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Developing Effective Strategies for Preserving Traditional Buildings in Historic City Centers

Mahmood Chabuk

Department of Architecture, College of engineering, University of Babylon, Iraq

E-mail: eng.mahmood.aa@uobabylon.edu.iq

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Abstract

The historic city centers in Iraq boast numerous traditional buildings of great architectural importance, characterized by unique design features and elements from previous historical periods. However, they suffer from neglect and loss due to a lack of proper preservation strategies. Effectively preserving traditional buildings requires strategies firmly rooted in the customs and cultures of the areas to which they belong. Considering the sensitivity of these buildings, any incorrect decision in identifying appropriate conservation strategies can have a rapid and negative impact. Thus, in this study, the primary indicators for creating effective strategies for maintaining traditional buildings in Iraq's historic city centers were determined. As a subject of a case study, a collection of historic buildings in Hillah's historic city center was chosen. For the purpose of assessing the percentages of fulfilling the indications in the research samples using a five-point Likert scale, a questionnaire form was created and sent to fifty architecture specialists. After that, analysis was done using the statistical software (SPSS). Accordingly, the findings revealed a discrepancy in the percentages of research samples that met the indicators; the (benefit) indicator was given the highest evaluation, while the (preservation works) indicator was given the lowest. This calls for specialists and decision-makers to step in and develop suitable solutions.

Keywords: Historic City Centers, Traditional Buildings, Preservation, Strategies, Hillah City.

1.Introduction

Historic city centers contain many traditional buildings dating back to different periods. These traditional buildings are important to the residents because they retain the historical and architectural characteristics from those historical periods. In the last half of the twentieth century, several trends called for conserving traditional buildings in historic city centers. While these trends have increased, especially after the modernism movement [1], the importance of preserving these buildings has gradually increased, especially in Europe [2]. On the other hand, in Iraq, the interest in preserving their architectural heritage has lagged. The urgent need to preserve the architectural heritage has appeared, especially after the serious deterioration of these buildings because of neglect and conflicts, in addition to poor conservation strategies [1].

Previous studies have addressed the topic of preservation from several approaches: the first approach is the study of laws, legislation, and the vision related to historic preservation to make appropriate decisions for achieving effective conservation, as it enhances the efforts of the preservation process [3]. Olson confirmed that laws have been issued in the United States

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مامعة بمسابل للعلموم الهندسية حلــة حـ



ISSN: 2616 - 9916

Vol. 32, No. 5. \ 2024

confirming that preserving irreplaceable heritage buildings is a public interest. The critical belief on which preservation works is that it serves a public purpose and that old building should participate in contemporary life [4]. Lori & Ferriss also emphasized the importance of setting a LEED standard to evaluate the preservation of historical cultural heritage [5]. The second approach is the study of how to adapt sustainable preservation indicators to evaluate the impact of historic preservation, and how to determine its effects on achieving social and economic equality [6]. Ozturk emphasized the importance of traditional building culture in supporting the city's identity, with special emphasis on traditional materials and systems and their impact on the sustainable city's identity [7]. Ambrose emphasized the importance of establishing a better future based on the past by integrating components of historical areas into eco-cities. Moreover, he emphasized that demolishing any building is ultimately a waste of resources and an act of absolute unsustainability [8].

The third approach addresses the study of preservation strategies of built heritage and their importance to the contemporary lives of residents. Besa & Prishtina emphasized the importance of developing integrated and comprehensive strategies to preserve historical city centers as they include physical, social, and economic elements that represent the past so that they can integrate with modern life [9]. Moreover, Abu Shal et. al. called for developing strategies to preserve and restore buildings damaged by wars and conflicts by returning to the past and drawing inspiration from architectural components that would be a bridge for integration and harmony between the past and the future. Therefore, rooting the cultural and social elements to link the old and the new, the authentic and the alien [10].

By presenting the previous studies, it becomes clear that the topic of preserving historical buildings is complex and broad and includes several trends. Therefore, the study classifies the previous studies into three main approaches. The knowledge gap was determined in the third approach. Therefore, this research will focus on strengthening the topic of strategies because it is still unclear and needs to identify the main aspects of these strategies and clarify the main differences between effective and ineffective strategies. In light of studying previous studies and due to the changes in political, social, economic, and architectural conditions in the reality of historic city centers in Iraq, the research addresses the main questions:

- What are the traditional buildings in historic city centers in Iraq?
- Why is it important to preserve traditional buildings?
- How can we preserve the traditional buildings?

1.1. Traditional Buildings in Historic City Centers: Definition and Problems

The historical city centers in Iraq faced challenges over time because of various aspects of life that negatively affected the components of their urban structure, represented in traditional buildings, streets, squares, etc. Therefore, to confront these changes, achieving preservation strategies is essential [11]. Despite the achievement of many strategies to develop the historical city centers in Iraq, they were unable to find appropriate solutions; in many cases, these strategies led to negative results. The main reason is that they have not been prepared according to comprehensive scientific principles in preservation, including social, economic, architectural,



and other needed aspects. Accordingly, large parts of the historical city centers were lost, and many buildings were transformed from the traditional to the modern style [12].

Traditional buildings are distinguished by two basic factors: value importance and continuity of life; the importance emerges as follows:

- •Architectural and aesthetic importance is represented in harmony, diversity, human scale, etc...
- •Historical importance is represented in continuity with the past.
- •Social importance is represented through engagement with the area, fostering a sense of cultural identity and memories.

Economic importance is represented in tourism [13].

1.2. Preservation Strategies for Traditional Buildings: Definition and Importance

Preservation in any era is a means of interpreting history through the physical remains, informed by the meanings and values of the present. Still, it can also be interpret according to the meanings and values of the social, economic, and cultural context [14]. Conservation is a multidisciplinary practice encompassing many topics such as art, architecture, environment, and archaeology [15]. To conserve means to keep, to preserve. Thus, the basic attitude of preservation comes most purely to expression in conservation: to conserve is the supreme preservation principle [16]. It is any measure that prevents or reduces the possibility of harm, thereby prolonging the life of buildings and urban fabric [17]. It is important to preserve and revive historic cities. Selecting an appropriate strategy is a successful step on a safe path to save what can be saved from heritage [18]. Many charters defined the concept of historic area conservation; the first official recognition of historic areas was the Venice Charter in 1964: The importance of the historic area can only be preserved if the tangible assets are appropriately and systematically preserved" [19]. Preserving the historic center is a national responsibility as it is a national treasure. According to Article 113 of the Iraqi constitution, which states that monuments, archaeological sites, and heritage buildings are considered a national treasure..." it is not permissible to dispose of urban heritage without the approval of the competent authority according to Law no. 55 of 2002 [13].

A major challenge in architectural and urban conservation is the lack of universally acceptable preservation strategies. These concepts differ according to the practicing people, their specialties, and cultural and linguistic factors. As well as the main principles of conservation, such as authenticity and integrity, may differ from one culture to another. [20]. Protecting historic areas requires individual treatments with comprehensive preservation over time, and then it can be adjusted to manageable levels and optimized for investments [21]. This is because historic areas represent one of the most important economic resources in tourism [22]. The effective strategies in conservation generate sustainable development by involving long-term projects, careful investment, and management of resources for infrastructure. Strategies improve the quality of life and enable historic city centers to meet the needs of residents and visitors [23]. When preserving traditional buildings, comprehensive historical studies need to be conducted for buildings, areas, and residents. These areas must be preserved, and brought back to life within the framework of the city's master plan [24] [25].



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2. Methodology

The following steps were adopted in the research methodology to achieve the research objective, as shown in Figure no.1.



Figure 1. A diagram showing the main steps of the research methodology. Source: Author.

2.1. Case Study and Selected Research Samples

2.1.1. Hilla Historic City Center

Hillah is an old city located in the middle of Iraq, (see figure 2). Most researchers and scholars have argued that Saif al-Dawla Sadaqa bin Mansour founded the city of Hilla on the western bank of the Hilla River in 1101 AD [26]. Until now, the city has maintained its ancient historical center: the old urban fabric that includes irregular alleys, traditional buildings, and other heritage elements. In recent years, several significant traditional buildings have deteriorated duo to various factors [26]. The research will focus on studying the traditional buildings in Hillah historic city center.



Figure 2. Maps of study area. Source: Author.

2.1.2. Selected Research Samples:

For the practical study, six traditional buildings in the historic center of Hillah were selected as research samples, as shown in Figure 3. The main reasons for selecting the building samples in the study area include:

- The buildings are located in the heart of the historic city center.
- They are along major transportation routes.
- They are diverse in form, function, structure, state, and period.
- The selected buildings retain significant historical values.



JOURNAL'S UNIVERSITY OF BABYLON FOR **ENGINEERING SCIENCES (JUBES)** وم الهندسية



Vol. 32, No. 5. \ 2024





Figure 3. The pictures (B1-B6) show the selected research samples (the traditional buildings). Source: Author.

Vol. 32, No. 5. \ 2024

ISSN: 2616 - 9916

2.2. Identifying the indicators of preservation strategies for traditional buildings in historic city centers:

The main aspects of strategies were identified in comparison with effective or ineffective actions that have a significant impact on the evaluation state of the selected traditional buildings. These Aspects represent the main indicators in the study, as shown in Table 1. When preserving traditional buildings, it is necessary to choose effective strategies, taking into account the special circumstances that can increase the population attraction and level of recreation in the historical center of the city.

	Aspects of	Description of Strategies			
No.	preservation strategies	Effective action	Ineffective action		
1.	Authenticity	Immediate preservation of the original physical and nonphysical elements or concepts of the existing traditional buildings.	Radical or partial transformation of the original physical and nonphysical concepts or elements of the traditional building into new concepts or elements.		
2.	Preservation works	Restoration and maintenance of lost buildings (completely or partially destroyed) and perception by the public were positive.	Restoration and maintenance of lost buildings (completely or partially destroyed) and perception by public were negative.		
3.	Integrity	Preservation of building structure, façade elements, and finishing materials of the traditional building in the historic center. So they can be recorded in local and international documents.	Violations of building structure, façade elements, and finishing materials of the traditional buildings. So they couldn't be recorded in local and international documents.		
4.	Benefit	Renovation of traditional buildings that do not represent significant benefits in function, culture, and tourism, including buildings in emergency conditions that are not under official state protection.	The demolition of traditional buildings with certain benefits in function, culture, and tourism and the construction of new buildings, such as offices, shopping centers, modern houses, etc.		
5.	Context	Enhance the integration and visual attention with context by withdrawing non-traditional buildings adjacent to the traditional building outside historic city center.	Keep non-traditional buildings adjacent to the traditional building inside the historic city center.		

Table 1. Main aspects of preserving strategies in comparison with effective and ineffective actions of traditional buildings in the historical city center. Source: Author.

2.3. Determining Secondary Indicators and Measurement Methods:

The secondary indicators of preservation strategies were identified, and then a questionnaire form was prepared that includes the primary and secondary indicators of preservation strategies as shown in Table 1. A group of 50 architects evaluated the indicators of the selected research samples. The measurement is carried out by a five-point Likert scale. The evaluation of the indicators of strategies ranges from (1), which represents the lowest value, to

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جلة جسامعة بسابل للعلوم الهندسية

ISSN: 2616 - 9916

(5), which represents the highest value, while value (3) represents the degree of neutrality, as shown in Table 2. The collected data were then analyzed using the statistical analysis program (SPSS) to obtain the percentages for the achieving indicators in the selected samples.

No.	Indicators		Likert Scale				
	Primary Vocabulary	Secondary vocabulary	Very high (5)	High (4)	Medium (3)	Low (2)	Very low (1)
1	Authenticity	Form & Design		N.		10	÷
		Matter & Essence	10111		(\bigcirc)		
		Techniques & Management systems			STO I		1
- 1		Spirit & feeling				6 N	1997
-	Preservation	Restoration			NO.	$2 - \lambda$	111
2	works	Maintenance			1-11	72	111
3	Integrity	Building structure			1	2. Sal	1 1 1
		Façade elements			6	1.	
	(Same	Finishing materials				1	
4	Benefit	Function				1	
		Culture	1.1			1	1 10 10
		tourism	1	~			6 1111
-	Context	Integration		2.2			144
5		Visual attention		$\left(\right)$		E.	11

Table 2. Questionnaire form and m	neasurement scale. Source: Author.
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3. Results and Discussion

3.1. Results of evaluating the primary vocabulary in the research samples.

The average evaluation percentage of the primary vocabulary (Benefit) was the highest in the research samples at 60%, as it received the highest evaluation in sample no. 6 at 81% and the lowest in sample no. 3 at 34%. Meanwhile the primary vocabulary (preservation work) was the least evaluated in the research samples at 47%, as it received the highest evaluation in sample no. 5 at 65% and the lowest in sample no. 2 at 37%, as shown in Figure 4. The results of evaluating the highest and lowest percentages for each of the primary vocabulary in the research samples are as follows:

- The (authenticity) achieved a percentage of (36%-70%).
- The (preservation work) achieved a percentage of (37%-65%).
- The (integrity) achieved a percentage of (43%-78%).
- The (Benefit) achieved a percentage of (34%-81%).
- The (context) achieved a percentage of (46%-68%).

JOURNAL'S UNIVERSITY OF BABYLON FOR ENGINEERING SCIENCES (JUBES)

جلة جسامعة بسابل للعلهوم الهندسية



ISSN: 2616 - 9916

Vol. 32, No. 5. \ 2024



Figure 4. Results of evaluation percentage of the primary vocabulary in the research samples. Source: author.

The final percentage rate for evaluating each of the primary vocabulary in the research samples was also determined, as shown in Figure 5. According to what was presented, it is clear that there is a weakness in achieving preservation strategies in the primary vocabulary (preservation work 47%), followed by (authenticity 52%), then (context 57%), which confirms that they need more development in their preservation strategies.



Figure 5. Average evaluation of the primary vocabulary in the research samples. Source: author.

3.2. Results of evaluating the secondary vocabulary in the research samples:

3.2.1. Results of evaluating the secondary vocabulary of (Authenticity) in the research samples:

The average evaluation percentages of the secondary vocabulary (form and design) were the highest in the research samples at 55%, as it received the highest evaluation in sample no. 5 at 76% and the lowest in sample no. 6 at 25%. While the secondary vocabulary (matter and essence) was the least evaluated in the research samples at 44%, as it received the highest evaluation in sample no. 5 at 70% and the lowest in sample no. 3 at 26%, as shown in the Figure 6. The results of evaluating the highest and lowest percentages for each of the secondary vocabulary in the research samples are as follows:

- The (form and design) achieved a percentage of (25%-76%).
- The (matter and essence) achieved a percentage of (26%-70%).

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Vol. 32, No. 5. \ 2024

- The (techniques and management systems) achieved a percentage of (40%-62%).
- The (spirit and feeling) achieved a percentage of (32%-74%), as shown in figure 6.

From what was presented, it is clear that there is a weakness in achieving preservation strategies in the secondary vocabulary (matter and essence), confirming that it needs to develop preservation strategies.



Figure 6. Results of evaluating the (Authenticity). Source: author.

3.3. Results of evaluating the secondary vocabulary of (Preservation works) in the research samples:

The average evaluation percentages of the secondary vocabulary (restoration) were the highest in the research samples at 48%, as it received the highest evaluation in sample no. 1 at 66% and the lowest in sample no. 3 at 30%. Meanwhile the secondary vocabulary (maintenance) was the least evaluated in the research samples at 46%, as it received the highest evaluation in sample no. 5 at 70% and the lowest in sample no. 2 at 24%, as shown in Figure 7. The results of evaluating the highest and lowest percentages for each of the secondary vocabulary in the research samples are as follows:

- The (restoration) achieved a percentage of (30%-66%).
- The (maintenance) achieved a percentage of (24%-70%), as shown in the figure 7.

From what was presented, it is clear that there is a weakness in achieving preservation strategies in both the secondary vocabularies (restoration) and (maintenance), confirming that they need to develop preservation strategies.

JOURNAL'S UNIVERSITY OF BABYLON FOR ENGINEERING SCIENCES (JUBES)

جلة جمامعة بمسابل للعلموم الهندسية

Vol. 32, No. 5. \ 2024





Figure 7. Results of evaluating the (preservation works). Source: Author.

3.4. Results of evaluating the secondary vocabulary of (Integrity) in the research samples:

The average evaluation percentages of the secondary vocabulary (building structure) were the highest in the research samples at 67%, as it received the highest evaluation in sample no. 6 at 80% and the lowest in sample no. 3 at 56%. While the secondary vocabulary (facade elements) was the least evaluated in the research samples at 54%, as it received the highest evaluation in sample no. 5 at 80% and the lowest in sample no. 2 at 36%, as shown in Figure 8. The results of evaluating the highest and lowest percentages for each of the secondary vocabulary in the research samples are as follows:

- The (Building structure) achieved a percentage of (56%-80%).
- The (Facade elements) achieved a percentage of (36%-80%).
- The (Finishing materials) achieved a percentage of (34%-84%), as shown in the figure 8.

From what was presented, it is clear that there is a weakness in achieving preservation strategies in the indicator (façade elements), confirming that it needs to develop preservation strategies.



Figure 8. Results of evaluating the (Integrity). Source: Author.

للعلــــوم الهندسية Vol. 32. No. 5. \ 2024



3.5. Results of evaluating the secondary vocabulary of (Benefit) in the research samples:

The average evaluation percentages of the secondary vocabulary (function) were the highest in the research samples at 62%, as it received the highest evaluation in sample no. 5 at 88% and the lowest in sample no. 1 at 40%. Meanwhile the secondary vocabulary (tourism) was the least evaluated in the research samples at 58%, as it received the highest evaluation in sample no. 5 at 76% and the lowest in sample no. 3 at 30%, as shown in Figure 9. The results of evaluating the highest and lowest percentages for each of the secondary vocabulary in the research samples are as follows:

- The (function) achieved a percentage of (40%-88%).
- The (culture) achieved a percentage of (30%-86%).
- The (tourism) achieved a percentage of (30%-76%), as shown in the figure 9.

From what was presented, it is clear that there is a weakness in achieving preservation strategies in the secondary vocabulary (tourism), confirming that it needs to develop preservation strategies.



Figure 9. Results of evaluating the primary vocabulary (benefits). Source: Author.

3.6. Results of evaluating the secondary vocabulary of (Context) in the research samples:

The average evaluation percentages of the secondary vocabulary (visual attention) were the highest in the research samples at 59%, as it received the highest evaluation in sample no. 1 and 3 at 72% and the lowest in sample no. 2 at 40%. Meanwhile the secondary vocabulary (integration) was the least evaluated in the research samples at 53%, as it received the highest evaluation in sample no. 4 at 60% and the lowest in sample no. 5 at 42%, as shown in Figure 10. The results of evaluating the highest and lowest percentages for each of the secondary vocabulary in the research samples are as follows:

- The (integration) achieved a percentage of (42%-60%).
- The (visual attention) achieved a percentage (40%-72%), as shown in the figure 10.

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JOURNAL'S UNIVERSITY OF BABYLON FOR **ENGINEERING SCIENCES (JUBES)**

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Vol. 32, No. 5. \ 2024

ISSN: 2616 - 9916

From what was presented, it is clear that there is a weakness in achieving preservation strategies in the secondary vocabulary (integration), confirming that it needs to develop preservation strategies.





4. Conclusions:

The research focused on developing effective preservation strategies for traditional buildings in Iraqi historic city centers. Previous conservation experiences have shown that the impact of strategies to preserve traditional buildings in historic city centers can be positive or negative, so decision-makers and specialists must identify and develop aspects related to the goal of achieving effective strategies to preserve traditional buildings. Therefore, the research concluded that achieving effective strategies for the preservation of traditional buildings requires consideration of the authenticity, preservation works, integrity, benefit, and context of traditional buildings within their historical context. Conversely, failure to address all aspects of conservation strategies in an integrated and comprehensive manner leads to weakness in the conservation of traditional buildings.

The findings revealed a discrepancy in the percentages of the selected research samples that met the indicators; the benefit indicator was given the highest evaluation, while the preservation work indicator was given the lowest. This calls for specialists and decision-makers to step in and develop suitable solutions.

In general, the results showed that there is a weakness in achieving effective strategies to preserve traditional buildings in the historical center of Hillah City. As a result, the historical center suffers from continuous changes towards demolishing old buildings, changing the organic urban fabric in the surrounding area, and the trend towards rebuilding according to the modern style to achieve economic benefits such as medical clinics, commercial complexes, etc.

This study was conducted on a limited research sample representing a group of traditional buildings selected from one historic city center, and therefore the results cannot be generalized to all historic city centers. However, it can certainly make an important contribution to architectural conservation as it seeks to develop effective strategies and reduce ineffective strategies in the conservation of traditional buildings.

Vol. 32, No. 5. \ 2024

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Vol. 32, No. 5. \ 2024

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جلة جـــامعة بــــابل للعلـــوم الهندسية



Vol. 32, No. 5. \ 2024

ISSN: 2616 - 9916

تطوير استراتيجيات فعّالة في الحفاظ على المباني التقليدية في مراكز المدن التاريخية

محمود عامر جابك

قسم هندسة العمارة، كلية الهندسة، جامعة بابل، العراق

البريد الإلكتروني eng.mahmood.aa@uobabylon.edu.iq

الخلاصة:

تتميز مراكز المدن التاريخية في العراق باحتوائها على العديد من المباني التقليدية ذات الأهمية المعمارية الكبيرة، والتي تمتلك خصائص تصميمية وعناصر فريدة تعود الى فترات تاريخية سابقة، ولكنها تعاني من الإهمال والاندثار نتيجة النقص في تطبيق استراتيجيات الحفاظ المناسبة. ان الحفاظ الفعال على المباني التقليدية يتطلب استراتيجيات متجذرة بقوة في عادات وثقافات المناطق التي تنتمي إليها، وبالنظر إلى حساسية هذه المباني، فإن أي قرار غير صحيح في تحديد استراتيجيات الحفاظ المناسبة يمكن أن يكون له تأثير سلبي وسريع. وعليه تم في البحث تحديد المؤشرات الأولية لإنشاء استراتيجيات فعالة في الحفاظ على المباني التقليدية التي يقع ضمن مراكز المدن التاريخية في العراق. بالنسبة الى الحالة المتراتيجيات فعالة في الحفاظ على المباني التقليدية التي نقع ضمن مراكز المدن التاريخية في العراق. بالنسبة الى الحالة في عينات البحث المنتخبة تم استخدام مقياس ليكرت الخماسي، وإعداد استمارة استبيان وإرسالها إلى خمسين متخصصًا في في عينات البحث المنتخبة تم استخدام مقياس ليكرت الخماسي، وإعداد استمارة استبيان وإرسالها إلى خمسين متخصصًا في هندسة العمارة. بعد ذلك تم إجراء التحليل باستخدام البرنامج الإحصائي (SPSS). وعليه، كثفت النتائج عن وجود تناقض في نسب عينات البحث التي استوفت تلك المؤشرات؛ فقد حصل مؤشر (المنفعة) على أعلى تقييم، في حين حصل مؤشر (أعمال الموط) على أدنى تقيم، وهذا ما يستدعي إلى تدخل المختصين وصناع القرار من اجل وضع الحلول المناسبة.

محلات حامعه بابل

الكلمات الدالة: مراكز المدن التاريخية، المباني التقليدية، الحفاظ، الاستراتيجيات، مدينة الحلة.