Kufa Journal of Engineering
Vol. 13, No. 1, January 2022, P.P. 1-21
Article history: Received 10 August 2020, accepted 22 October 2020

ANALYTICAL STUDY OF THE LANDSCAPE ACTIVATION DIMENSIONS

Maryam R. Abdulkareem[1] and Rawaa F. Naom[2]

[1]MSc student, University of Technology, Architecture Eng. Dep. Baghdad-Iraq. Email: maryalmarsomy@gmail.com

[2]Assistant Prof. at Architecture Engineering Department, University of Technology, Baghdad-Iraq. Email: rawaa.f.abbawi@uotechnology.edu.iq

https://doi.org/10.30572/2018/kje/130101

ABSTRACT

Landscapes are considered an essential and effective element in the city. However, the neglect occurring in them reflects negatively on the city, which requires the need to research how to deal with this through the concept of activating the landscapes. To determine the dimensions, the designer can rely on it in the activating of these spaces, the problem of research has emerged as (The absence of a theoretical framework that determines the dimensions involved in activating landscapes, which the designer can rely on). And to solve the research problem, through literature review, the research reaches the activating landscapes concept definition, and the dimensions of activating these spaces were extracted with its verification indicators to build the theoretical framework. Four dimensions were reached to activate the landscapes, which included both the social, economic, environmental, and symbolic dimensions. The research assumed, "the landscape activation requires the existence of the symbolic dimension, with the three dimensions of sustainability (environmental-social-economical)".

To test the validity of the hypothesis, in the practical study, three landscape projects were selected, they are similar in having neglected spaces had been activated in its city centers, so to measure the extent to which the indicators of these dimensions have been achieved. The results showed the symbolic dimension as the most prominent dimension for activating the landscapes, followed by the environmental, then social, and finally the economic dimension. Finally, the research achieved a theoretical model for the landscape activation dimensions and its indicators and values, which the designer can rely on it in activation of these spaces.

KEYWORDS: activating landscapes, dimensions of activating landscapes, the symbolic dimension, the social dimension, the economic dimension, the environmental dimension.

Article information: This manuscript was handled by Abbas Al-Hdabi, Managing.

1. INTRODUCTION

The research dealt with the concept of landscape activation, to reach the points that work to activate these spaces, especially the activation dimensions which the designer can rely on them, so emerged the research problem of (The absence of a theoretical framework that determines the dimensions involved in activating landscapes, which the designer can rely on). To solve the problem, a literature review of the previous studies had been for determined the activation dimensions and their indicators and values, which formed the theoretical framework, which was tested and verified by the research hypothesis in the case study. Then, research reached a theoretical model, conclusions, and recommendations for the landscape activation dimensions.

2. PREVIOUS STUDIES

The concept of activating landscapes been mentioned in many previous studies, where it been defined as the process of enhancing public spaces and places to improve the overall environment of open urban spaces for the community through a set of design principles. Also, successfully activated landscapes have a set of criteria which include easy access, available to all, attractive from inside and outside, safe for users, enhances health and well-being for their users, environmentally comfortable, supports the programs for which they are designed, preserves the economy, equates expressing visual art with being a social place, and supporting community participation in its design (Hammadi, 2012).

It has also been linked with the concept of protection, as both the protection of landscapes and the inspiring public space equipment work to facilitate and stimulate social integration and communication, and that both performance, events, or public space furniture fall within the concept of art to activate space (Pazder, 2014).

In another study, activation landscapes was linked with the strategy of reflecting the national identity, by strengthening the landscapes as a memorial, and employing them to spread the local identity to strengthen the relationship between the past and the present, which increases the interdependence of the community members (Sumartojo, 2015). As it was noted that culturally activated landscapes serve to define a community's identity and provide vibrant spaces (Ping, 2012).

The concept of activating landscapes is defined as the process of the visually designing landscapes, to activate its inherent characteristics, that refer to past times by preserving the space and its historical continuity, highlighting the tangible features in the space as

topography, movement, and afforestation and the intangible such as collective memory and the spirit of the place (Karamanea, 2015).

The activation of landscapes has been linked to the sustainable development, management and urban planning to provide sustainable landscapes that can be cultivated in urban environments by activating these spaces within social, economic and environmental sustainable dimensions. It was also referred that the activated sustainable green landscapes characterize with its physical characteristics in terms of size, public facilities, comfort, public accessibility and vitality, as they indicated that large landscapes provide a greater number of visitors and more opportunities for physical activity. As for the small landscape, they facilitate the opening of public places such as spaces for children to play, the presence of people, relaxation and mixing (Rakhshandehroo and et al, 2016).

As came the concept of activating landscapes is linked to the place, Where it has been indicated that the activation of the place in the past was part of a field of study called the creative tradition, which is one of two approaches, the first of which is for art itself to be a project and the second for art to take the form of a participatory project led by the community, and the latter aims at social change at the grassroots level (Madsen, 2017).

From the above, we can consider that the concept of activating landscapes is "the process of improving and strengthening landscapes to reach spaces that are characterized by flexibility, functional diversity, safe, usable by all groups, and with high accessibility, concerned with preserving the characteristics of cultural and historical spaces, their vital social structure, their detailed and design components within certain dimensions, including economic and social".

For determining the rest of the dimensions that can contribute to the activation of landscapes, and reach a comprehensive framework for all of these dimensions, the research problem has emerged as, "The absence of a theoretical framework, that determines the dimensions of activating landscapes, which the designer can rely on it". To solve the research problem through previous studies, the most important statements about the dimensions of the activating landscape will be extracted.

To solve the problem, and through a literature review, the research had extracted The most important indicators about the landscape activation dimensions.

2.1. Extraction the dimensions of activating landscapes

In the Previous studies, each one of it indicated to some dimensions that characterize the process of activating the landscapes, where the research has extracted all these dimensions and then crystallized them as follows:

- The social dimension: The social dimension has been linked to the concept of sustainable landscapes through social interaction and cohesion, reducing the possibility of accidents, entertainment, learning from and experiencing nature, children games and benefiting from their impact on mental and physical health (Rakhshandehroo,et al , 2016). Whereas providing spaces and facilities for entertainment and leisure, facilitating social communication, and providing a safe and clean environment through visual links and corridors to reach the surrounding landscapes spaces; are achieve a social interaction in the landscapes (Hammadi, 2012). The social dimension in landscape is also achieved by engaging communities to achieve long-term success in these spaces and their ability to enhance interaction and social cohesion (Rakhshandehroo, et al, 2016).

The ease of use and increase the safety of landscapes can be achieved by fixing paving materials according to the user's needs, improving street lighting, making space accessible to all groups, as well as educating people and enhancing their awareness in the management of spaces and thus caring for their cities to enhance the social aspect of space (Gambaro, et al, 2017). The social activation of abandoned spaces done by creating public spaces with seasonal and cultural activities, linking green landscapes such as walking gardens, grouping the recreational activities and creating gathering spaces (Georgieva, 2014). as well as improving people's perception within space by relying on technology and internet networks such as providing pictures of space and suggested routes. Also, there is a need to involve everyone in the design process and planning to preserve the cultural heritage (Gambaro,et al, 2017). The social activation of landscapes can be achieved by the ease of access with using the information technology, illustrative plans for sites, and distinctive points in space, it also achieved by user experience in determining the direction, through providing thematic routes that allow people to choose from it, which may be long or short (Scavone, 2018).

So, the following indicators for the social dimension have been extracted: Increasing social interactivity, Perception enhancement and community Awareness. Also we extracted the values of these indicators as shown in Table 1.

- The economic dimension: The economic aspect of landscapes is activated by preserving the points of attraction in space and transforming them into a distinct integrated service area,

providing commercial jobs, workshops and to solve the unemployment issue and building new parks that provide many jobs and promote the development of services according to the region's specificity (Ping, 2012). The role of landscape management has been mentioned in achieving the economic goals to make city centers more attractive by activating old parks to improve the service industry at all levels of shops and cultural events, by investing in existing commercial networks, small shops, and antique activities (Gambaro,et al, 2017). Landscapes are strengthened to serve cultural tourism and thus activate the economic aspect in these spaces, as the building of external spaces for a cultural tourism site works to support the economic dimensions of the space, serve the inhabitants of the place by promoting literary works to highlight the creative efforts of novelists and supporting local handicrafts such as tourist souvenir shops to support the culture of the region (Zhou, 2016).

So, the following indicators for the economic dimension have been extracted: Improving the domestic economy and reuse of existing resources. Also we extracted the values of these indicators as shown in Table 1.

- The environmental dimension: The environmental dimension of green landscapes include nature conservation, biodiversity, urban heat islands reduction, airflow and quality, pollution reduction, and carbon sequestration, which are achieved through water management (soil protection and rainwater drainage), the provision of public facilities, which include routes, corridors, sports stadiums, fountains, rest areas, and their well-maintenance, and the operating of canals or ancient rivers from linear urban gardens by greening of the banks and their restoration and revitalization to create blue roads bordered by green roads, and the treatment of the left linear green space such as railways or power plants by replacing it with soil and weeds to improve street landscape (Rakhshandehroo, et al, 2016).

The landscapes function is linked to the environmental dimension, which can be achieved through a set of principles that include increasing the amount and diversity of green spaces to reduce radiation gain for buildings and associated structures, planting tall trees with wide and leafy shades in urban areas to reduce wind blockages, improving the microclimate through greening and vegetation, providing sunshades and windbreaks (Hammadi, 2012). The environmental activation of the landscapes is achieved by conserving resources and energy by using waste or recycled materials, reusing existing materials in creating paths from abandoned stone, or converting existing paths and enhancing them with cultural sculptures (Ping, 2012).

And so, the following indicators for the environmental dimension have been extracted:

Nature conservation, Climate improvement and physical Preservation. Also we extracted the values of these indicators as shown in Table 1.

- The symbolic dimension: The symbolic dimension of landscapes is achieved by enhancing the identity and memory of the place by adopting the elements of space to achieve them as designing the land of space, adoption of vegetation (seasonal plants and local plants) as a means of narration, and preserve the landscapes without compromising them (Karamanea, 2015). The symbolic dimension of activating landscapes was linked to the creation of a cultural, historical, physical, and moral ambiance in the landscapes. Physically, which included the interest in night lighting for landmarks, the implementation of recreational activities in them, as well as innovation in old stores by adopting technology (Zhou, 2016). Maintenance of buildings, memorials, sidewalks, space furniture such as lighting (Gambaro, 2017), protecting nature elements such as trees and plant materials in archaeological gardens (Celikyay, 2006). Morally, they emphasized the promotion of activities in a popular ambience such as festivals, and promotion of literary works such as novels and handicrafts, souvenirs, and the promotion of popular performance by adding appropriate facilities such as building cafes, outdoor theatres for folk performance, and entertainment spaces (Zhou, 2016). Also, achieving harmony in materials with the historical environment works to enhance the cultural and historical values of landscapes through achieving harmony in the materials used in the space and the facades of the surrounding historical buildings, and achieving harmony between sidewalks and vegetation design with the historical environment (Celikyay, 2006).

And so, the following indicators for the symbolic dimension have been extracted: Enhancing identity and location memory, Promote cultural and historical values of space and harmony of materials with the historical environment. Also we extracted the values of these indicators as shown in Table 1.

Thus, the research has identified both the environmental, symbolic, economic, and social dimensions as the main dimensions for activating the landscape, and then the indicators and the possible values to achieve each dimension were extracted, which all formed the theoretical framework, shown in Table 1.

Table 1. The theoretical framework for the dimensions of activating the landscapes, (prepared by the researchers).

Main concept	Indicators	values	
The social dimension	**Increasing social interactivity**	Yards for gathering	Spaces with seasonal and cultural activities
			Space for entertainment (children's play and sports games)
		Increase security and safety in space	Install paving materials according to users' needs
			Street lighting improvement
			Make space accessible to all groups
	Perception enhancement	The use of technologies like images and blueprints of the space and routes to achieve ease of access	
		Motion clarity	
		Determine the direction	
	Community Awareness)	Educating people and enhancing their awareness of space management	
		Involving the community in the design and planning process for preserving the cultural heritage of the landscape	
The economic dimension	**Improving the domestic economy**	Support small kiosks and activities within the perimeter of the landscape	
		Maintaining attractions in the space and turning it into an integrated service area	
		Supporting the display and sale of handicrafts and souvenirs within the boundaries of the landscapes	
	Reuse of existing resources	Natural resources	
		Physical resources	
The environmental dimension	**Nature conservation**	Water management (soil protection and rainwater drainage)	
		Promoting the river routes and linear urban parks	
		Construction of blue roads bordered by green roads	
	Climate improvement	Increase the diversity of green spaces to reduce heat gain	
		Increased greening, vegetation and long shade trees	
		Providing sun umbrellas and windbreaks	
	Physical Preservation	Reuse of materials and waste as (abandoned stone)	
		Generating new uses for discarded structures within a landscape, such as railways and laboratory spaces	
The symbolic dimension	**Enhancing identity and location memory**	Dependence on space elements in the narration (land, vegetation, seasonal plants, soil, and trees)	
		Preserving cultural landscapes	
	Promote cultural and historical values of space	Physically	Maintenance of structures and monuments
			Interest in the night lighting of the monument and historical sites
			Protecting the elements of nature (trees and plants in archaeological gardens)
			Enhancing the spaces with cultural sculptures
			Innovation in old stores by adopting technology (display screens)
		Morally	Promoting popular activities (festivals, literary works, and handicrafts)
			Promoting popular performance (building cafes, open theaters, and a stage for holding events)
	Harmony of materials with the historical environment (S3)	Harmony in the materials used in the space and the facades of the surrounding buildings	
		Harmony of botanical design and furnishing space	

3. METHODOLOGY

3.1. Measuring the verification values for the dimensions of the sustainable landscapes activation

To measure the verification values of the dimensions and its indicators based on the theoretical framework reached by the research, in the practical study three projects were selected from international cities in which the landscape activation dimensions within the city were applied.

The descriptive-analytical approach was adopted in the study by analyzing the drawings and illustrative plans of the projects and then unpacking the information that related to the extent to which the dimensions and its indicators are achieved for each case, and adopting the value (0) for the unrealized value and the value (1) for the realized value of the indicators. Then using (Microsoft Excel) to calculate the extent to which the indicators of each dimension are achieved mathematically through the mathematical formula:

$$DIM.x = (\sum S.x / N) *100 \quad (1)$$

DIM.x: The dimension

S.x : The dimension indicators value for each case

N: The number of the indicators in the dimension

3.2. Case studies

The election of these projects was based on the following criteria:

1. All projects aim to activate the landscapes within the city centers.
2. The selected projects participate to improve the landscapes on the social, economic, environmental, and symbolic levels.

The project analysis process included preparing a form for describing and analyzing projects. The form dealt with the most important dimensions of activating landscapes.

Projects description:

First project: The Goods Line project in Sydney, Australia (https://www.e-architect.com)

Location: Sydney Darling Harbor.

The reason to choose the project area: The project connects the main train station, Central Station, through the entertainment and recreational district in Sydney Darling Harbor, where

Goods Line creates a new people-centered address for various cultural, educational and media institutions such as UTS's (Dr Chau Chak Wing Building), which is bounded by a new park.

Table 2. The form of measuring verification values for the dimensions of activating landscapes, first case, (prepared by the researchers).

The social dimension		
Indicators		**Description**
Increasing social interaction	Yards for gathering	The project achieved the provision of activity spaces by providing a collective office for 30 people with built-in energy points for outdoor work , see Fig. 1
		The project achieved the provision of bleachers, a children's play area, and tables to play table tennis and raised lawns see Fig. 2
	Increase security and safety in space	Paving materials were provided according to the users' needs (seats for seating, furniture for games and exercise performance) see Fig. 2
		The project achieved the provision of lighting by using low-energy lighting, see Fig. 3
		The project achieved the provision of a space that serves all age groups and focuses on people for various cultural, educational and media institutions, see Fig. 4
Perception enhancement		The project achieved its use of technology by providing a Wi-Fi network to achieve ease of access and communication between people, Fig. 1
Community Awareness		Not fulfilled
The economic dimension		
Indicators		**Description**
Improving the domestic economy		The project achieved the improvement of the local economy by promoting small businesses around the site.
Reuse of existing resources		Not fulfilled
The environmental dimension		
Indicators		**Description**
Nature conservation		The project achieved nature conservation by preserving existing trees and minimizing cutting and packing by adopting ladders, Fig. 3
Climate improvement		Low energy lighting, local cultivation was provided to improve the climate Figs. 3 and 4
Physical Preservation		Important items (the Ultimo railroad bridge and its infrastructure) were preserved and recycled materials were used, Fig. 5
The symbolic dimension		
Enhancing identity and location memory		The project achieved narration within the space by creating levels within the space floor.
Promote cultural and historical values of space		The project, at the physical level, achieved the preservation of heritage railways, Fig. 5
Harmony of materials with the historical environment		Achieving the harmony of furniture materials by adopting a uniform steel material and adopting the yellow color of the furniture, Fig. 6

Fig. 1. Providing a yard for gathering and wi-fi https://www.outdoordesign.com.au/landscape-supplies-hard/street-furniture/the-goods-line/6768.htm*

Fig. 2. Children's playgrounds and exercise furniture. https://www.aspect-studios.com/project/the-goods-line/*

Fig. 3. The use of low-energy luminescent in space. *

Fig. 4. A space serving all groups. *

Fig. 5. Dealing with old structures such as railways. *

Fig. 6. The harmony of the materials and color of the furniture within the space. *

***Source: https://www.e-architect.co.uk/sydney/the-goods-line-in-sydney**

The second project: LUZ Celje's Old City Center / 2015

Location: Zilji city center, Luz, Slovenia

The reason for choosing the project: The project shed light on the city's center and how to deal with its rich history dating back to the Roman era, as well as focusing on making it an administrative, commercial, economic, cultural, educational, and tourism, in the center of the region through the squares and streets that were renovated, urban facilities and water features, which are meeting points and popular parks for both residents and visitors of the city.

Table 3. The form of measuring verification values for the dimensions of activating landscapes second case, (prepared by the researchers).

The social dimension		
Indicators		**Description**
Increasing social interaction	Yards for gathering	The project achieved spaces with seasonal activities by providing an arena dedicated to various cultural events throughout the year, Fig. 8
		The project has created a space for fun and entertainment by providing a fun playground for children on Krek Square and a refreshing sight and sound during the hot summer months.
Perception enhancement		Not fulfilled
Community Awareness		Not fulfilled
The economic dimension		
Improving the domestic economy		The project achieved the preservation of attractions in space and transformed them into an integrated service place by rebuilding the star shape from the Celje coat of arms, which is one of the most famous landmarks and meeting places in the city center
Reuse of existing resources		Not fulfilled
The environmental dimension		
Indicators		**Description**
Climate improvement		The improvement of the climate was achieved by increasing the blue area through the construction of a new fountain containing twelve jets of water that provides enjoyment of water for passers-by , Fig. 9
		The project achieved increased greening and vegetation cover by planting trees Fig. 8
Nature conservation		Not achieved
Physical Preservation		Not achieved
The symbolic dimension		
Indicators		**Description**
Enhancing identity and location memory		The project achieved the preservation of the landscapes discovered within it, by preserving Roman paved streets, freshwater wells, mosaics and other remnants of antiquity and the Middle Ages, rebuilding the well on the site and the coat of arms with its three stars, Figs. 9 and 10
Promote cultural and historical values of space		The project achieved the enhancement of cultural and historical values on the physical level by maintaining the structures and memorials by reconstructing the star shape of the Celje coat of arms at the intersection of the two main pedestrian streets, which is one of the most famous landmarks and meeting places in the city center, Fig. 7.
		On the moral level, the project achieved the enhancement of popular performances via a newly built platform with wood-covered edges providing seating under the trees for concerts, open-air cinema and a variety of other events, Fig. 10
Harmony of materials with the historical environment		The project achieved harmony in the materials used in space with the historical environment through the two ancient Roman rooms that were discovered were furnished with frescoes, floor mosaics and a hypocaust system.

Fig. 7.The maintenance of monuments within space. *

Fig. 8. The gathering places within the space and the increase of afforestation. *

Fig. 9. The improvement of the climate through the use of fountains and the mosaics used in the paving of a street. *

Fig. 10. Providing seating places under trees for concerts and outdoor cinemas. *

***Source:** **http://landezine.com/index.php/2015/02/public-space-renewal-in-celjes-old-city-centre-by-luz/**

The third project: Place d'Youville in Montreal/ 2008 (www.land8.com)

Location: Quebec, Canada

The reason for choosing the project: Place d'Youville represents a historic square in Montreal and forms a meeting point of the important roads at the gate and leading it to the city waterfront and the old port. The designers had responded to the archaeological

importance of the site to create direct physical links with the history of the ancient port, as the designers focused on materialism and memory, and reflected it in the site.

Table 4. The form of measuring verification values for the dimensions of activating landscapes third case, (prepared by the researchers).

The social dimension		
Indicators		**Description**
Increasing social interaction	Yards for gathering	The project achieved the provision of a space full of meaning that reflects the history of the place to be spaces for sitting, meeting and talking .Fig. 11
	Enhance a person's perception of movement within space through	The project achieved visibility of movement by connecting corner corridors with access points for museums, offices, restaurants and residential units. Fig. 11
		The project achieved determining the directionality by constructing the corridors with materials indicating the movement function for each of them through wooden routes (local), concrete (commercial), granite or limestone (institutional), Fig. 11
Perception enhancement		Not achieved
Community Awareness		Not achieved
The economic dimension		
Not achieved		
The environmental dimension		
Indicators		**Description**
Climate		The project achieved an increase in the diversity of green spaces to reduce heat gain by providing large green spaces. Fig. 13
improvement		The project achieved increased greening by planting leafy trees, Fig. 19
Nature conservation		Not achieved
Physical Preservation		Not achieved
The symbolic dimension		
Indicators		**Description**
Enhancing identity and location memory		The project achieved narration in space through its elements across the floor of space to reflect the 500-year history of Montreal in building sidewalks in response to archaeological memory by adopting wood, concrete, granite and limestone to create a quilt-like appearance at Place d'Youville, Fig. 12
Promote cultural and historical values of space		The project achieved the enhancement of cultural and historical values on the physical level by preserving structures and memorials by adopting trees as archaeological signs.
Harmony of materials with the historical environment		The project achieved harmony in the materials used in space with the historical environment by employing different materials such as wood, concrete, granite and limestone to reflect the history of the region. Fig. 11

Fig. 11. The designed footpaths in space that reflect direction and clarity in space.

Fig. 12. The variety of materials used in creating the corridors to achieve narration in space.

Fig. 13. Increasing the diversity of green spaces to reduce heat gain by providing large green spaces and increasing greening by planting leafy trees

Source: **https://land8.cottps://land8.com/?s=Place+d%E2%80%99Youville**

4. RESULTS

After measuring the dimension indicators' achievement values for each of the cases, we collected the indicator's results of each dimension for the three cases, as shown in Table 5. And based on the aforementioned formula mentioned above, were reached to the percentage of dimension indicators and the percentage of achieving each dimension.

First- The indicators that achieve each dimension:

- The social dimension: The results of the application of this dimension within its first indicators revealed a clear superiority for increasing social interaction, as it achieved a rate of (50%) represented by gathering spaces and increasing security and safety in space for the three projects selected for practical study, and then followed by the indicator of enhancement of perception by (33%) which is represented by the clarity of movement and determining the direction, as shown by Fig. 14.

- The economic dimension: The economic dimension is related to the two indicators: improving the local economy and reusing existing resources, as the improvement of the local economy has achieved a rate of (22%), which is represented in supporting small kiosks and activities within the periphery of landscape, preserving attractions in the space and transforming it into an integrated service area and supporting display and sale of handicrafts and souvenirs within the boundaries of the landscapes, while the reuse of existing resources did not record any percentage, as shown in Fig. 15.

Table 5. The results of achieving the indicators of the dimensions of activating landscapes for the three cases, (prepared by the authors)

Main Concepts	Indicators			Check the indicator within the selected cases		
				1st case	2nd case	3rd case
social dimension	Increasing social interactivity	Yards for gathering	Spaces with seasonal and cultural activities	0	1	1
			Space for entertainment (children's play and sports games)	1	1	0
		Increase security and safety in space	Install paving materials according to users' needs	1	0	0
			Street lighting improvement	1	0	0
			Make space accessible to all groups	1	0	0
	Perception enhancement	The use of technologies like images and blueprints of the space and routes to achieve ease of access		1	0	0
		Motion clarity		0	0	1
		Determine the direction		0	0	1
	Community Awareness	Educating people and enhancing their awareness of space management		0	0	0
		Involving the community in the design and planning process for preserving the cultural heritage of the landscape		0	0	0
economic dimension	Improving the domestic economy	Support small kiosks and activities within the perimeter of the landscape		1	0	0
		Maintaining attractions in the space and turning it into an integrated service area		0	1	0
		Supporting the display and sale of handicrafts and souvenirs within the boundaries of the landscapes		0	0	0
	Reuse of existing resources	Natural resources		0	0	0
		Physical resources		0	0	0
environmental dimension	Nature conservation	Water management (soil protection and rainwater drainage)		0	0	0
		Promoting the river routes and linear urban parks		1	0	0
		Construction of blue roads bordered by green roads		0	1	0
	Climate improvement	Increase the diversity of green spaces to reduce heat gain		0	0	1
		Increased greening, vegetation and long shade trees		1	1	1
		Providing sun umbrellas and windbreaks		0	0	0
	Physical Preservation	Reuse of materials and waste as (abandoned stone)		1	0	0
		Generating new uses for discarded structures within a landscape, such as railways and laboratory spaces		1	0	0
	Enhancing identity and location memory	Dependence on space elements in the narration (land, vegetation, seasonal plants, soil, and trees)		1	0	1
		Preserving cultural landscapes		0	1	0

symbolic dimension	**Promote cultural and historical values of space**	Physically	Interest in the night lighting of the monument and historical sites	1	1	1
			Protecting the elements of nature (trees and plants in archaeological gardens)	0	0	0
			Enhancing the spaces with cultural sculptures	0	0	0
			Innovation in old stores by adopting technology (display screens)	0	0	0
		Morally	Promoting popular activities (festivals, literary works, and handicrafts)	0	0	0
			Promoting popular performance (building cafes, open theaters, and a stage for holding events	0	1	0
	Harmony of materials with the historical environment	Harmony in the materials used in the space and the facades of the surrounding buildings		0	0	0
		Harmony of botanical design and furnishing space		1	1	1

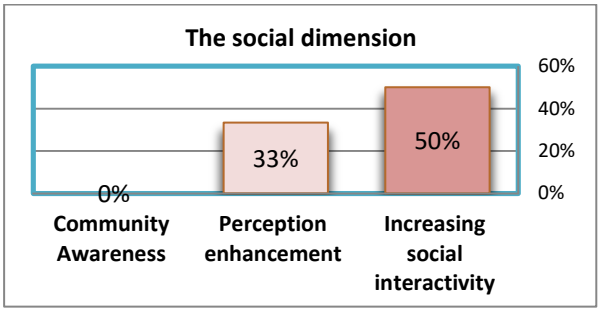

Fig. 14. Rate of achieving social dimension indicators for landscape activation, (by the researchers).

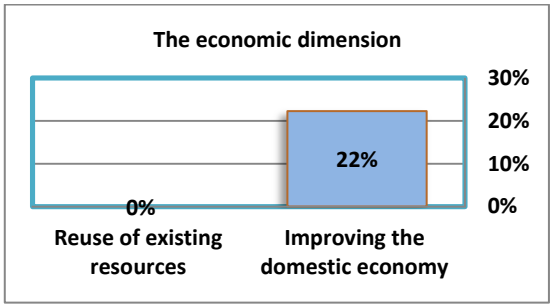

Fig. 15. Rate of achieving economic dimension indicators for landscape activation, (by the researchers)

- The environmental dimension**:** The climate improvement indicator in the environmental dimension achieved the highest percentage by (44%), followed by the physical preservation by (33%), followed by the nature conservation by (22%), as shown in Fig. 16.

- The symbolic dimension**:** the two symbolic dimension indicators, enhancing identity and memory of the place, and the harmony in materials with the historical environment, both achieved a highest rate of (50%), while the strengthening the cultural and historical values of space achieved a rate of (18%), , as shown in Fig. 17.

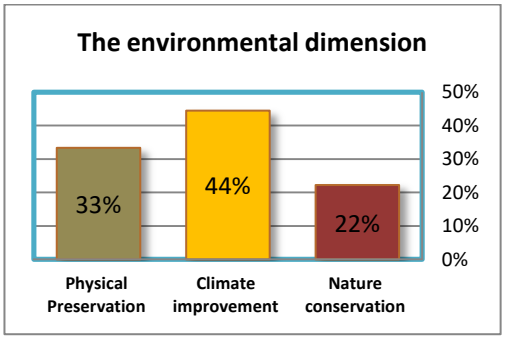

Fig. 16. Rate of achieving environmental dimension indicators for landscape activation, (by the researchers).

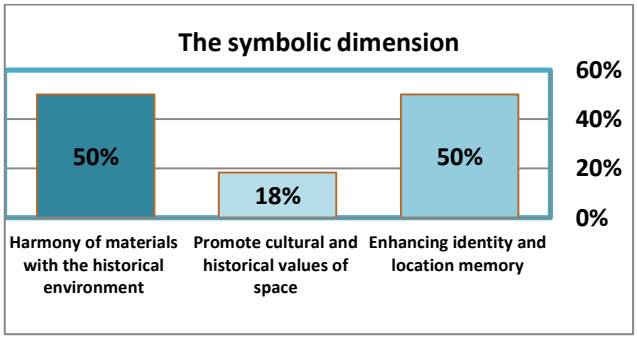

Fig. 17. Rate of achieving symbolic dimension indicators for landscape activation (by the researchers).

-Second: Concerning the dimensions as a whole:

The results showed a variation in the dimensions indicators of activating the landscapes depending on what indicators achieved in the project analysis process, as in Fig. 18, where the symbolic dimension recorded the highest impact rate (35.30%), followed by the environmental dimension with a rate of (29.9%), the social dimension by a rate of (24.8%), while the economic dimension achieved the lowest rate (10%).

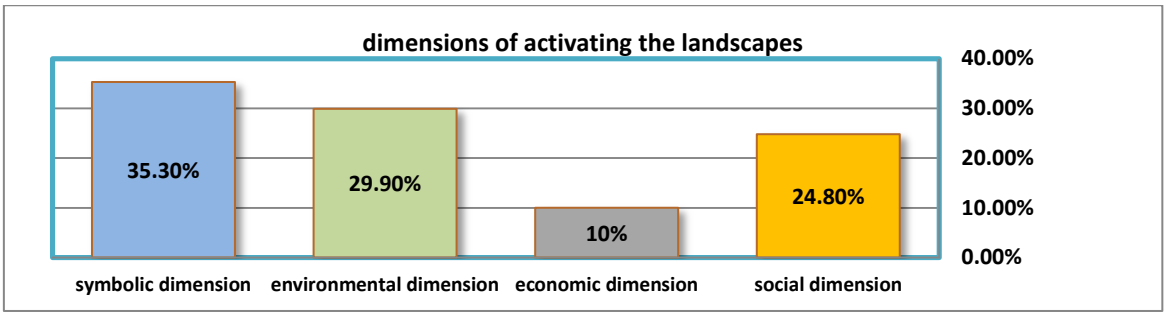

Fig. 18. Results of activation dimensions for the landscapes, (prepared by the researchers).

Thus, the research has verified the validity of the hypothesis that "the landscape activation requires the existence of the symbolic dimension, with the three dimensions of sustainability (environmental-social-economical)".

5. THE THEORETICAL MODEL

A theoretical model was reached for the landscape activation dimensions, as in Fig. 19, where it clarifies the dimensions with its indicators for realizing them, starting with the symbolic dimension as the most prominent dimension of activating the landscapes, followed by the environmental, then the social, and finally the economic dimension.

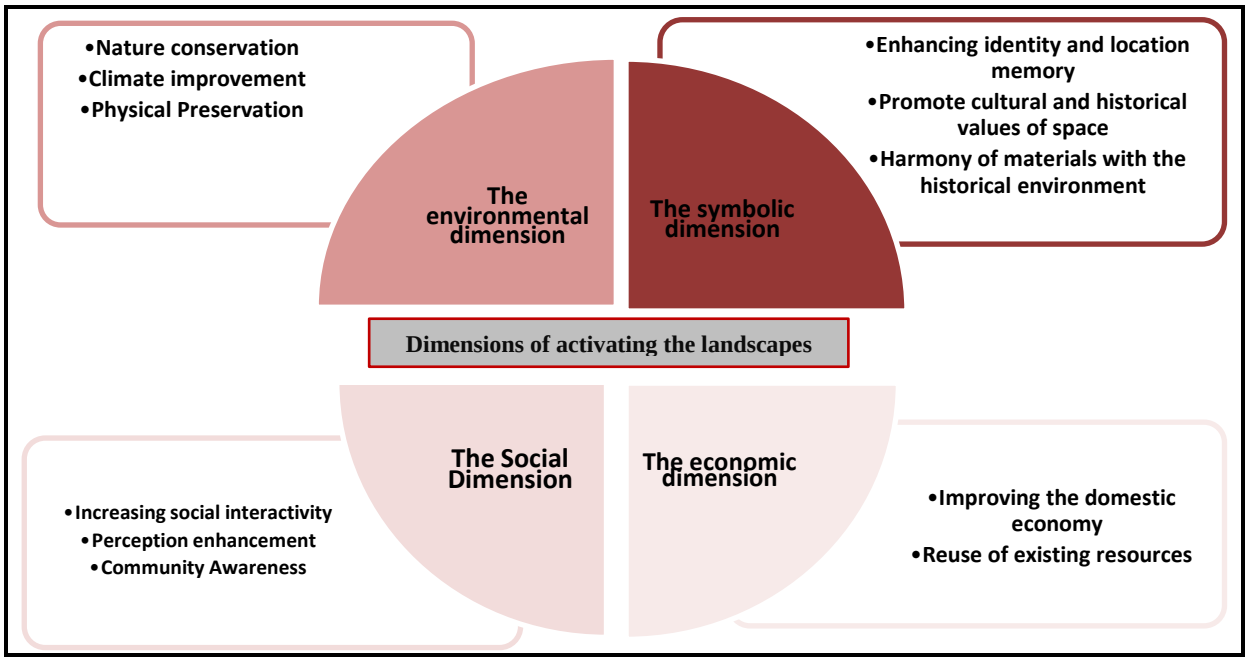

Fig. 19. A theoretical model for the dimensions and indicators of landscape activation (prepared by the authors).

6. CONCLUSIONS

The theoretical conclusions

- Activating the landscapes in the heritage areas can achieve historical continuity, reflect the local identity, and link the past with the present.
- The three dimensions of sustainability, social, economic, and environmental, must be considered in landscape activation.
- Active landscapes include, visual and aesthetic features with tangible and intangible values.
- The natural and physical elements of the activated landscape must achieve the need of the users.
- The research reached a procedural definition of the concept of activating landscapes as (a process to improve and enhance outdoor spaces to reach spaces characterized by flexibility, functional diversity, safe and usable by all groups of people, and with high accessibility, through a set of dimensions (symbolic, social, economic and environmental) concerned with preserving The characteristics of the cultural and historical landscape, its vital social structure, detailed and design components.

The practical study Conclusions:

The dimensions of activating landscapes, which include the symbolic, environmental, social, and economic dimensions, work to achieve active landscapes as they contribute to achieving harmony between the person and his surrounding environment and linking him with the place as follows:

- Concerning the symbolic dimension: The symbolic dimension is achieved by enhancing the identity and memory of the place, achieving harmony in space`s materials with its historical environment, thus leading to providing a culturally activate historical landscape that defines the identity of the community, and supporting city, socially and economically.
- Concerning the environmental dimension: It is achieved through improving the climate by increasing vegetation cover, green spaces, and appropriate furnishing of the activated landscape to enhance the user`s health, environmental comfort, and supporting sustainability.
- Concerning the social dimension: The socially activated landscapes enhance the user's well-being and achieve high accessibility, and the social interaction increases by

increasing the spaces with recreational and cultural activities and by increasing the safety and security of space through the appropriate furnishing of the landscape.

- Concerning the economic dimension: The need for the designer to focus on the economic dimension and create landscapes that support the program designed for it, and help increase the attractiveness of the city center by supporting handicrafts and small kiosks, and preserving attractive points within the landscape.

7. RECOMMENDATIONS

Finally, the research recommends the following:

- Adopting the theoretical model reached by the research in the process of activating landscapes and concern the following:

- Giving priority to the symbolic dimension in the process of activating landscapes in terms of enhancing the cultural value in space, reviving the memory of the place in it with cultural activities, creating elements with spiritual connotations that convey the historical value to people, and the reusing of the existing archaeological and historical elements in the landscape itself.
- Focusing on the environmental dimension in activating landscapes to support mental and physical health and create an appropriate environmental ambiance for people.
- Achieving the social dimension of activating the landscapes in terms of increasing community awareness to preserve the elements of landscape and the furniture in it, as this is done through education in official establishments such as schools and universities, and with advertisements on the display screens in the landscape, and involving the community in the design process through an exchange of views between the designer and people which makes them aware of the design idea.
- Thinking of the economic dimension in activating the landscapes by focusing on finding places for activities that support the economic benefit, such as encouraging people with handicrafts and small businesses to display their work and thus creating an economic activity within the space that works to increase the attraction element in space and increase social interaction within it.

8. REFERENCES

Aspect Studios, The Goods Line in Sydney URL: https://www.e-architect.co.uk/sydney/the-goods-line-in-sydney

Celikyay. Selma, et al, 2006, " Urban Landscape Design Strategies on 3000 Years Settlement: Amasra", the 5th WSEAS International Conference on Environment Ecosystems and Development, Italy. Pp. 371-372.

Claude Cormier, Place d'Youville in Montreal, Quebec, URL: https://land8.com/?s=Place+d%E2%80%99Youville

Gambaro. Matteo, et al, 2017, "The regaining of public spaces to enhance the historic urban landscape", The Journal of Public Space, Vol. 2 N. 1. Pp.45,50,53.

Georgieva. Angelina, 2014, "Riverbanks redevelopment through sustainable landscape principles", A proposal for the banks of the Havel river in Berlin, Germany, Chalmers University of Technology, Sweden. Pp.59.

Hammadi. Talal, 2017, "The Role of Urban Landscape Design in Enhancing Peoples Outdoor Places and Spaces", International Journal of Advanced Research, ISSN 2320-5407. Pp.1086,1089,1093,1095-1096.

Karamanea. Panita, 2015, " Landscape, memory and contemporary design" , Craft Plus Design Enquiry, Issue. Pp.119,126.

Madsen.Wendy, 2017, " Place Activation: Understanding creative placemaking in Bundaberg", CQ University, evaluation report. Available on: https://www.creativeregions.com.au/portfolio-item/place-activation-bundaberg-region/.

Pazder. Dominika, 2014, " Innovation and creativity in a design of high quality public space: Case study of Poznan, Poland", Mediterranean Journal of Social Sciences MCSER Publishing, Vol 5 No 19, Italy. Pp.405.

Ping. Lu, 2012, " The activation, transformation, and updates of the abandoned mining area: Take the Quantai, Xuzhou Mining Area's concept design of landscape for example", 2nd International Conference on Consumer Electronics, Communications and Networks (CECNet). Pp.3547- P3548,3549.

Rakhshandehroo. Mehdi. et al, 2016, " Strategies to Improve Sustainability in Urban Landscape, Literature Review", Journal of Landscape Ecology, Vol: 9 No. 3. Pp.5-6-7-8-9-10

Scavone.Valeria, 2018, " Strategy to re-active an urban landscape", World Heritage and Knowledge, Napoli. Pp.818-819.

Sumartojo. Shanti, 2015, "National Identity and Commemorative Space: Connections to the Nation through Time and Site", Landscape Review Journal, Vol 15 Issue 2. Pp.7-8

Zhou. Wei, 2016, "Construction of traditional cultural tour landscape field based on city memory-Taking Nanjing Fuzimiao (Confucius Temple) Qinhuai Scenic Area as an example", EDP Sciences. Pp.2,5-6.

URL: https://land8.com/how-place-dyouville-is-teaching-us-that-artificial-is-not fake/#:~:text=Cormier%20(in%20collaboration%20with%20Groupe,city's%20waterfront%20and%20ol