-test results

	Component	Element 1	Element 2	Element 3	Element 4	Element 5	Element 6	Element 7	Element 8
Structural component Perceptual component	t-value	6.851	10.60	5.982	3.401	0.236	8.786	3.051	0.307
	Significance level	0.000	0.000	0.000	0.03	0.234	0.000	0.04	0.12
	Mean difference	5.9	9.8	3.2	1.3	-4.9	7.4	0.9	-1.9
Structural component Perceptual component	t-value	3.051	4.076	2.045	1.456	0.102	6.851	1.870	0.203
	Significance level	0.000	0.000	0.045	0.806	0.919	0.000	0.092	0.078
	Mean difference	3.4	5.9	04.6	-3.3	-4.7	6.1	-3.4	-2.2
Structural component	t-value	4.56	9.076	1.21	1.045	0.204	3.679	0.175.0	0.201
	Significance level	0.00	0.000	0.34	0.256	0.812	0.000	0.092	0.067
	Mean difference	1.3	3.7	-3.3	-2.5	-4	1.3	-2	-2

As shown in Table 6, the t-value is more than the critical value at a significance level of less than 0.001, which shows the desirability of the cultural spaces of the Municipal Palace, the traditional Bazaar, Maqbaratoshoara, the Blue Mosque, El Goli and the Catholic Church in structural identity. In the perceptual identity, the favorable t-value was significant for the cultural spaces of the Municipal Palace, Traditional Bazaar, Maqbaratosoara, and Eel Goli. The desired t-value in social functional identity for the cultural spaces of the Municipal Palace, Traditional Bazaar, and Eel Goli had a significance of less than 0.001. A parametric t-test can be used to compare the evaluation of urban cultural spaces based on the identity components among existing groups' pairs. As shown in Table 7, there is a

Table 7: Comparison of the average evaluation of urban elements by group

Variable	Group	T-test	Significance level
Gender	Female	3.25	0.046
	Male		
Education	Diploma and below	9.02	0.001
	Bachelor's degree and higher		
Number of visits to places	Less than five times	3.44	0.007
	Five times and more		
Purpose of reference	Recreational, sports	5.05	0.062
	Activity and residence in the region		

significant difference (P¡0.05) between the average evaluation of genders in urban cultural spaces based on structural, perceptual, and functional-social identity components. There was also a significant difference (P¡0.01) between the average evaluation of people with studied education and the number of times people visit urban cultural spaces based on structural, perceptual, and functional-social identity components. No significant difference was observed in comparing the average points given to urban cultural spaces based on the components of identity based on the purpose of the clients. In Table 7, the results of the correlation between structural, perceptual, and functional identity components are reported based on Equation (10.1).

$$r = \frac{\sum (x_i - \bar{x})(y_i - \bar{y})}{\sqrt{\sum (x_i - \bar{x})^2 (y_i - \bar{y})^2}} \tag{10.1}$$

r = correlation coefficient
x_i = value of the x-variable in a sample
$\bar{x}$ = mean of the values of the x-variable
y_i = value of the y-variable in a sample
$\bar{y}$ = mean of the values of the y-variable

Table 8: Correlation results between structural identity components

	Contextualism	Differentiation	Texture and decorations	Spatial confinement	Architectural style
Contextualism	1				
Differentiation	0.037**	1			
Texture and decorations	0.04*	0.092**	1		
Spatial confinement	0.043**	0.08	0.024*	1	
Architectural style	0.056*	0.021*	0.034*	0.05	1

** The significance level is 0.05. * The significance level is 0.01.

As shown in Table 8, the component of contextualism is correlated with differentiation and spatial confinement at a significant level of less than 0.05. In addition, contextualism was correlated with texture, decorations, and architectural style at a significant level of less than 0.01. The differentiation component was correlated with texture and decorations at a significance level of less than 0.05 and with architectural style at less than 0.01. Texture and decorations were correlated with spatial enclosure and architectural style at a significant level of less than 0.01. Table 9 shows a correlation between the identity and authenticity components of the perceptual identity components with previous memories and relationships at a level of less than 0.01. Correlation at a significant level less than 0.05 was observed between attractiveness and smell and sound. Table 10 shows no significant correlation among functional-social identity components.

Table 9: Correlation results between the components of perceptual identity

	Authenticity and historicity	Attractiveness and greenery	Previous memories and relationships	Smell and sound
Authenticity and historicity	1			
Attractiveness and greenery	0.08	1		
Previous memories and relationships	0.03*	0.045	1	
Smell and sound	0.07	0.061**	048.0	1

** The significance level is 0.05. * The significance level is 0.01.

Table 10: Correlation results between functional-social identity components

	Behavioral diversity	Social interactions
Behavioral diversity	1	
Social interactions	0.09	1

11 Conclusion

Urban approaches have always focused on social issues in recent decades following the expansion of communication between urban communities. The physical development of cities without attention and emphasis on human needs has caused many problems in today's cities. Sustainable urban development studies have paid less attention to the social aspect of urban development. Therefore, urban planning and design based on human factors and human-centered urban realization are critical in coherent and integrated development. The roads in urban centers require special attention in urban planning and design due to their special and unique economic, social, physical, and environmental characteristics. According to Shannon's entropy method, [57] found the components of improving collective spaces and topographical conditions to be the highest and lowest level of importance and priority, consistent with the present study.

Urban cultural space does not have an independent identity without the existence of man and his performance, and human interactions make a place meaningful. On the other hand, cohesive features such as the growth of relationships based on feelings and emotions, conservatism, reduction of trust, inconsistency, and heterogeneity cause disharmony and conflict with the expansion of urbanization. The social autonomy of the users drives the strategy of the concept of closed cohesion, and the consequence of such a phenomenon is the social divergence between the desired place and the city in terms of social cohesion. Interaction centers, physical facilities in places, relative independence in services,

respect for place, clear differentiation of the city, security, belonging to a place, empathy, cooperation, commitment, mutual trust, and intimate interactions are essential factors in creating social cohesion [64].

Beautiful urban elements are one of the ways of giving identity to urban spaces. Urban elements reflect people's thoughts and are rooted in each city's natural, historical, social, and cultural characteristics. Urban elements should be beautiful to give an identity and should induce a sense of beauty to people. Therefore, the aesthetic components are very effective in these elements, both objectively and subjectively. In this research, the main components, such as architectural style, originality, historicity, and social interactions, were recognized as the main components. Spatial confinement, texture and decorations, contextualism, smell and sound, attractiveness and greenness, memories and previous relationships, and behavioral diversity were identified as sub-components of the eight urban elements of Tabriz. Based on the findings, the traditional market of Tabriz is beautiful and unique for having all the components of structural, perceptual, and functional-social identity, which plays a special role in giving identity to the city. Despite having noteworthy points, cultural spaces in Tabriz's Eel Goli and Municipal Palace could not include all aspects as much as Tabriz's traditional market in providing Tabriz's identity.

The architectural style component, originality and historicity, and social interactions should be considered to promote the cities' structural, perceptual, and functional-social identity. In addition, spatial confinement and cultural differentiation should be applied in designing. Urban cultural spaces should be designed and highlighted using appropriate materials and attractive colors to remain more in people's minds. Paying attention to green spaces and creating relaxation in terms of sense of smell and hearing should be considered when designing urban cultural spaces because, in today's tense world, German design is regarded as an urgent need to create relaxation. It is necessary to design cultural spaces suitable for creating more social interactions, considering the importance of urban elements in the ecology and identity of cities. Appropriate positioning of elements by observing the principles of urban planning, establishing a connection between the subject of elements and their function, observing aesthetic principles in the design, form, and architecture of elements, and using large-scale elements in cities effectively improve the quality of urban spaces.

The research limitations were a limited number of studied elements and a low sample size. Future studies should select a more significant number of elements in all the geographical areas of Tabriz because increasing the size of the statistical sample will expand the scope and accuracy of the statistical tests. In addition, future studies can focus on the comparative comparison of the urban cultural spaces of Tabriz with similar cities in the country.

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