



Contents available at Iraqi Academic Scientific Journals

Iraqi Journal of Architecture and Planning المجلة العراقية لمهندسة العمارة والتخطيط

Journal homepage: <https://iqjap.uotechnology.edu.iq>



Evaluating the Open Design Strategy in Promoting Urban Interconnection of New City Centers in Baghdad

تقييم استراتيجية التصميم المفتوح في تعزيز الترابط الحضري لمراكز المدن الجديدة في بغداد

Inaam Qassem Abdullah ^{a*}, Khansaa Ghazi Rasheed ^a

^a Department of Architectural Engineering, University of Technology- Iraq, Baghdad, Iraq.

Submitted: 17/08/2023

Accepted: 12/10/2023

Published: 18/12/2023

KEY WORDS

Open Design Strategy,
Urban Interconnection,
Master Plan, New Cities,
Formation Patterns.

ABSTRACT

Morphological or typological transformations and changes within cities led to new cities with rules disconnected from the center of the existing city, both intellectually and physically. These rules prevented the master plan areas from interconnecting with each other. This research aims to achieve urban interconnection between new and existing city centers within a unified and cohesive design by relying on the most important design and planning strategies and mechanisms. The research begins by defining the open design strategy and its importance as a research topic. Then, we reviewed and discussed a group of studies through which the research problem was crystallized in "the lack of comprehensive knowledge of the impact of the open design strategy on city planning in general, and in achieving urban interconnection between new city centers and the existing city in particular", based on which the research goal was determined to identify the most important effective terms in the open design strategy within the design strategies and mechanisms in city planning and linking them with new cities, leading to building a comprehensive theoretical framework. The results showed that the local project achieved good values concerning the clear impact in the developing master plan with special integration and interconnection with the new cities.

الكلمات المفتاحية

استراتيجية التصميم المفتوح، الربط الحضري، المخطط الأساس، المدن الجديدة، أنماط التكوين.

الملخص

أدت التحولات والتغيرات المورفولوجية داخل المدن إلى ظهور مدن جديدة ذات قواعد منفصلة عن مركز المدينة القائمة منعت هذه القواعد من الترابط مع بعضها البعض. يهدف هذا البحث إلى تحقيق الترابط الحضري بين مراكز المدن الجديدة والمدينة القائمة ضمن تصميم موحد ومتناسك. يبدأ البحث بتحديد استراتيجية التصميم المفتوح وأهميتها كموضوع بحث. ثم قمنا بمراجعة ومناقشة مجموعة من الدراسات التي تبلورت من خلالها مشكلة البحث في "عدم وجود معرفة شاملة بأثر استراتيجية التصميم المفتوح على تخطيط المدن بشكل عام، وفي تحقيق الترابط الحضري بين مراكز المدن الجديدة ومراكز المدن القائمة". المدينة على وجه الخصوص"، والذي على أساسه تم تحديد هدف البحث للتعرف على أهم المصطلحات الفعالة في استراتيجية التصميم المفتوح ضمن استراتيجيات وآليات التصميم في تخطيط المدن وربطها بالمدن الجديدة بما يؤدي إلى بناء إطار نظري شامل. وأظهرت النتائج أن المشروع المحلي حقق قيمة جيدة فيما يتعلق بالأثر الواضح لهذه الاستراتيجية في تطوير المخطط التنظيمي والتكامل والترابط مع المدن الجديدة.

* Correspondent Author contact: ae.19.38@grad.uotechnology.edu.iq

DOI: <https://doi.org/10.36041/iqjap.2023.142695.1087>

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1. Introduction

New urban cities constitute actual or potential spaces for democracy in all its dimensions. As a result of the contemporary challenges (economic, social, environmental, cultural, and service) facing urban spaces in existing cities have led to the necessity of reconsidering the strategies that contribute to the production of new urban cities interconnected with the neighbourhoods of the master plan to achieve possible life opportunities and respond to all challenges. On this basis, the idea of the research was to employ open design as an effective strategy for renewing the master plan that suffers from fragmentation, neglect, and lack of interconnection with new areas within the urban fabric of the city as a whole intentionally, to improve or renew the reality of life in all its aspects and try to make them competitive places, attractive for populations, and spatially, functionally, and typologically interconnected. The research adopted a descriptive and analytical approach for several previous urban studies that dealt with the main research axes to achieve this. The research consisted of three axes. The first axis included the introductory framework for the open design strategy to provide a knowledge base for the open design strategy and its importance in city planning, developing the master plan, and its interconnection with new city centres, as well as providing a knowledge base for the concept of urban interconnection in developing master plans or upgrading new city centres, and what are the most important indicators for achieving the open design strategy according to the patterns of urban interconnection in new cities. The research in the second axis was able to address the knowledge gap represented by the lack of sufficient specialized studies dealing with the integration of design strategies within the master plan of the existing city and achieving the interconnection between the new city centres and the existing centre at the level of the whole and the part through criticizing, discussing, and analyzing several previous architectural and urban studies to extract the theoretical framework. In the third axis, the terms of the theoretical framework were applied and analyzed (Bismayah city) in Baghdad as a local example of the open design strategy in interconnecting new city centres, and then the main conclusions were presented.

2. The First Axis: Defining the Open Design Strategy:

The research seeks to investigate one of the urban democracy strategies represented by the open design and its interconnection mechanisms within new city centres as a strategy for improving, renewing, and upgrading the master plan toward sustainable urban development.

The open design strategy refers to public spaces and places within the urban fabric as a valuable tool to serve users under certain circumstances. It enables policymakers and planners to use them to create programs for comprehensive development plans, planning, or sustainable design (Wattan and Al-Bakri, 2019). The open design strategy includes a group of spaces, including (a green garden, an unbuilt garden, a proposed interstitial garden between the buildings, the plaza or square, the walkway, changing the use of the land to either residential or religious, the central walkway, and the waterfront space) (Alzahrani, 2022). Among the most important principles that the design strategy focused on are the following (Broadbent, 2003):

- Planning open spaces in coordination with a network for sustainable mobility.
- Use of land, which in turn evolves the master plan from rough graininess and loss of overall scale to fine graininess.
- Back to local details.
- Reintegration of abandoned spaces that enhance porosity with the rest of the city as transitional elements.
- Promoting activities or functions that help attract residents, create a place, and increase the overall income of the city.
- Emphasizing flexibility and responsiveness to change in the intensification of urban land uses.

2.1. The Importance of Open Design Strategy in City Planning:

- The open design strategy is described as a tool for urban reorganization and spatial arrangement of new zoning divisions by creating the duality of (walkability - proximity) to events, office complexes, or shopping centres, improving the quality of life in urban environments. A spatial unit is formed with a clear identity that individuals can, in light of this, belong to the region, and new urban areas with high-density development and mixed uses are emerging within the new areas, creating a continuous fabric

of the city that embodies sustainable development with interconnected urban neighbourhoods (Ching, 2014).

- The open design strategy is necessary to reshape existing cities, develop master plans, create social interactions and recreational activities for residents, improve well-being, in addition to providing economic and environmental benefits, and raise public open spaces to the level of user expectations following international standards, and then determine special planning and management policies for outdoor spaces (Mueller et al., 2018).
- The open design strategy refers to the process of building development scenarios and reshaping the existing city fabric with its new centres in an attempt to determine possible urban development patterns, confront widespread changes in land use, and respond to various environmental, social, economic, and aesthetic impacts, to create transformed urban centres from the old centre of the city, but linked to it functionally or typologically within a gradual and sustainable process. These centres are characterized by attractiveness and livability and provide opportunities for work, housing, education, and entertainment (Glaeser and Steinberg, 2018).

2.2. Defining Urban Interconnection in New Cities:

Broadbent (1990) described urban interconnection as connecting urban nodes to a group of axes as joints that, in turn, redevelop the city, generate formal or typical continuity of the urban fabric, and link the blocks with the space system structurally (Al-Hinkawi and Alatta, 2017).

Pinto et al. (2012) referred to urban interconnection as cohesion based on the formulation of contextually specific intervention measures that can open the way for the management of new cities, their interconnection with each other and with the old center, and the upgrading of their deteriorating areas. Interconnection develops issues related to the city's physical form and its planning processes, but it also develops socioeconomic and sociocultural factors, including those linked to urban identity (Mehaffy et al., 2010).

Urban interconnection is seen as articulating an axis or node that connects the new areas within the city fabric with the original old center at the level of planning and design, physically or intellectually (Adjei Mensah et al., 2017).

2.3. Urban Interconnection in Shaping New City Patterns:

Urban interconnection is one of the strategies for special reorganizing and reformation of new centres in light of connecting one element to another, the movement network for pedestrians and cars, visual axes affecting the fabric, or any other linking elements that physically connect the new parts of the city. Therefore, new cities take multiple forms and patterns in light of the urban interconnection that works to organize their spaces and blocks, which are as follows:

- **Functionally interconnected cities:** These are organized cities that deal with the size and patterns of the spatial distribution of activities within city centers and the links between different centers, such as daily transportation flows or the strength of business communications and social networks. These cities include a group of added or interconnected activities that often carry more than one meaning or name as a result of the temporal overlap with the original spaces and squares, as they act as attractive points that include various residential, commercial, and recreational functions and public services available to everyone (Tiesdell, 2002).
- **Spatially interconnected cities:** These are cities that contain a group of spaces linking new regions or cities that not only play a vital role as public facilities that contribute to enhancing the psychological and physical well-being of the population but are also important in maintaining environmental continuity and provide a framework for many planned or spontaneous (temporary) activities that help create sustainable, livable spaces within the master plan of the city as a whole (Ritter, 2013).
- **Typically interconnected cities:** They are cities whose formation depends on community consultation in restructuring urban spaces based on multidisciplinary considerations about the use of public space as a linking element between the original city and the new areas within the master plan of the existing city itself, and considering the people used consciously and unconsciously as the basis for enhancing communication activities with the city in light of the prevailing architectural style of the region that meets the city's functional and aesthetic requirements and meets contemporary needs (Rosenau, 1969).

2.4. Indicators For Achieving an Open Design Strategy According to Urban Interconnection Patterns in New Cities:

The open design strategy in spatially interconnected cities is achieved through indicators that are divided according to (design perspectives, type of land use, cultural or visual characteristics, size of public spaces and their physical form) into a diversity of urban spaces, creation of large parks as symbolic focal points, and creation of open community spaces and natural protection areas, managing or developing the network of open public spaces in the city so that they are usually green, available and open to all, enhancing movement spaces that achieve flow and ease of access between spaces, enhancing clarity in the design of public spaces linking existing and new areas, and diversity in types of public places within the new center (Thilakaratne, 2019).

- In functionally interconnected cities, the above strategy is achieved through the following indicators: functional convergence within the centers of the new areas, emphasis on the concept of the neighbourhood, place, or walkable area within walking distance with the edge and the center, diversity in the types of appropriately located buildings to accommodate a different group of uses that in turn meet the daily needs of its people, taking into account the functional hierarchy of streets and movement paths, and the gradation in height between dense areas to natural and rural areas within the master plan of the city as a whole (Wang et al., 2019).
- While in typically interconnected cities, this strategy is achieved in light of a set of indicators: central organization in creating secondary places within the region as supportive spaces for the center, defining the ends of urban axes, sequencing with a linear organization of recurring spaces, whether functional or symbolic, assembling the new spaces following the visual relationship or physical proximity in a cohesive organization that enhances the perception and connects the new areas, and surrounds the spaces with continuous and close external means or elements such as fences (von Wirth et al., 2014).

Accordingly, the research defines urban interconnection as: “creating diverse spaces, taking advantage of existing urban spaces, and adding multi-functional urban centers, axes, or nodes that connect the original city center with the new city centers, within the public open space network connection system and in light of: spaces that are not vacant or used between the buildings, the paths, the walkways, the green areas, and the integrated connection between the new and old spaces”.

The open design strategy is defined as: “adapting urban spaces and implementing the ideas of centralization, integration, and communication in linking the main public squares and parks of the original center with the new city center spaces functionally, spatially, and typologically”.

3. The Second Axis: Previous Studies:

This topic addresses a group of the most important previous studies that dealt with (open design strategy) and its importance in city planning and the interconnection of its center with new city centers to derive the research problem. All previous studies agreed to identify the most important criteria adopted in interpreting the open design strategy, which is (what is the open design strategy, the goal of this strategy, the type of urban interconnection it achieves, and the mechanisms for achieving it).

- **Ching's Study Entitled: Architecture: Form, Space, (2007).**

The study described the open design strategy as assembling spaces based on their locations and the patterns of the elements linking them as urban connectors surrounding the block or group of blocks and blending with them in a simple or complex space formation. These elements embody their function in redefining space within new cities by visually sending or receiving their formative content. The study also developed patterns of the various formative relationships that arise in the places linking the blocks and spaces to each other in light of a transitional, kinetic, or functional path (Ching, 2014).

We conclude from the study that the open design strategy for democracy was adopted in redefining space within the new cities and interconnecting their spaces typically by relying on many design indicators such as symmetry, displacement, repetition, and dynamic organization that gives a visual sense of rotational-radial movement around the central space, or the central organization in creating secondary places within the region as supportive spaces for the centre.

- **Ritter's study is titled Infrastructure, Intervention, And Connectivity Exploring Urban Architecture Through the Integration of Infrastructure and Landscape Cincinnati's Central Parkway (2013).**

This study referred to the open design strategy as a process of adapting urban spaces and implementing the ideas of centralization, integration, and communication in linking the main public squares and parks of the original center with the spaces of the new centers by generating new programs and functionally and spatially diverse urban patterns that in turn unite the basic infrastructure of the spaces with the urban environment, thus restore communities, reduce the effects of urban sprawl, and focus on innovative solutions that increase density and improve the urban experience and thus achieve sustainable spatial development of the city at the part and whole levels (Ritter, 2013).

We conclude from this study that applying this strategy within new city centers contributes to linking them spatially with the main center of the mother city in light of integration between architecture, programs, services, and neighboring facilities, as well as linking them functionally by emphasizing planning terms such as flexibility, response to change, intensification of uses, and focusing on the versatility of land uses of urban open space.

- **Glaeser's study entitled Transforming Cities: Does Urbanization Promote Democratic Chances (2016).**

The study explained that the open design strategy is developing civic capital that enables citizens to reform urban functions within existing and new spaces. It is the approved policy to promote future economic growth and positive political change in new slum neighbourhoods and an attempt to link those neighbourhoods to the original centre functionally through a set of indicators, among them urban intensification of activities and events according to various timetables and different spatial levels, the use of interconnected spaces, and the rehabilitation of the functions of some distinct buildings within their urban context (Glaeser and Steinberg, 2018).

We conclude from the study that it is necessary to enhance opportunities that develop local human capital and to create central areas as an urban nucleus linked to the main traffic routes or located on the edge of new cities to activate the open design strategy in achieving functional interconnection between the new cities and the main centre of the mother city.

From the previous studies above, it is clear that the knowledge gap and the need for research are justified by neglect and failure to employ the open design strategy in organizing or reforming new urban areas and their interconnection with multiple patterns in most Iraqi cities. The research assumes that the possibility of linking new cities with the existing city functionally, spatially, and typologically is achieved by activating the open design strategy in planning new cities. The most important terms and indicators can be extracted in Table (1).

4. Theoretical framework

The theoretical framework was built through previous studies and proposals regarding adopting open design as a strategy that embodies the possibility of linking new cities with the existing cities within a unified and cohesive design and in light of a set of mechanisms and indicators, as shown in Table 1. The theoretical framework included three main terms: the possibility of linking cities spatially, the possibility of linking cities functionally, and the possibility of linking cities typologically.

The first main term (the possibility of connecting cities spatially), which focuses on urban cohesion in forming spatial structures, is achieved through three mechanisms: a) The spatial expansion mechanism, which is concerned with creating open spaces and public places within the master plan such as (parks) and considering them as focal points, and transforming some distinguished buildings in public spaces into models for simulation, and connecting public spaces to various activities, b) The space integration mechanism is concerned with the community participation of users in establishing social awareness programs, designing and managing public places, and measuring their experience in using those places, and c) While the space sublimation mechanism focuses on how to enhance these places and spaces (public and open) and connect them visually.

The second main term (the possibility of functionally linking cities) works to organize the space system, such as movement axes as a guide to space behaviour and one of the place-making strategies through three mechanisms: a) the functional overlap mechanism, which focuses on the use of interstitial

spaces, and the hierarchy of streets and paths, b) the functional compatibility mechanism, that focuses on mixed-use and communicating the terms of the event in urban forms, and c) the functional incentive mechanism focuses on participatory planning and enhancing opportunities to develop local human capital.

The third term focuses on (the possibility of connecting cities typologically), which works to reorganize the existing city fabric with its new suburbs to maintain a specific pattern or generate new types of cities through the modular interactive inclusion mechanism that is concerned with design and planning principles in defining public spaces and explaining their importance, and the mechanism of modular assembly, which is concerned with assembling public spaces and arranging them to reach different urban life scenarios. Thus, the most important terms of open design strategy may be summarized in the theoretical framework in Table (1).

Table 1. The main terms, possible mechanisms and their indicators for the open design strategy in planning new cities (Source: Authors).

Main term	Mechanisms	Indicators
The possibility of connecting cities spatially	Space expansion mechanism	Create parks as focal points.
		Converting some buildings within the main squares into models or signs for literal simulation.
		Communicating open marketing space with artistic and cultural activities.
	Space integration mechanism	Establishing social awareness programs within spaces to improve the quality of life for citizens.
		Facilitating community participation in various cultural, recreational, and sporting activities.
	Space sublimation mechanism	Enhancing movement spaces that achieve flow and ease of access.
Connecting public parks visually.		
The possibility of connecting cities functionally	Mechanism of functional overlap	Taking into account the functional hierarchy of streets and movement paths.
		Using inter-connective spaces that embody functional convergence.
	The functional compatibility mechanism	Include mixed-use events and activities while increasing opportunities for visual monitoring.
		Communicating the terms of the event in urban forms and significant signs adapted to all requirements.
	The functional motivation mechanism	Diversity inappropriately located building patterns based on democratic, participatory planning.
		Promoting opportunities that develop local human capital while expanding the scope of private sector activities.
The possibility of connecting cities modularly	Modular interactive embedding mechanism	Design symmetry in explaining the importance of spaces within the master plan.
		Surrounding spaces with external means or elements such as walls.
		Defining open public spaces with boundaries to avoid risks and embody harmony or conformity.
	Modular assembly mechanism	Repeating a specific design pattern with a regular rhythm employs proportional relationships in the shaping process.
		Combining unity with versatility for a prototype for accessing different urban life scenarios.
		Organizing in a dynamic pattern gives a visual sense of rotational-radial movement around the space.

After reviewing the main terms, mechanisms, and indicators, the questionnaire form was organized, and a quantitative and qualitative measurement method was adopted by asking several questions and obtaining percentages for the results.

5. Practical Study:

An intentional local sample was selected, and the research aimed to propose the city of (Bismayah) as a new, expanding urban project within the master plan for the city of Baghdad as a new city linked materially and morally to the master plan and designed following professional academic directions that employ an open design strategy to connect its urban spaces with the existing basic centre for the city of Baghdad as a developed foundation design. It also embodies functional convergence and visual integration with diversity in patterns of activities and functions.

The new Bismayah City project is considered the largest and first development project in Iraq and Baghdad. The new Bismayah city is located to the southeast of Baghdad. It is approximately (10 km) away from the borders of Baghdad on the side of the international road linking the cities of Baghdad and Kut. The project is designed on a land area of (1,830) hectares, which can accommodate (600,000) people. The total number of housing units is (100,000) units. It was also planned and designed to create a network of infrastructure that includes water, electricity, main streets, and a group of public facilities such as entertainment, religious, educational, and commercial facilities. The city also includes sewage and water treatment plants, as the new city of Bismayah is considered the first city connected with its spaces, networks, blocks, and urban axes to the master plan for the city of Baghdad within an integrated design unit at all levels. This project is considered one of the most distinguished projects in the Middle East and Iraq region and the first huge project of the national housing program. As shown in Figures (1) – (5).



Figure 1. The location of the city of Bismayah concerning the boundaries of the master plan of the city of Baghdad (Source: Authors based on Google Maps).

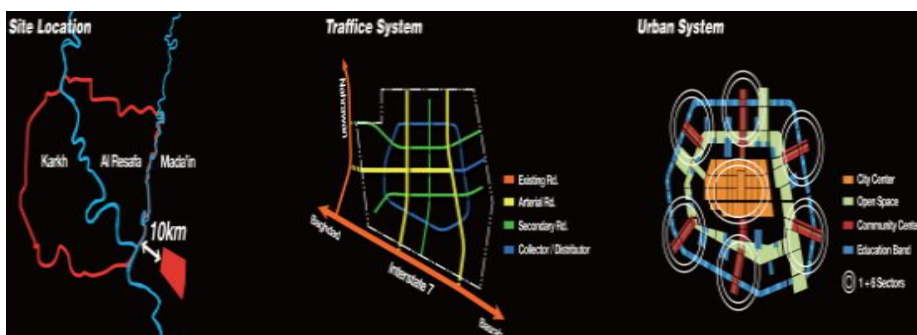


Figure 2. The design philosophy of the project (Source: Authors).



Figure 3. Open and public spaces in the project, Source: (Hanwha, 2012).



Figure 4. The distribution of urban services in the project, Source: (Hanwha, 2012).



Figure 5. The urban structure of the project (Source: Authors based on Google Maps).

6. Questionnaire Form:

The questionnaire form was designed and included relevant questions formulated and shaped in a simple, clear, and easy cognitive style in which it is possible to clarify the intended idea and understand the recipient through various interpretation formulas embodied in the questions listed below, which relate to the indicators of achieving the open design strategy in the possibility of linking new cities with the existing city spatially, functionally, and typically. Thirty academic architects were elected from among the faculty members in all architectural engineering departments in all universities in the country with at least (5) years of academic experience to fill out the form for the elected project.

7. Results of the Practical Study:

The results of the questionnaire for the main terms are as follows:

- **Q1: Did the open design strategy embody main public squares, spaces, and parks spatially interconnected with the new centers at a specific association level?**

The analysis of the research sample showed that the spatial interconnection of the main public squares and parks with the new urban centers is achieved in different proportions according to their importance in embodying this according to the specific levels of intervention. The percentage of partial association (50%) has emerged in a positive development, developmental urban planning, or improving the attractiveness and ability of cities for competitiveness at the local and regional levels, while the relative association that combines the whole and the part and the weak association in terms of the effectiveness of their influence emerged at a rate of (20%). In comparison, the percentage of intervention with a total association represented less importance than the previous terms at a rate of (10%). As shown in the Figure (6).

- **Q2: Did the open design strategy embody main public squares, spaces, and parks that are functionally interconnected with the spaces of the new center's at a specific level of synergy?**

The practical application and analysis results revealed that the functional interconnection of the main squares, spaces, and parks with the new city spaces within the master plan scheme is achieved in different proportions that vary according to the level of influence. The level of intervention has been achieved through a relative synergy of (40%) in redefining or developing unknown or abandoned spaces with new functions. The weak synergy intervention was achieved at (30%) in rehabilitating old cities and creating other spaces served by a kinetic network. The partial synergy achieved a rate of (20%), while total synergy achieved a rate of (10%), as shown in Figure (7).

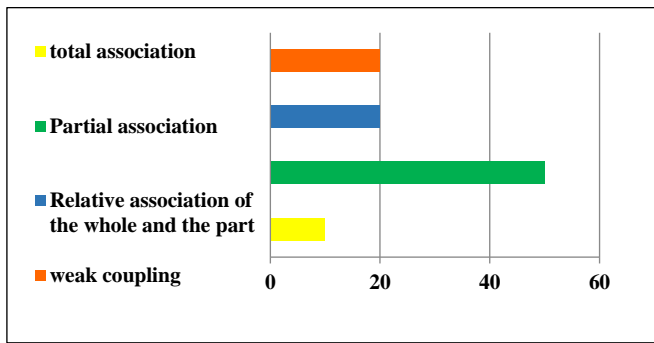


Figure 6. Shows the results of Q1 (Source: Authors).

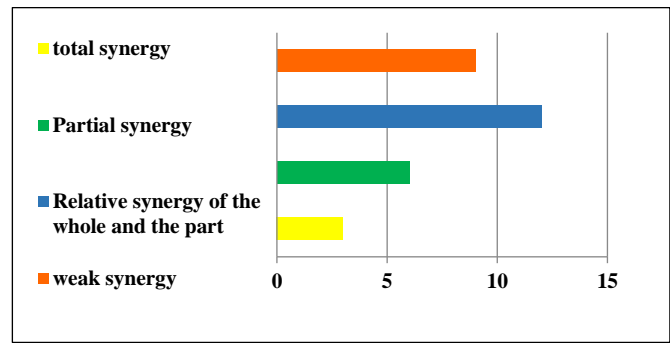


Figure 7. Shows the results of Q2 (Source: Authors).

- **Q3: Did the open design strategy embody main public squares, spaces, and parks that were typically interconnected with the spaces of the new centers at a specific level of connection?**

The typical interconnection of the main public squares, spaces, and parks with the spaces of the new center's is achieved within the open design strategy in different proportions that vary according to the levels of intervention within the urban fabric. The intervention was in partial, relative, and weak connection at a rate of (30%), while the level of weak connection was at a rate of (10%), as shown in Figure (8).

- **Q4: Did the adoption of design or legislative strategies for democracy and formal mechanisms of urban interconnection contribute to contextual integration at a specific level of development?**

Adopting the open design strategy helped bring about contextual integration in varying degrees. Partial creation achieved the highest rate of (50%) in redefining problems in advance to present those problems as possibilities that generate different design solutions. The level of intervention through weak creation showed a rate of (30%) and the level of intervention through total creation showed a rate of (20%). In comparison, the level of intervention in the relative development within the Bismayah city plan was achieved at a rate of (0%), i.e., non-existent. As shown in Figure (9).

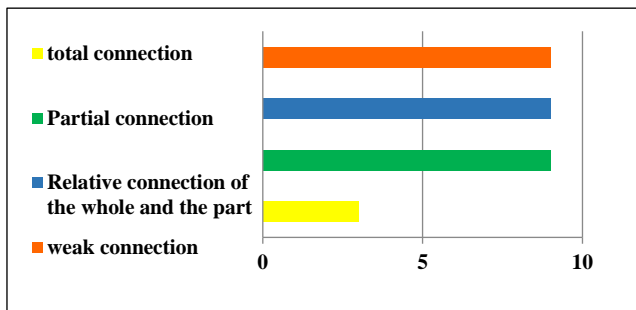


Figure 8. Shows the results of Q3 (Source: Authors).

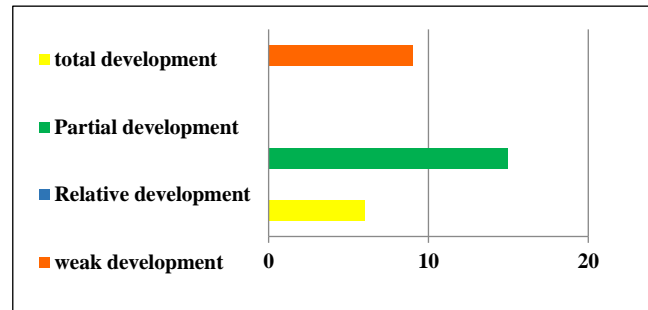


Figure 9. Shows the results of Q4 (Source: Authors).

- **Q5: Did employing design strategies for urban democracy in the Bismayah city project contribute to enhancing interconnection and comprehensive spatial development within the master plan for the city of Baghdad at a specific contribution level?**

Employing the open design strategy in the Bismayah city project contributed to enhancing interconnection and comprehensive spatial development within the master plan for the city of Baghdad at different rates. The partial contribution achieved a rate of (40%) and was the highest in creating sustainable, livable places that preserve the visible and invisible values of the community. The total, relative, and weak contributions achieved equal rates of (20%) in developing and improving the master plan, as shown in Figure (10).

- **Q6: Did urban design strategies for democracy embody the main goal of interconnecting the city center of Bismayah as a new city with Baghdad's existing master plan within an integrated design unit and at a specific level of intervention?**

The results show a discrepancy in the values of embodying urban interconnection between the new and existing city centers. The partial intervention appeared in connecting the spaces through movement and visual axes at a rate of (40%), which is the highest percentage. In comparison, the relative intervention was achieved in connecting the rest of the buildings with each other and with the urban centre based on planning

transformation policies at a lower rate of (30%), followed by weak intervention at a rate of (20%) in identifying the elements that provide free growth and prepare some indicators for future change, so that the total intervention within the city occupies the lowest rate of (10%) in interconnection and development, as shown in Figure (11).

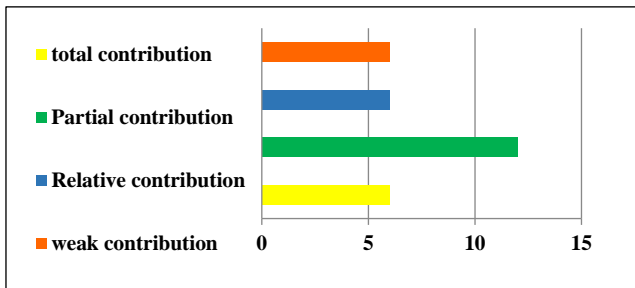


Figure 10. Shows the results of Q5 (Source: Authors).

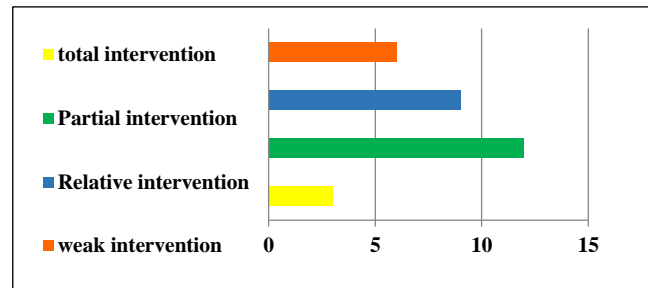


Figure 11. Shows the results of Q6 (Source: Authors).

8. Conclusions:

- Urban interconnection is the separation or connection of important urban nodes with axes and other places as joints that redevelop the city, explain the growth of new city centers, and link them together spatially and temporally.
- Suppose the urban interconnection policy is applied to new cities. In that case, the result will be various forms and patterns of those cities within the master plan scheme. These include spatially, functionally, and typically interconnected cities, each with mechanisms and indicators for its implementation within a coherent urban environment.
- The open design strategy has shown effectiveness in embodying a functionally, spatially and typologically interconnected city within the master plan scheme. Each of these cities has different mechanisms, such as spatial (expansion, integration, and sublimation) mechanism, functional (overlap, compatibility, and motivation) mechanism, and modular (interactive embedding, grouping) mechanism, and each of these mechanisms has different implementation indicators.
- The development of the urban areas of the Bismayah city project and the improvement of their spaces within the existing master plan for the city of Baghdad was based on the principle of community empowerment (community participation), which focused on remaking places for people with the development of secondary and supporting spaces supporting the existing center (Baghdad) city.
- The open design strategy has contributed to enhancing connectivity and comprehensive spatial development within the city of Baghdad's master plan, as well as to upgrading urban slums or degraded areas.
- The open design strategy consists of adapting urban spaces and implementing the ideas of centralization, integration, and communication to connect the main public squares and parks in the existing city center with the spaces of new city center's functionally, spatially, and typically.

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