



**TECHNIUM**  
**SOCIAL SCIENCES JOURNAL**

**Vol. 18, 2021**

**A new decade  
for social changes**

[www.techniumscience.com](http://www.techniumscience.com)

ISSN 2668-7798



9 772668 779000

## **Explaining the components of improving the physical and functional quality of the Culture and Arts Center to meet human social needs and promote social interactions**

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**Abstract.** Objective: The purpose of this study is to explain the components of improving the physical and functional quality of the Culture and Arts Center to meet human social needs and promote social interactions. Objective: The purpose of this study is to explain the components of improving the physical and functional quality of the Culture and Arts Center to meet human social needs and promote social interactions. Research method: The present research method is quantitative and the researcher-made questionnaire is the main tool for collecting information in this research. The main structures of the questionnaire are derived from theoretical foundations. For this purpose, 384 questionnaires were distributed among the statistical sample. Descriptive and inferential statistics were used to analyze the findings in SPSS software as well as Smart PLS. Findings: The findings of this study show that the problem of promoting social interactions and meeting human social needs in Qazvin Culture and Art Center depends on a series of interventions in the functional, aesthetic, identity, physical and environmental areas of space.

**Keywords.** art center, culture, functional quality, interaction, social needs

### **1. Introduction**

The design of the art center to promote social interaction is the main subject of this research. Accordingly, creating a collection with an artistic structure and based on social relations and interactions between people and artists to strengthen social foundations is an approach that the author wants. The culture of any society has a decisive role in all aspects of the individual and social life of human beings and cultural centers as a platform for the formation of simple and complex social relations of citizens, dialogue between associations, private and local organizations, are the bedrock of social interactions in a society. Is. The present age, which is the age of science and technology, and culture and art as a pillar of it, is one of the greatest cultural goals to introduce the originality and content of the past of this land to those who are interested, especially the new generation.

For the continuation of human social life and the growth of human social culture, it is necessary to reconcile individuals with the public sphere by creating the necessary infrastructure. In the meantime, public spaces such as squares and cultural centers are at the center of gravity of this revival of social life. This study seeks to establish a link between art as a vital aspect of human culture and modern urban life, which has made art a window to bring people closer to each other and prevent the weakening of their social relations. The entry of art into the public arena can well pave the way for the proximity of social classes and groups.

The presented subject raises the thoughts in the designer's mind that this collection is not necessarily a museum, gallery, amphitheater, or a school, or a discourse park, or ... Rather, it tries to put them together in the form of different arts according to their various functions that it can complete the puzzle of the interaction of different arts with each other and with people. And at the same time, the general public is also invited to visit to see how the various artworks, to display and perform them. Therefore, the way of inviting people by making the collection attractive and practical is difficult and at the same time valuable. In the following, this art center sees some issues behind its design; Including the display of various works of art, the introduction of new arts, the preservation, and revival of forgotten original Iranian arts, the huge city theater (amphitheater), discourse spaces, and social interaction.

Communication between people and artists takes place at the city level, so an art center should be selected and designed on a city-wide scale to meet needs beyond the basic needs of urban society. The scope of research will be to change the paradigms and principles and purely physical components in architectural design to social and qualitative components.

Therefore, to create this connection, the first step is to recognize the needs and aspirations of the people, a society in which the basic needs of the people are not met, in which people cannot be expected to care about their aesthetic needs, so at this stage, the artist It will be necessary. To achieve this goal, the first step is to identify the level of awareness of the people of Qazvin about art and the impact it can have on their lives because as long as the level of awareness of the people who will be the main users and beneficiaries of the project is not known, their needs are unknown. The rest and basis of the research will be incomplete. Then the expectations and needs of the artists are examined. It should be noted that designing an art center with a goal will not be possible without considering the initial studies.

At first glance, it seems that the relationship between the people and artists of Qazvin is a superficial and one-way communication and only to meet the need, whether such an assumption can be cited or not will be determined in the project, on the other hand, if such an assumption is possible One of the main goals of the art center is to establish a strong and two-way communication.

Under these circumstances, the design of an art center in Qazvin begins with theoretical and field studies and eventually leads to the presentation of a design that, according to the author, can be a place for the direct and direct community between artists and people, and also a research center for Conducting artistic research with the participation and support of interested parties can be. This center is designed in the city of Qazvin to raise the level of awareness of the people about their needs and their basic rights, which is to enjoy the joy and vitality of life in the shadow of enjoying art, so it brings together the public at all levels and tastes. Identify and support anonymous artists.

The city of Qazvin, as one of the most important areas that have a large part of ancient Iranian culture and art, the lack of space to depict this history and art is very much felt, based on the idea of designing and creating a center of culture and art. Qazvin to increase social interactions, in the architectural design of the complex, was the first step towards the realization of this idea. Designing a place for gathering and gathering of different strata of society for people and cultural friends to interact with each other to raise the level of their culture and pay attention to recognizing and understanding how people socialize in these centers, as a public space to increase people's presence and promote culture. Society is effective. Therefore, in this research, with a descriptive-analytical method, first culture, art, and socialization and then domestic and foreign cultural centers have been studied. Human social and the promotion of social interactions, to be provided in one space. Communication and recognition of people's

needs in this research are established based on questionnaires and face-to-face interviews with people.

## **2.Theoretical Foundations**

So far, several types of research have been done on social interactions and the issue of urban design. Rafieian and Khodaei (2009) in a study in Tehran, by identifying the variables affecting citizens' satisfaction with public urban spaces, introduce the three variables of access to services, social security, and spatial identity as the most influential factors in citizens' satisfaction with public spaces.

Rafieian et al. (2008) in another study evaluates the impact of public-urban spaces on the rate of socialization and strengthening women's social participation. The results of this study indicate that from the point of view of women, the sociability of space and social supervision in it is most related to the desirability of public and urban spaces.

Daneshpour and Charkhchian (2007) in his research the process of socialization and promotion of collective life in public spaces based on the acceptance of space for individuals and different social groups, providing mental and physical comfort, enjoying the presence of individuals and social groups in space. And they have considered active and continuous social presence in space, and according to them, they have pointed to us as spatial values such as inviting, security, desirability, and responding to activities in line with their goal.

Kashani Joo (2010) in his research entitled Recognition of theoretical approaches to urban public spaces, recognizes these spaces as the third-place that play a key role in establishing social interactions. He has considered three main periods based on the thematic orientation to urban spaces. In the period after the Industrial Revolution until 1960, the main emphasis was on spatial and visual perception, in the second period from 1960 to 1990 on strengthening social interactions, pedestrian expansion and environmental-behavioral effects of urban spaces, and in recent years since 1990 the most activities and considers theories based on environmental considerations - sustainability and security and humanitarianism in public spheres.

Masoudi (2008) considers the public sphere as a space in which a person expresses himself to another. He considered the feature of this field to be the gathering of private individuals and the discussion of public interests, so this social phenomenon should be available to all citizens. Daneshpour (2007) recognizes the space and different dimensions of public space considers the use of its social capabilities and the promotion of opportunities for participation in collective life to be effective in creating a successful public space.

Pakzad (2005) considers the determination and integration of space, dimensions, proportions, flexibility, form, geometry, materials, confinement, bodies, physical and spatial continuity to affect human perception.

Ghanbaran and Jafari (2013) Another need is to be able to observe and monitor others and surrounding events and happenings, which is one of the determining factors in the responsiveness of space. Besides, the human need for complexity and the possibility of discovering space can be created by creating various spaces and landscapes, various activities to provide diversity, attraction, and various experiences and create movement in visitors from space.

Qaraguzlu (1399) in his research "explains the patterns of urban open space design and social interactions in Malaysia." This research is of a qualitative type which has achieved the objectives of the research with a descriptive-analytical method and deductive reasoning method. The urban landscape designer must relate to the spatial composition and personality of the site and also state the characteristics of the time in which he is present, otherwise what comes to mind from the perspective of today's cities will not have a successful effect.

Etesamian et al. (2019) in their research "identifies and prioritizes design factors affecting the social interactions of citizens in public urban squares." The results show that managerial aspects with a factor load of 0.96 are the first, priority and behavioral and psychological aspects with a factor load of 0.67 are the last priority affecting the number of social interactions in the green of Bojnourd city square. Accordingly, with better attention and planning on the design of urban public squares, it is possible to achieve greater productivity of these spaces to increase the social interactions of citizens.

Heidari (2019) in his research "designing urban spaces to promote social interactions (case study: the historical context of Mahabad)". This study empirically examines behavioral responses, perceptions, and attitudes of people to physical characteristics, land use and use, and management in public spaces of the historical context of Mahabad city and using methods based on environmental behavior sciences that include extensive observations of these streets. For more than eight months and interviewing people who use these streets, you can understand their behaviors and perceptions.

Najafi Manesh (2019) in his research "evaluates the requirements of urban design of open spaces in residential areas by promoting vitality in social interactions in the neighborhood." The purpose of this study is to identify the open space of residential complexes to explain the architectural requirements in optimizing open space to promote vitality and social interactions in the neighborhood. Therefore, the present study uses the method of descriptive-analytical research to investigate the architectural requirements of spaces in optimizing the open space of residential apartments by promoting vitality in social interactions in the neighborhood unit. In the meantime, two examples of residential complexes in Tehran are studied.

Marufi and Astaneh (2018) in their research "Investigate the effect of effective factors in urban space design on social interactions: a case study: the first square of Rajai Shahr in Karaj". The present study aims to promote social interactions in Rajai Shahr's urban square to design this urban square. This research, which is based on the purpose of the applied type and based on the method and nature, descriptive-analytical, can be done using interviews and survey methods, and with SWOT analysis method to evaluate internal and external factors affecting the design of Rajaei urban square. The city pays attention and finally offers suggestions considering the design principles of the urban square.

Pashazanousi (2018) in his research "examines the impact of architecture and urban identity in the design of spaces for women. The presence of women in urban spaces and social interaction with other people is very effective in raising their social and individual morale. Therefore, urban spaces should be designed to be suitable for women. In this study, social interactions in the recreational space of sports, therapy, and the factors affecting them have been studied by the descriptive-analytical method and by collecting information in a library.

Sadeghian and Tabatabai (2018) in their research "design of urban nodes with the approach of promoting vitality and maintaining social interactions at the intersection of Khayyam, Mashhad." The general research method is methodological and descriptive-analytical. Data collection has been done in the field and library. At the end of this research, 3 alternatives have been designed and after evaluating them using AHP hierarchical process technique, the best and optimal alternative has been selected and suggestions and solutions are presented.

Omidvar and Dolatabadi (2015) in their research "formulate methods to improve the quality of urban space by increasing social interactions to design a music house in Tehran." The proposal of these researchers to preserve and maintain it in the form of a museum, as well as the need to consider a place to record the instrument in the studios, and to consider at least two concert halls with different capacities to hold events of different dimensions. A diverse

population, and an administrative section that regulates the various sections to coordinate the necessary affairs to organize the current affairs of this complex.

Christopher Alexander (1977) considers casual and informal meetings as the background for the development of friendships and everyday relationships between people. Social interaction brings people closer to each other with different mental backgrounds and characteristics.

White (1980) The human need based on direct contact with the environment expresses the direct experience of space, people and social activities such as interaction with acquaintances, gathering, walking, playing, recreation and along with sports, physical activities, the possibility of competition and ... It has a direct role in creating a desirable mental image of people from space, dynamism, and excitement, gaining new experiences and environmental education. According to White, the effective factors in promoting the physical aspects of public spaces are monuments, stairs, water features, and other effective factors in encouraging human presence and interaction.

Kaplan (1998) attributed the physical qualities of public space to the presence of natural elements that lead to increased excitement and vitality of the environment, the possibility of rest, pleasant experiences, and better health for people.

Crowe<sup>4</sup> (2000) The need for security can be met by factors such as the visibility of space, the ability to perceive the environment, the creation of place and the aesthetic values of place, and finally the control of place by using various mechanical and natural forms.

In his research, Mehta (2009) "evaluates the role of urban design in promoting social interactions". Findings show that urban design has played a significant role in promoting social interaction in a case study. The findings of this study show that urban design increases the presence and inclusion of urban spaces.

Peters et al. (2010) in their research "Assessing social interactions in urban parks as an element to stimulate social cohesion." Urban parks are places where different ethnic groups come together and where informal, cross-sectional interactions can foster social cohesion. Besides, involvement and concern about parks can facilitate connectivity to these locations. Urban parks can provide a vital place where everyday experiences can be shared and discussed with different people. The design of the park, its location, and the image of the people of the park in combination with the cultural characteristics of different ethnic groups, inform the opportunities for intercultural interactions.

Ramezani and Hamidi (2010) in their research "Evaluation of privacy and social interaction in traditional cities through contemporary urban design in Iran". This study shows that the existence of transitional spaces in traditional cities is the main reason for the simultaneous creation of privacy and social interactions. Therefore, the contemporary shape of these spaces in contemporary residential areas can help increase the above attitudes in contemporary cities.

Neutenz et al. (2013) in their research evaluates "the role of spatial diversity in promoting the potential of social interaction in Flanders (Belgium)". This paper seeks to address both issues in an empirical case study in Flanders and Brussels (Belgium). Exploratory spatial analysis has been performed to discover spatial trends in social interaction potential in order to better understand the role of urban spatial structure in generating social interaction potential. The findings of this study show the positive role of intervening urban design in promoting the sense of social belonging of citizens to urban spaces.

Hanspool & Delgshad (2015) in his research "Assessing the place of urban design in social interactions and urban livability". They focus on how the audience understands and uses the installation and outlines the six modes of social interaction that emerge with the installation.

From this analysis, they derive seven patterns of social interaction, which represent different strategies for designing and applying media architecture to influence social interaction.

Cremona (2016) in his book *Creative Theory* says that if people need social contact, they provide it in any environment. Social interaction is a necessity to respond to human needs for connection and a sense of place, which is the reason for the desirability of social interaction. Therefore, every opportunity to achieve such a goal has been positively evaluated. Another reason is that activities such as interacting with others and observing the activities of people, by creating the grounds for socialization and sociability, contribute to the individual development of human beings.

Albrecht (2016) in his research "evaluates the role of the fourth space as an area for social interaction in today's cities." He introduces this space as the most important arena for the formation of social interactions between people who do not know each other.

In his research, Lloyd et al. (2016) "Explore socially constructive spaces in urban living spaces". This study seeks to discuss a deeper understanding of the social structures of livability resulting from urban design in public spaces, which confirms the complexity of changing urban environments in contemporary society.

Amos Rapaport (2019) is one of the most prominent theorists of behavioral sciences who has paid attention to urban issues. By denouncing the subject of human-environment interaction, he denies the passive position of man in the urban space and considers movement in the environment as the most important factor in recognizing the environment and mental design. John Lang has also studied the role of behavioral sciences in designing the environment. In his work entitled *Creation of Architectural Theory*, he deals with how a person perceives space and influential environmental factors, and considers people's perceptions of the environment as a kind of mental schema that shapes his behaviors and activities in the public arena of the city.

**Table 1:** Components and indicators used in research and related sources

Source	Indicator	Component
Christopher Alexander (1977)	Selective activities	Functional
Peters et al. (2010)	Access to activities	
Ramezani and Hamidi (2010)	Night activities	
Neutens et al. (2013)	Freedom of activity	
Hanspool and Delgshad (2015)	Variety of activities	
Cremona (2016)	User diversity	
Albrecht (2016)	Simplicity	Aesthetic
Lloyd et al. (2016)	Proportion	
Amos Rapaport (2019)	Inviting	
White (1980)	Psychological security	
Kaplan in the year (1998)	Skyline	
Crow (2000)	Human Scale	
Mehta (2009)	History	Identity
Albrecht (2016)	social values	
Lloyd et al. (2016)	Identity elements	
Amos Rapaport (2019)	Historical integrity	
White (1980)	Street art	
Kaplan in the year (1998)	Location	body
Hanspool and Delgshad (2015)	Stability	

Cremona (2016)	access	Environmental
Albrecht (2016)	Environmental comfort	
Lloyd et al. (2016)	Environmental calm	

### 3. Research methodology

The present study is categorized in the research category. The main tool of data collection in this study is quantitative and the researcher-made questionnaire is the main tool of data collection in this study. The structures of this research are based on the theoretical foundations shown in Table 1. In the descriptive statistics section, components such as mean and mean and standard deviation are used, and in the inferential statistics section, components such as factor analysis in SPSS software and structural equations in Smart PLS software are used. The main tool for data collection in this study is a questionnaire. The questionnaire is based on findings related to theoretical foundations. The number of samples based on Cochran's formula for the known population was equal to 384 questionnaires. The questionnaires were distributed by simple random sampling. The results of the questionnaire have been analyzed in statistical software. Content validity ratio index (CVR) and content validity index (CVI) were used to determine the validity of the questionnaires; Finally, Cronbach's alpha coefficient was used to determine the reliability of the questionnaires and the coefficients were higher than the minimum value of 0.6, which indicates the appropriate reliability of the referrals. Descriptive and inferential statistics were also used to analyze the data.

### 4. Research Findings

In descriptive analysis of information, first, the demographic characteristics of the respondents, including their age, gender and level of education, are examined and the results obtained in the study group show:

**Table 2: Demographics**

Abundance percentage	Abundance	Gender
236	61,5	Man
148	38,5	Female
Abundance percentage	Abundance	Age
54	14,1	Under 25 years
101	26,3	25-30
159	41,4	30-40
70	18,2	40 years and up
Abundance percentage	Abundance	education
216	56,8	Bachelor
121	31,5	MA
47	12,2	Doctorate
<b>100</b>	<b>384</b>	<b>Total</b>

The following is a descriptive statistic of research variables such as mean, standard deviation, and variance.



**Table 3:** Variable of responding to human social needs and promoting social interactions

User diversity	Variety of activities	Freedom of activity	Night activities	Access to activities	Selective activities	Functional	Human needs and the promotion of social interactions	Variables
384	384	384	384	384	384	384	384	Number
3.30	3.32	3.83	3.75	3.51	3.29	3.50	3.44	Average
3	3	3	3	3	3	3	3	Middle
1.133	1.047	1.196	1.178	1.154	1.297	1.331	1.068	Standard deviation
1.285	1.098	1.431	1.388	1.331	1.683	1.773	1.142	Variance
-0.231	-0.33	-0.559	-0.426	-0.351	-0.166	-0.145	-0.036	Skewness
0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	Standard skewer error
-0.742	-0.841	-0.997	-1.222	-0.703	-1.144	-1.428	-1.014	Elongation
0.248	0.248	0.248	0.248	0.248	0.248	0.248	0.248	Stretch standard error
1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	The least
5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	the most

Human Scale	Skyline	Psychological security	Inviting	Proportion	Simplicity	Aesthetic	Variables
384	384	384	384	384	384	384	Number
3.2292	3.2318	3.8177	3.3177	3.6312	3.4036	3.4385	Average
3.0000	3.0000	4.0000	3.0000	4.0000	3.0000	3.0000	Middle
1.10993	1.21390	1.16211	1.23614	.96025	1.20317	1.19344	Standard deviation
1.232	1.474	1.350	1.528	.922	1.448	1.424	Variance
.033	-.003	-.583	-.114	-.430	-.066	-.212	Skewness
.125	.125	.125	.125	.125	.125	.125	Standard skewer error
-.670	-1.079	-1.063	-1.145	-.018	-1.258	-.984	Elongation
.248	.248	.248	.248	.248	.248	.248	Standard elongation error

1.0 0	1.00	1.00	1.00	1.00	1.00	1.00	The least
5.0 0	6.00	5.00	5.00	5.00	5.00	5.00	the most

**Table 4:** Aesthetic variables

**Table 5:** Identity variable

Street art	Historical integrity	Identity elements	social values	History	Identity	Variables
384	384	384	384	384	384	Number
3.5156	3.2995	3.3255	3.5456	3.2083	3.3789	Average
4.0000	3.0000	3.0000	4.0000	3.0000	3.0000	Middle
1.15384	1.29728	1.36375	1.12873	1.25094	1.26313	Standard deviation
1.331	1.683	1.860	1.274	1.565	1.595	Variance
-.351	-.166	-.002	-.170	.075	-.107	Skewness
.125	.125	.125	.125	.125	.125	Standard skewer error
-.703	-1.144	-1.406	-1.128	-1.238	-1.191	Elongation
.248	.248	.248	.248	.248	.248	Standard elongation error
1.00	1.00	1.00	1.00	1.00	1.00	The least
5.00	5.00	5.00	5.00	5.00	5.00	the most

**Table 6:** Body variable

accessibility	Sustainability	Location	Body	Variables
384	384	384	384	Number
3.4891	3.3242	3.8307	3.5480	Average
3.0000	3.0000	4.0000	3.5000	Middle
.85776	1.04770	1.19616	1.13336	Standard deviation
.736	1.098	1.431	1.285	Variance
.046	-.033	-.599	-.067	Skewness
.125	.125	.125	.125	Standard skewer error
-.274	-.841	-.977	-1.276	Elongation
.248	.248	.248	.248	Stretch standard error
1.00	1.00	1.00	1.00	The least
5.00	5.00	5.00	5.00	the most

**Table 7:** Environmental variable

Environmental calm	Environmental comfort	Environmental	Variables
384	384	384	Number
3.2995	3.3255	3.3125	Average
3.0000	3.0000	3.0000	Middle
1.29728	1.36375	1.02123	Standard deviation
1.683	1.860	1.043	Variance
-.166	-.002	.056	Skewness
.125	.125	.125	Standard skew error
-1.144	-1.406	-.853	Elongation
.248	.248	.248	Stretch standard st
1.00	1.00	1.00	The least
5.00	5.00	5.00	the most

Before the hypotheses of this research can be tested, it must first be ensured that the variables are normal. According to Table 8, all variables are abnormal.

**Table 8:** Results of Kolmogorov-Smirnov test to check the assumption of normal or informal

P-value	Test statistics	Sample size	Valuables
0.000	1.411	384	Meeting human social needs and promoting social interactions
0.000	1.900	384	Functional
0.000	1.189	384	Selective activities
0.000	1.609	384	Access to activities
0.000	2.440	384	Night activities
0.000	1.789	384	Freedom of activity
0.000	1.246	384	Variety of activities
0.000	1.216	384	User diversity
0.000	1.198	384	Aesthetic
0.000	1.320	384	Simplicity
0.000	1.908	384	Proportion
0.000	1.181	384	Inviting
0.000	1.600	384	Psychological security
0.000	2.241	384	Skyline
0.000	1.764	384	Human Scale
0.000	1.231	384	Identity
0.000	1.263	384	History
0.000	1.116	384	social values
0.000	1.415	384	Identity elements
0.000	1.905	384	Historical integrity
0.000	1.147	384	Street art
0.000	1.609	384	body
0.000	2.448	384	Location
0.000	1.754	384	Stability
0.000	1.249	384	access
0.000	1.213	384	Environmental
0.000	1.411	384	Environmental comfort
0.000	1.900	384	Environmental calm

According to the research findings, all correlations had values less than 0.8, so the existence of multiple common linear relationships between variables is ruled out. In the partial least squares method, the average variance extracted (AVE) is used to calculate the convergent validity of the structures.

**Table 9:** Cronbach's alpha coefficient

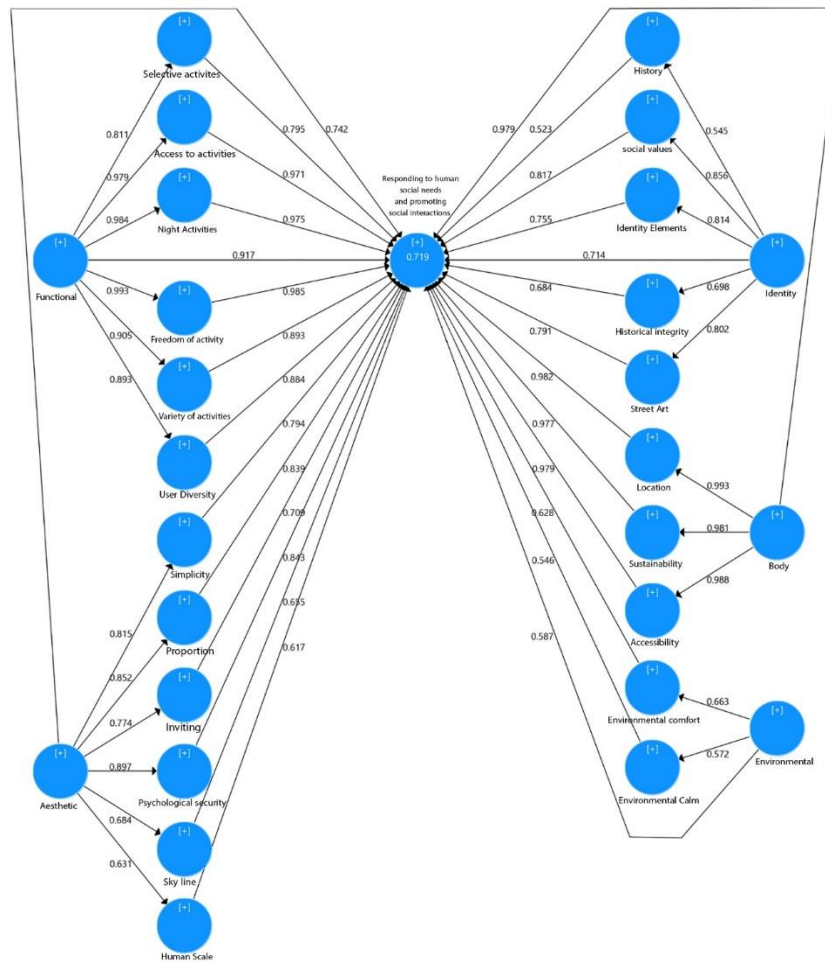
Composite reliability	Cronbach's alpha	Variables
0.804	0.778	<b>Reliability of all variables</b>

According to the table above, the criteria for the structure is higher than 0.7, which indicates the appropriate reliability of the model. If the value of the combined reliability for each structure is above 0.7, it indicates the appropriate internal reliability for size models.  $\alpha$  has a value of less than 0.6 indicates lack of reliability. It is important to note that hybrid reliability in structural modeling is a better measure of Cronbach's alpha. Because in calculating the Cronbach's alpha coefficient for each structure, all the indices are entered with equal importance in the calculations. While for calculating the reliability of the combination, the indicators with more factor load are more important. This makes the composite reliability values of the structures more realistic and accurate than their Cronbach's alpha. In the partial least squares method, the Average Variance Extracted (AVE) is used to calculate the convergent validity of the structures.

**Table 10:** Average variance Extracted (AVE)

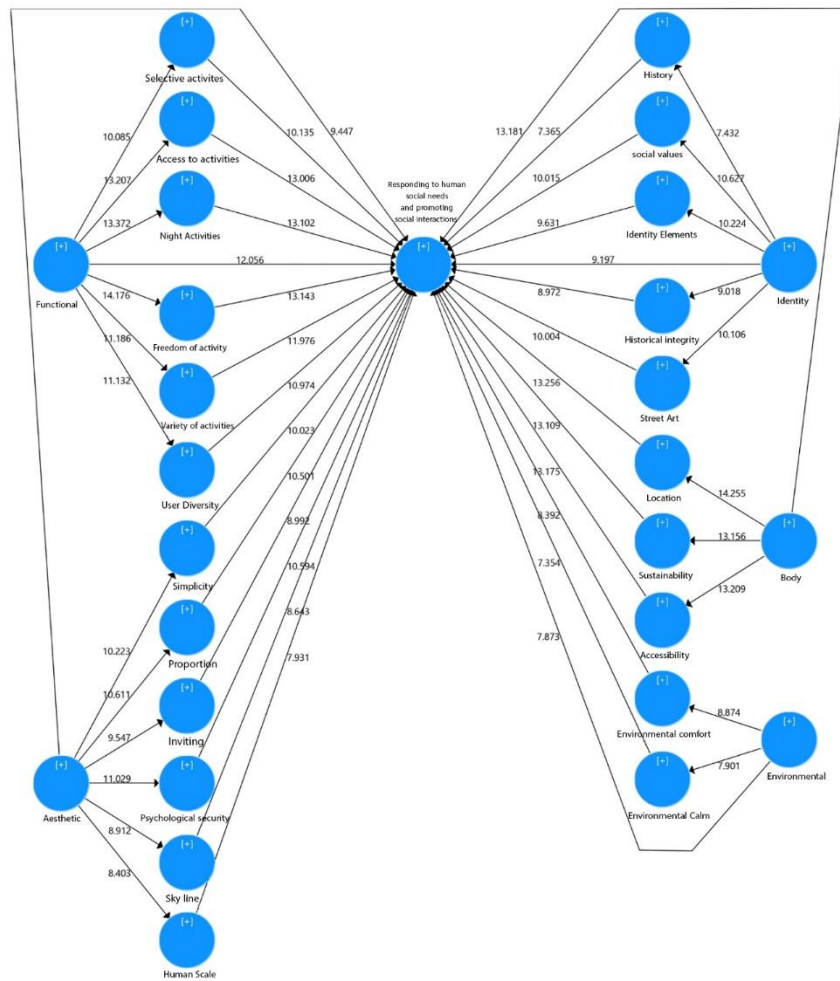
Average Variance Extracted (AVE)	Valuable
.72180	Meeting human social needs and promoting social interactions
0.6712	Functional
0.8787	Selective activities
0.6334	Access to activities
0.5077	Night activities
0.8743	Freedom of activity
0.7809	Variety of activities
0.6369	User diversity
0.7888	Aesthetic
0.7243	Simplicity
0.6719	Proportion
0.8749	Inviting
0.6365	Psychological security
0.5855	Skyline
0.8749	Human Scale
0.7826	Identity
0.6389	History
0.7766	social values
0.7434	Identity elements
0.6710	Historical integrity
0.8749	Street art
0.6346	body
0.5810	Location
0.8754	Stability
0.7829	access
0.8900	Environmental
0.7200	Environmental comfort
0.6744	Environmental calm

As can be seen in the table above, the average value of extraction variance for the variables of this study is between 0.5077 and 0.8900, which is higher than the minimum value of 0.5, which indicates the validity of the appropriate convergence of the structures. Before entering the stage of testing research hypotheses, one should make sure that the questions related to research variables are correct, therefore, in this stage, confirmatory factor analysis is used.



**Figure 1:** Standard numbers of research questions

As can be seen in the model, all numbers are above 0.3, therefore; no questions are removed. The values in this graph measure the relationships between latent (unobserved) variables in a meaningful way.



**Figure 2:** Significant numbers of research questions

Criterion R2 determines the effect of an exogenous variable on an endogenous variable. Three values of 0.19, 0.33, and 0.67 are considered as the criterion values for weak, medium, and strong values of fit of the structural part of the model by R2 criterion.

**Table 11:** Determination coefficient

Intensity	R <sup>2</sup>	The dependent variable
medium	0.719	Meeting human social needs and promoting social interactions
medium	0.719	average

Predictive quality (Q<sup>2</sup>): This criterion determines the predictive power of the model. The three values are 0.02, 0.15 and 0.35 to indicate the weak, medium and strong predictive power of the structure or its associated exogenous structures.

**Table 12:** Predictive quality (Q<sup>2</sup>)

Intensity	Q <sup>2</sup>	The dependent variable
intense	0.553	Meeting human social needs and promoting social interactions
intense	0.553	Average

Finally, GOF index was used to fit the model. The GOF criterion for overall model fit is calculated to be 0.39, which indicates a strong fit of the model.

Table 12 presents the model quality indicators in the partial least squares method.

**Table 13:** Model quality indicators and their acceptance level in the partial least squares method

Average variances extracted	Composite reliability	Construction of cross-validation	Valuable
<b>0.5&gt;</b>	<b>0.7&gt;</b>	<b>Acceptance level 0 = &lt;</b>	
0.561	0.715	0.137	Meeting human social needs and promoting social interactions
0.601	0.743	0.182	Functional
0.667	0.721	0.209	Selective activities
0.563	0.799	0.305	Access to activities
0.518	0.741	0.317	Night activities
0.599	0.773	0.299	Freedom of activity
0.618	0.730	0.375	Variety of activities
0.551	0.715	0.300	User diversity
0.623	0.771	0.121	Aesthetic
0.672	0.705	0.118	Simplicity
0.569	0.729	0.223	Proportion
0.571	0.772	0.205	Inviting
0.585	0.769	0.114	Psychological security
0.591	0.775	0.109	Skyline
0.551	0.780	0.092	Human Scale
0.611	0.748	0.116	Identity
0.607	0.717	0.101	History
0.593	0.764	0.106	social values
0.588	0.703	0.094	Identity elements
0.560	0.718	0.115	Historical integrity
0.602	0.712	0.118	Street art
0.671	0.710	0.126	body
0.739	0.881	0.122	Location
0.544	0.718	0.325	Stability
0.570	0.765	0.122	access
0.564	0.793	0.109	Environmental
0.593	0.799	0.217	Environmental comfort
0.544	0.718	0.315	Environmental calm

## 5. Main Hypothesis 1

The promotion of functional components in the center of culture and art has a direct role in responding to human social needs and promoting social interactions.

Considering the path coefficient of the variables of promotion of functional components in the center of culture and art in order to meet human social needs and promotion of social interactions which is 0.917 and t-statistic of 9.447, it can be said: promotion of functional

components in the center of culture and art It responds to human social needs and promotes social interactions. This hypothesis is confirmed.

### **5.1.Sub-hypotheses related to the first main hypothesis**

- 5.1.1. Improving selective activities is one of the ways to promote functional components in the Center for Culture and Arts in order to meet human social needs and promote social interactions. Considering the path coefficient of variables for improving selected activities in order to meet human social needs and promoting social interactions, which is 0.795 and t-statistic to 10.135, it can be said that improving selected activities to meet human social needs and promoting social interactions.
- 5.1.2. Improving access to activities is one of the ways to improve the functional components in the Center of Culture and Arts in order to meet human social needs and promote social interactions. Considering the path coefficient of variables to improve access to activities to meet human social needs and promote social interactions which is 0.971 and t-statistic to be 13.006, we can say: improving access to activities to meet human social needs and enhance interactions has a social. This hypothesis is confirmed.
- 5.1.3. Improving night activities is one of the ways to improve the functional components in the Culture and Arts Center to meet human social needs and promote social interactions. Considering the coefficient of variables of improving night activities to meet human social needs and promoting social interactions, which is 0.975 and t-statistic of 13.102, it can be said that improving night activities to meet human social needs and promoting social interactions. This hypothesis is confirmed.
- 5.1.4. Improving the freedom of activities is one of the ways to improve the functional components in the Center of Culture and Arts to meet human social needs and promote social interactions. Considering the coefficient of variables of improving the freedom of activities to meet human social needs and promoting social interactions, which is 0.985 and a t-statistic of 13.143, it can be said that improving the freedom of activities to meet human social needs and promoting social interactions. This hypothesis is confirmed.
- 5.1.5. Diversity of activities is one of the ways to improve the functional components in the Center of Culture and Arts to meet the social needs of human beings and promote social interactions. According to the coefficient of variation of activity variables to meet human social needs and promote social interactions, which is 0.893 and t-statistic to 11.976 can be said: diversity has activities to meet human social needs and promote social interactions. This hypothesis is confirmed.
- 5.1.6. Diversity of users is one of the ways to improve the functional components in the Center of Culture and Arts to meet human social needs and promote social interactions. Considering the coefficient of variables of users 'diversity to meet human social needs and promote social interactions, which is 0.884 and t-statistic to be 10.974, it can be said that users' diversity is to meet human social needs and promote social interactions. This hypothesis is confirmed.

### **6. Main Hypothesis 2**

Promoting aesthetic components through design in the Center for Culture and Arts to meet human social needs and promote social interactions has a direct role. Considering the path coefficient of the variables of promoting aesthetic components to meet human social needs and promoting social interactions which is 0.724 and t-statistic of 9.447, it can be said: upgrading aesthetic components to meet human social needs and promoting interactions It has a social. This hypothesis is confirmed.

### **6.1.Sub-hypotheses related to the second hypothesis**

- 6.1.1. Observing simplicity in design is one of the aesthetic interventions in the Center of Culture and Arts to meet the social needs of human beings and promote social interactions. Considering the coefficient of variables of observing simplicity to meet human social needs and promoting social interactions, which are 0.794 and t-statistic of 10.023, it can be said: observing simplicity to meet human social needs and promoting social interactions. This hypothesis is confirmed.
- 6.1.2. Observance of appropriateness in design is one of the aesthetic interventions in the center of culture and art to meet the social needs of human beings and promote social interactions. Considering the coefficient of proportion of the variables of observing proportionality in order to meet human social needs and promoting social interactions, which is 0.839 and t-statistic in the amount of 10.501, it can be said: observing proportionality to meet human social needs and promoting social interactions. This hypothesis is confirmed.
- 6.1.3. Inviting spaces through design is one of the aesthetic interventions in the center of culture and art to respond to human social needs and promote social interactions. According to the coefficient of path of the inviting variables of spaces to meet human social needs and promote social interactions, which is 0.709, as well as a t-statistic of 8.992, it can be said: inviting spaces to meet human social needs and promote social interactions. This hypothesis is confirmed.
- 6.1.4. Providing psychological security through design is one of the aesthetic interventions in the Center of Culture and Arts to meet human social needs and promote social interactions. Considering the path coefficient of psychological security variables to meet human social needs and promote social interactions, which is 0.843 and t-statistic of 10.594, it can be said that mental security is to meet human social needs and promote social interactions. This hypothesis is confirmed.
- 6.1.5. Observing the sky line in design is one of the aesthetic interventions in the center of culture and art to meet the social needs of human beings and promote social interactions. Considering the coefficient of variables of observing the skyline to meet human social needs and promoting social interactions, which is 0.655 and t-statistic of 8.683, it can be said: observing the skyline to meet human social needs and promote social interactions. This hypothesis is confirmed.
- 6.1.6. Observing the human scale in design is one of the aesthetic interventions in the center of culture and art to respond to human social needs and promote social interactions. Considering the coefficient of variables of observing human scale to meet human social needs and promoting social interactions, which is 0.617 and t-statistic of 7.931, it can be said: observing human scale to meet human social needs and promote social interactions. This hypothesis is confirmed.

### **7. Hypothesis 3**

Promoting identity components through design in the Center for Culture and Arts has a direct role to play in meeting human social needs and promoting social interactions. Considering the path coefficient of variables of promotion of identity components to meet human social needs and promotion of social interactions, which is 0.714 and t-statistic of 9.197, it can be said: promotion of identity components to meet human social needs and promotion of social interactions. This hypothesis is confirmed.

### **7.1.Sub-hypotheses related to the third hypothesis:**

- 7.1.1. Observance of historicity in design is one of the components of identity in the center of culture and art to meet human social needs and promote social interactions. Considering the coefficient of the variables of observance of historicity in order to respond to human social needs and promotion of social interactions, which is 0.523 and t-statistic of 7.365, it can be said: observance of historicity to meet human social needs and promotion of social interactions. This hypothesis is confirmed.
- 7.1.2. Transfer of social values in design is one of the components of identity in the center of culture and art to meet human social needs and promote social interactions. Considering the coefficient of path of variables of transfer of social values in order to meet human social needs and promotion of social interactions which is 0.817 and t-statistic of 10.015 can be said: transfer of social values to meet human social needs and promote social interactions. This hypothesis is confirmed.
- 7.1.3. Strengthening identity elements in the design is one of the identity components in the Center for Culture and Arts to meet human social needs and promote social interactions. Considering the path coefficient of variables of strengthening identity elements to meet human social needs and promoting social interactions, which is 0.755 and t-statistic of 9.631, it can be said: strengthening identity elements in order to meet human social needs and promote social interactions. . This hypothesis is confirmed.
- 7.1.4. Strengthening historical integrity in design is one of the components of identity in the center of culture and art to meet human social needs and promote social interactions. Considering the coefficient of variables of strengthening historical integrity in order to meet human social needs and promoting social interactions, which is 0.684 and t-statistic of 8.972, it can be said: strengthening historical integrity in order to meet human social needs and promote social interactions. This hypothesis is confirmed.
- 7.1.5. The use of street art in design is one of the components of identity in the center of culture and art to meet human social needs and promote social interactions. Considering the coefficient of variables of using street arts to meet human social needs and promoting social interactions, which is 0.791 and t-statistic to be 10.004, it can be said that using street arts to meet human social needs and promote social interactions. . This hypothesis is confirmed.

### **8. Main Hypothesis 4**

The promotion of physical components in the Center of Culture and Arts has a direct role in responding to human social needs and promoting social interactions. Considering the coefficient of variables of promotion of physical components in order to meet human social needs and promotion of social interactions, which is 0.979 and t-statistic of 13.181, it can be said: promotion of physical components to meet human social needs and promotion of social interactions. This hypothesis is confirmed.

#### **8.1.Sub-hypotheses related to Hypothesis 4**

- 8.1.1. A readable and transparent location is one of the ways to meet human social needs and promote social interactions in the center of culture and art. Considering the path coefficient of legible and transparent location variables to meet human social needs and improve social interactions by 0.982 and t-statistic by 14.255, it can be said:



legible and transparent location to meet human social needs and promote interactions. It has social. This hypothesis is confirmed.

8.1.2. Observing sustainability in design is one of the ways to meet human social needs and promote social interactions in the center of culture and art. Considering the path coefficient of variables of observing stability to meet human social needs and promoting social interactions, which is 0.977 and the t-statistic in the amount of 13.156, it can be said: observing stability in order to meet human social needs and promote social interactions. This hypothesis is confirmed.

8.1.3. Facilitating access is one of the ways to meet human social needs and promote social interactions in the center of culture and art. Considering the path coefficient of accessibility variables in order to meet human social needs and promote social interactions, which is 0.979 and t-statistic to be 13.209, it can be said that access facilitation is to meet human social needs and promote social interactions. This hypothesis is confirmed.

## **9. Main Hypothesis 5**

The promotion of environmental components in the center of culture and art has a direct role in responding to human social needs and promoting social interactions. Considering the coefficient of the path of the variables of promotion of environmental components to meet human social needs and promotion of social interactions which is 0.587 and t-statistic of 7.873 can be said: upgrade of environmental components to meet human social needs and promotion of social interactions. This hypothesis is confirmed.

### **9.1.Sub-hypotheses related to Hypothesis 5**

9.1.1. Observing environmental comfort in design is one of the ways to meet human social needs and promote social interactions in the center of culture and art. Considering the path coefficient of environmental comfort variables to meet human social needs and promote social interactions, which is 0.628 and t-statistic is 8.874, it can be said: environmental comfort is to meet human social needs and promote social interactions. This hypothesis is confirmed.

10.1.1. Observing environmental tranquility is one of the ways to respond to human social needs and promote social interactions in the center of culture and art. Considering the coefficient of the variables of observing environmental tranquility to meet human social needs and promoting social interactions, which is 0.546 and t-statistic to be 7.901, it can be said: observing environmental tranquility to meet human social needs and promoting social interactions. This hypothesis is confirmed.

## **11. Results**

11.1. The use of mixed-use is recommended, the desired art center should have mixed-use to attract maximum groups to the space and increase the diversity and breadth of the site.

11.2. Increase of voluntary activities, the more voluntary activities, the more general space. These optional activities include playing, seeing, and being seen, attending group activities, and so on.

11.3. Access to the intended art center should be facilitated. Access to the art center should be facilitated through various means such as the variety of modes of transportation so that this site can be considered as a landmark for the public.

11.4. Access to different parts of the art center should be facilitated. One must be able to move freely from anywhere in the art center to another place. As a result, disruptive factors such as cars should be eliminated as much as possible.

- 11.5. Groups such as women and children are also part of the space. As a result, by eliminating malefactors such as secret spaces, insecurity, and increasing open eyes on the street, the presence of these people on the site should be made.
- 11.6. The creation of long walls at the level of the art center should be avoided. The permeability of this center should be high so that different people can easily enter and exit.
- 11.7. In designing an art center, one must observe the human scale and avoid the domination of the masses over space. People should not feel confined.
- 11.8. At the level of the art center, different and varied sitting spaces should be designed that are resistant to cold and heat. The tree can be a good element to create shade in the design.
- 11.9. A good local space should have different opportunities to keep citizens in space for a long time, services that include restaurants, coffee shops.
- 11.10. Pedestrianism is very important. Designing a space for humans should be accompanied by pedestrianization. Pedestrianization helps to experience urban space.
- 11.11. All constructions in and around the art center must be done with an architectural form and content. It is necessary to coordinate materials, walls, roads, urban furniture, banners, shop signs, and all components of the space.
- 11.12. The space must be open 24 hours a day. The importance of nightlife is essential, and it requires the definition of 24-hour uses such as grocery stores, supermarkets, and 24-hour pharmacies to boost nightlife at the art center.
- 11.13. Space should not be one-piece. If space becomes a commercial, office, etc., it means the loss of some space consumers and is not ideal. Uses within the art center should be varied and extensive.
- 11.14. As the variety of space uses increases, so does the diversity of space consumers, and as a result, space becomes a more diverse arena, and the chances of social interactions increase.
- 11.15. Access to activities and space should be equal. A playground for women should be designed so that half of our human groups have the right to social life.
- 11.16. The edges need to be strengthened. The seating area is not only urban furniture, but also the edges related to the waterfront, the edges related to the parks, etc. can be designed for sitting and increase the variety of the space.
- 11.17. All good urban spaces need a strong urban symbol to be an element of artistic identity. This element of identity can be a famous sculpture or Sardis or any other urban element in the art center.
- 11.18. Designing spaces for photography is essential. These spaces help people have more reasons to be in space.
- 11.19. Social interactions occur when people do joint activities with each other at the same time and place. This activity can be group sports, watching a theater or street music, and so on.
- 11.20. The art center should also be used appropriately. A pedestrian area can be a good opportunity to hold a book fair, a fair of relatives, youth achievements, and so on. This means using space in different ways, in other words, different people use space.
- 11.21. Green space is of great importance. The more green space the site has, the more inviting this space becomes.

### **Conclusion**

The issue of promoting social interactions and human social needs depends on a set of functional, aesthetic, identity, physical, and environmental components. In fact, if the designer or architect is going to respond to the social needs and interactions and social inclinations of human beings by using a series of design and architectural interventions in such an environment, he must change in the above-mentioned areas. Promoting a sense of place through the creation of identity elements, as well as enhancing the level of function of public spaces by creating sitting spaces, as well as putting together areas for social interaction by creating pauses and watching activities, should be considered; Another task that an architect or urban designer has in the meantime is to create the ground for more presence and permanence of the audience in the urban space with soft interventions in the urban space. In such a situation, what is necessary is to think of measures that can help citizens to remain in space. According to what was said in this section, to present strategies to promote social interactions at the site level, which examined above.

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