Collective Memory as a Source of Knowledge in Architectural Education

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Abstract. The research deals with the concept of collective memory as one of the influential concepts produced in the process of architectural design, which is defined as the symbolic system and the creative process in the architectural product and linked to the identity needs of the individual and society, through its various media that represent the criteria for collective remembering of the student of architecture establishes the collective identity, through studying the architectural products For architecture students, we note the student's poor knowledge of the concept of collective memory, and thus the research problem is the lack of knowledge in investing the collective memory of the student of architecture in architectural products, so the research aims to clarify the sources of knowledge of collective memory in architectural education and how to invest it by the student of architecture. By analysing the graduation projects of architecture students at Al-Mustansiriya University, the research concludes the weak sources of collective memory in architectural products and its strong focus on the physical aspects of historical structures as a source of collective memory because of the presence of this source in architectural approaches, especially in the lessons of the history of architecture in its various stages. The research recommends the introduction of educational programs for collective memory within the curricula of architectural education to increase the architectural knowledge of students in the field of collective memory and the revival of heritage and archaeology and benefit from them in developing cognitive and intellectual capabilities and creating a collective identity using virtual media and digital technologies.

1. Introduction
Memory requires visualization and organization of perception through mental images, as the symbolic retrospective of the student's collective memories, through which the shared memories are retrieved and revived according to current and future requirements. As for building collective memory, it is through the image and its relationship with time, that is, its association with a set of basic patterns by emphasizing the collective agreement that performs the function of the legend for architectural productions. Accordingly, the research assumes that the sources of knowledge of collective memory have a significant and distinctive impact in shaping the architectural products, and for the purpose of addressing the research issue and achieving the aims of the research and checking the hypothesis, a knowledge framework for collective memory was first built, then a comprehensive theoretical framework for collective memory in architectural education is extracted from theories and studies of...
collective memory. Then, they are applied to selected projects to clarify their impact on the architectural product and reach conclusions and recommendations.

2. Concept of Collective Memory

Collective memory is defined as follows:

- Halbwachs 1992, as a recall of images that are arranged either in chronological order or by the names, we give them and the meaning that is attributed to them within our group [1].
- Foote & Azaryahu 2007, as a matrix in which time and space are used separately and in conjunction with shared historical experiences and a sense of a shared past in the public life of a community or religious or social group [2].
- Hewer & Roberts 2012, as a dynamic interaction between history, culture and knowledge, including knowledge, emotion and choice, and then something that exists between people is manifested in the representations of the past discussed and spread within the social environment, which has the ability to enter into new or alternative perspectives Especially when exposed to generational alteration [3].
- Is central to how individuals and collectivises conceive of their identities. Sociological engagements with it spotlight how we mobilise resources from the social world to bring the past into the present and the implications of this for identity, power, and social change [4].
- Is a communicative process characterized by an intricate set of relations between individuals, objects, and actions. The process of collective memory is often tied to the formation of group identity and groups are conceptualized as products of collective memories. Herein lies the dominant function of collective remembrance: to solidify or assert collective identity, to construct a historical continuity from which to give a present grouping meaning—whether couple, family, organization, social movement, or nation [5].

3. Collective Memory and Architecture

The need to understand the memory of the previous forms restores the importance of collective memory related to architecture and cities. Scientists have studied memory for several decades in many disciplines, and this has led to an increase in the repercussions in memory where the meanings, concepts and phenomena of memory can be diverse [6]. Halbwachs acknowledges that each individual retains a mental image of the past events, these representations are fleeting. The images of the past can be structured into lasting memories only to the extent they are contextualized by the social group to which the individual belongs, be it a family, a social class, or a religious community. Collective memory thus transcends simple reminiscences of the past, and encompasses tastes, values, and social mores of a community [7]. According to Halbwachs, the collective memory is in constant flux in the consciousness of a group. Yet when an event experienced by the group is memorialized into a monument, collective memory is fixed in architecture. His study, in other words, both revolutionizes the sociology of knowledge, and yet, paradoxically, rests on the positivist assumption that architectural monuments of the past communicate only the original intent of commemoration. Halbwachs believes that architectural monuments help the ruling power—a church, a sovereign family, or a state—control or delay the inevitable shifts in the collective memory of the faithful [7].

According to (Halbwachs), collective memory is constructed socially through the spatial images of specific events or experiences related to an object or built-up environment or landscape through which people feel spatial communication [8]. Boyer described the collective memory in architecture and urban space as a general style or public formation that composes the city's image [9]. (Zelizer) emphasized that the study of collective memory "represents a graph of the past as it is woven into the present and the future" [10]. Notable personalities play an important role in community memory as a historical document, and the Lincoln Memorial in Washington DC occupies a permanent place in American history. It is very
suitable for a heroic history that makes legends and colossal sculptures great leaders. The student's role lies in her study and its impact on the collective memory of society for its investment in its architectural product [11].

Given that the urban collective memory implies an awareness of the environment in temporal and spatial communication, the urban collective memory becomes especially important for contemporary cities in transition, because the city entity is almost never fixed (spatial and time) to allow us to know things to be able to shape their images of our memories Urban area.

4. Collective Memory Sources in Architectural Education

The research relies on the work of the theoretical framework to analyse the graduation projects of students to know the sources of collective memory in architectural products on the theories and previous studies of collective memory, which are the main sources of collective memory [12].

4.1. Collective Memory Theories

They are as follows:

4.1.1. Two Cultures Theory: Theorize "Jeffery Olick" in 1999, the theory focused on the characteristics of the memorial context (cultural, social, and political), because it has stimuli, which are a response to the characteristics of the remembered (the remembered students), as groups possess memories as well as identities, ideas, styles, and speeches they possess more than just a grouping of individual subjects, language, dialogue, and narration are examples above. Individual, in addition to societies that offer forms of social organization that rely on different techniques of memory, such as monuments, museums, and texts. Consequently, these characteristics play a major role in expanding the student's ability to remember by enabling them to write a note, record a message or take a picture, which in turn plays an effective role in building architectural concepts and formative compositions [13].

4.1.2. Socio Historical Theory: Theorize "James Wertsch" in 2002, the theory focused on the characteristics of the physical and social reminder context, most experiences take place in social frameworks and share with others, and it focused on the process of social interaction that occurs within these frameworks, as well as emphasizes the stereotyping that exists within the self-formation of events and narratives, and the interactive relationships between representations and their decisive impact on collective action. Consequently, these frameworks represent the student's remembering criteria and are at the same time rich sources of knowledge for the student about collective memory, whether on the physical (historical) or social (human) level, and knowing whether the student’s architectural text prefers the historical dimension of the event or its human dimension, and therefore the architectural forms of projects varies according to the historical dimension versus the human dimension that constitutes the collective memory [14].

4.1.3. Narrative Theory: Theorize Liu & Hilton in 2005, the theory focused on the characteristics of the memorial context in terms of focusing attention on how important collective events are incorporated into social representations to understand how history shapes the group’s behavior. For a student to study any space, consider the historical context and deal with it with regard to memory, whether it is individual or collective to determine the roles that with it, and specifying the verbs that give an organizational hierarchy, starting from studying the project site to the end of the project. Consequently, it emphasizes doing the right thing by referring to the collective experience that produces cognitive and societal narrative forms, which convey the symbolic meaning to interfere with new experiences by restoring the collective patterns that are the center of understanding social identity. Also, it focused on the characteristics of the remembered student and the imposed approaches to the stimulus-response, which depend on his thoughts and tendencies in investing signals (patterns of groups) and the extent of their influence on his architectural product [15].
4.1.4. Socio-Cognitive Theory: Theorize Rydgren in 2008, the theory focused on the characteristics of the memorial context and the interactions and events that occur in it, that is, on the characteristics of the schematic cognitive structures of the group, which emerge from the cultures of the groups, and therefore the student must be familiar with the memories of the place by knowing the different events and understanding the experiences and social interactions that take place in it and that play a role Effective in creating multiple mental images of the student, and the use of normative cognitive strategies that serve social reality, and the analogy imposes itself on new information so that the collective memories and past beliefs become consistent with the beliefs of the present, and here the decisive effect of collective memory on collective action appears [16].

4.1.5. Dynamic Theory: Theorize Hewer & Roberts in 2012, the theory focused on the characteristics of the remembrance context (the dynamics of the social environment) by giving representations of the cognitive social processes that individuals use to give meaning to their environment. When a student is familiar with and understands the social environment, he or she re-establishes the collective structure of reality by expressing the content of social representation of social interactions and affiliations. Consequently, he or she performs a process of establishing standards, values and beliefs of the group to achieve social identity, where the decisive impact of collective memory is reflected in the collective action. where the decisive impact of collective memory is reflected in the collective action. At the same time, these representations vary from student to student, depending on the characteristics of the student on the one hand and the percentage of his or her awareness and his call for the event on the other. Therefore, the theory emphasized the characteristics of the remembrance (the remembered students), and (events and personalities) [17].

The theory focused the interaction between three sources of knowledge: academic history, collective memory, and individual experience, producing a personal view of reality, concepts of the past, present, and future, identity and values, truth and falsehood, and the results of the collective's narratives (Figure 1). These three components are rooted in relatively different knowledge worlds: science, tradition and experimentation. The total of them produces a unique reaction for each individual, and the output depends on the relative weights of each of the components.

![Figure 1. Interaction of sources of knowledge producing collective memory [17].](image-url)
From the above, we conclude that theories have confirmed [18]:

A. Theories emphasized the content of representations of collective memory, represented by the representations of people in a group to the history of their group and other groups. They emphasized the interactive relationships between these representations, which are manifested as cultural or physical products. Likewise, they emphasized the collective memory structure represented by the characteristics of memory in general (how the content exists in the collective memory), which can be determined with five structural dimensions that represent each dimension (dipole) which is:

- **Flexibility – Rigidity:** which indicates how the collective memory that embodies it the student in his product is characterized by scientific, tolerant and subject to change or resistance to change and this indicates flexibility or hardening of collective memory.
- **Central – Marginal:** which indicates the extent to which the remembered student is more interested in history and physical manifestations of collective memory, or less interested in history, which indicates the centralization or marginal of collective memory.
- **Strength – Weakness:** which indicates the extent of the high capacity of the remembered student to remember the collective events and practices and the decrease in forgetfulness or vice versa, which indicates the strength or weakness of the collective memory.
- **Individual-Social Explanatory:** which indicates the extent to which collective changes affect the student's characteristics, which indicates individual or social collective memory.
- **Optimistic - Pessimistic, total directionality:** which indicates the extent of positive overall evaluation of collective events and interactions or negative overall evaluation, which indicates optimism or pessimism of collective memory.

These representations can be seen as frames that structure the architecture inside and outside, and become an essential part of the construction of the framework and structure of the architecture.

B. Theories emphasized the representations of social, cultural and historical frameworks that were positioned within the collective context. Theories emphasized several concepts, including the role of history, historical memory, historical remembrance and narratives, which revolve around the type of objective representation of the past based on the multiple perspectives of the past, as it is a firm basis of shared knowledge across the culture of individuals. Language is what determines the form of subsequent memory, and most of the memory distortions result from the fact that language was not fully planned within experience, and how the language is formed to remember depends on the role of the narrative. Collective narratives as cultural tools constitute thinking, remembering and interpreting events that are used by the memorial society. Consequently, building social representations of history is imposed from the narrative structure that moves within stories that refer to the narratives of the original and that embody collective experience and group experience and represented in collective agreements. To understand the cultural values and beliefs that shape the historical perspective, it is imperative that when dealing with new situations, a similar mechanism must be used with similar memories and beliefs of the past. The dynamics of social beliefs are the infrastructure for the social transformation of knowledge. All these are done through two cultures, which are grouped and collective, so there is no collective memory without the participation of individuals in social life. As collective memory is a community culture, within each culture collective memory, collective remember, and memoirs are reference points for remembering (Figure 2).

4.2. Previous Studies of Collective Memory
They are as follows:

4.2.1. Kevin Lynch study in 1960: Lynch discussed the study of collective memory in cities, as he did not explicitly mention collective memory, but rather linked it to the general image of any particular
city, which is an overlap between many individual images. Here may be a series of public images, each of which is carried by a large number of citizens. These collective images are necessary if the individual is working successfully within his environment and cooperating with his colleagues, which is represented by a shared mental image that depends on identity, structure and meaning, and the importance of clarity, the process of orientation and a sense of safety for the city structure. These associated with the visual value, as the perception process is linked to the temporal and spatial restructuring of the mental image [19].

4.2.2. Aldo Rossi study in 1966: Rossi focus on a concept the new time of architecture is the time of memory that replaces history, so history is recognized by recognizing the relationship between the collective memory of events and the personality of the place in which the collective memory leads to its own transformation of the idea of type, as an analytical and experimental structure that can now be used to work on the structure of history, and becomes a tool for analysis and measurement, and it allows urban elements to be perceived as having real and original meaning, although they are typically predefined [20].

4.2.3. Christine Boyer study in 1996: Boyer mentioned that memory forms the knowledge of the built environment in which we live, socially share and recall it. The city and its architecture provide a set of collective memory that enables people to create meaning, reproduce, remember and preserve it through the chronological development of different cities, that there is unequal preservation of memory, where the buildings and surrounding areas remain, but social practices between them change and are forgotten in the end. It is important to capture past memory and understand the relationships between collective memories by rational analysis [21].

Figure 2. Theories of Collective Memory Representations (Authors).
4.2.4. Segah Sak study in 2013: The study aims to highlight the cyberspace to the light as a way that can be used to enhance the relationship of people with cities by adopting a socio-spatial approach that relies on integrating collective memory with the cyberspace to form images, places, practices and meanings that are related to the physical aspect, as well as creating electronic sites that encourage the continuation and collection of collective memory [22]. Through theories and previous studies of collective memory the research reached to prepare sources for collective memory representations (Table 1) and the application of these variables to a group of graduation projects for architecture students.

| First Variables | Secondary Variables | Sub Variables | Possible Values |
|-----------------|---------------------|---------------|-----------------|
| Spatial Images  | Social Events       | Social Events  |
|                 | Social Experiences  |               |
|                 | Social Experiences  |               |
| Social Behaviour| Repetition of Behaviour | Visual Stimulation |
|                 | Collective Perceptions |               |
|                 | Common Emotions     |               |
| Collective Awareness| Psychological Phenomena Collective | Thinking |
|                 |                     | Feeling       |
|                 |                     | Common Will   |
| Social Needs    | Social Affiliations | Collective Values and Beliefs |
|                 |                     | Collective Customs and Traditions |
|                 | Social Conversations |               |
|                 | Social Relations    |               |
|                 | Socially Shared Speeches |            |
| Socio-Cultural Practices | Ritual Practices and Traditions |               |
|                 | Myths and Tales     |               |
|                 | General Festivals    |               |
|                 | Group Holidays       |               |
| Physical Frameworks Representations | Physical Frameworks for Collective Memory | Physical Formations | Archaeology | Heritage Buildings |
|                 |                      |                | Archaeological Buildings |
|                 |                      |                | Landmark |
|                 |                      |                | Monument |
|                 |                      |                | Landscape |
| Physical Spaces | Monuments            |                |               |
| Events          | History of The Place |               |
|                 | Memories of The Place |               |
| Characters      | Historical Characters |               |
|                 | Collective Identity  |               |
| Historical Frameworks Representations | Physical Representations of History | Architectural Formations Built Throughout History | History of Architecture | Original Collectives Agreement |
|                 |                      |                | Architectural Principles |
|                 |                      |                | Architectural Concepts |
|                 |                      |                | Architectural Compositions |
| Collective Agreements | Representing the Group for Its History |               |
|                 | Culture Transmitted Through |            |
|                 |                       |               |               |
5. Practical Aspect
The practical aspect includes analysing a group of graduation projects according to the analysis form (Table 1) by adopting the SPSS software and extracting the mean and the relative importance of knowing the level of collective memory sources in graduation projects.

5.1. Selected Graduation Projects
The research relied on the analysis of 15 graduation projects (Table 2) for the fifth stage students according to the variables extracted from the theoretical framework, for the purpose of analysing it and knowing its effects and knowing the extent of the impact of collective memory sources on the architectural products, the researchers relying on the descriptive statistical analysis of data through the statistical measures of all variables Analysis form.

Table 2. Selected Projects for Analysis.

| No. | Project Name                                      | Project Location            |
|-----|--------------------------------------------------|-----------------------------|
| 1   | Interactive Cultural Complex                     | Nasiriyah / Ur              |
| 2   | Marine Biology Museum                            | Basra / Shatt Al-Arab       |
| 3   | Sustainable Village for The Care of The Elderly  | Dhi Qar / Nasiriyah         |
| 4   | Sustainable Industrial City                       | Maysan / Ammara             |
| 5   | Youth Sports City                                | Baghdad                     |
| 6   | Interactive Tourist City                         | Sulaymaniyah / Dokan        |
| 7   | Post-Terror Panorama Museum                      | Nineveh / Mosul             |
| 8   | Redesign of Najaf International Airport          | Najaf                       |
| 9   | Speicher Academy Between Yesterday and Today    | Salah-Din / Speicher Camp   |
| 10  | A Sustainable Tourist Complex in The Marshes     | Maysan / Umm an Ni’Aj Marsh |
| 11  | Marine Studies Academy                           | Basra / Khor Al-Zubair      |
| 12  | Media Production City                            | Basra / FAO                 |
| 13  | Shopping Mall and Metro Station                  | Anbar / Hit                 |
| 14  | Science and Technology Museum                    | Baghdad / Abu Nawas         |
| 15  | Geological Research Centre                        | Nineveh / Mosul             |
5.2. Analysis of the Results of Selected Projects

Table (3) contains 44 elements related to collective memory sources in the architectural products of graduation projects in terms of design concept and architectural composition, divided into three secondary variables (social framework representations, physical framework representations, historical frame representations) and the results of the analysis form showed the following (Figure 3):

| No. | Possible Values                              | Mean  | Relative Importance (RI) | Impact   |
|-----|---------------------------------------------|-------|--------------------------|----------|
| Q1  | Social events                               | 3.47  | 69.33%                   | Strong   |
| Q2  | Social experiences                          | 2.67  | 53.33%                   | Medium   |
| Q3  | Social experiences                          | 2.73  | 54.67%                   | Medium   |
| Q4  | Repetition of behaviour                     | 1.67  | 33.33%                   | Weak     |
| Q5  | Visual stimulation                          | 2.93  | 58.67%                   | Medium   |
| Q6  | Collective perceptions                       | 3.67  | 73.33%                   | Strong   |
| Q7  | Common emotions                             | 1.47  | 29.33%                   | Weak     |
| Q8  | Thinking                                    | 1.67  | 33.33%                   | Weak     |
| Q9  | Feeling                                     | 1.4   | 28.00%                   | Weak     |
| Q10 | Common will                                 | 2.07  | 41.33%                   | Weak     |
| Q11 | Collective values and beliefs                | 2.93  | 58.67%                   | Medium   |
| Q12 | Collective customs and traditions           | 2.53  | 50.67%                   | Weak     |
| Q13 | Social conversations                         | 1.8   | 36.00%                   | Weak     |
| Q14 | Social relations                            | 1.4   | 28.00%                   | Weak     |
| Q15 | Socially shared speeches                    | 1.8   | 36.00%                   | Weak     |
| Q16 | Ritual practices and traditions              | 1.93  | 38.67%                   | Weak     |
| Q17 | Myths and tales                             | 1.8   | 36.00%                   | Weak     |
| Q18 | General festivals                            | 1.2   | 24.00%                   | Weak     |
| Q19 | Group holidays                              | 1.07  | 21.33%                   | Weak     |
| Q20 | Heritage buildings                          | 1.67  | 33.33%                   | Weak     |
| Q21 | Ancient buildings                           | 2.8   | 56.00%                   | Medium   |
| Q22 | Landmark                                    | 2.27  | 45.33%                   | Weak     |
| Q23 | Monument                                    | 2.33  | 46.67%                   | Weak     |
| Q24 | Landscape                                   | 1.67  | 33.33%                   | Weak     |
| Q25 | History of the place                        | 3.47  | 69.33%                   | Strong   |
| Q26 | Memories of the place                       | 2.93  | 58.67%                   | Medium   |
| Q27 | Historical Characters                       | 1.53  | 30.67%                   | Weak     |
| Q28 | Collective identity                         | 3.47  | 69.33%                   | Strong   |
| Q29 | Collective agreement                        | 2.73  | 54.67%                   | Medium   |
| Q30 | principles                                  | 2.07  | 41.33%                   | Weak     |
| Q31 | Concepts                                    | 2.07  | 41.33%                   | Weak     |
| Q32 | Compositions                                | 3.4   | 68.00%                   | Strong   |
| Q33 | Representing the group for its history      | 2.87  | 57.33%                   | Medium   |

**Social Framework Representations**

| No. | Possible Values                              | Mean  | Relative Importance (RI) | Impact   |
|-----|---------------------------------------------|-------|--------------------------|----------|
| Q20 | Heritage buildings                          | 1.67  | 33.33%                   | Weak     |
| Q21 | Ancient buildings                           | 2.8   | 56.00%                   | Medium   |
| Q22 | Landmark                                    | 2.27  | 45.33%                   | Weak     |
| Q23 | Monument                                    | 2.33  | 46.67%                   | Weak     |
| Q24 | Landscape                                   | 1.67  | 33.33%                   | Weak     |

**Physical Framework Representations**

| No. | Possible Values                              | Mean  | Relative Importance (RI) | Impact   |
|-----|---------------------------------------------|-------|--------------------------|----------|
| Q25 | History of the place                        | 3.47  | 69.33%                   | Strong   |
| Q26 | Memories of the place                       | 2.93  | 58.67%                   | Medium   |
| Q27 | Historical Characters                       | 1.53  | 30.67%                   | Weak     |
| Q28 | Collective identity                         | 3.47  | 69.33%                   | Strong   |
| Q29 | Collective agreement                        | 2.73  | 54.67%                   | Medium   |
| Q30 | principles                                  | 2.07  | 41.33%                   | Weak     |
| Q31 | Concepts                                    | 2.07  | 41.33%                   | Weak     |
| Q32 | Compositions                                | 3.4   | 68.00%                   | Strong   |
| Q33 | Representing the group for its history      | 2.87  | 57.33%                   | Medium   |
Table 3 shows the following:

A. Collective Memory Representations: The mean of collective memory representations has reached 2.23, which is smaller than the value of the hypothetical mean of 3, meaning that the effect of the combined memory representations is weak on graduation projects. The average relative importance of 44.64% of representations of collective memory in graduation projects is weak.

B. Social Framework Representations: The mean of social framework representations has reached 2.23, which is smaller than the value of the hypothetical mean of 3, meaning that the effect of the combined memory representations is weak on graduation projects. The average relative importance of 44.64% of representations of collective memory in graduation projects is weak.

The highest values within the variables of social framework representations and have a high impact are the collective perceptions stemming from the collective awareness of the student in the community, and their relative importance has reached 73.33%, and a strong impact on the students' products. Followed by a strong impact of 69.33% for the social events represented by its spatial images.
Social framework representations include five primary values (spatial image, social behaviour, collective awareness, social needs, social practices). The highest relative importance of 59.11% has a medium impact of the spatial image value, which includes events, experiences, and social experiences for student, that are employed in architectural education, but on medium. As for the rest of the values, they have a weak effect on their use by the student of architecture in architectural education (Table 4) (Figure 4).

Table 4. Values of Social Framework Representations in Graduation Projects.

| No.   | Secondary Variables | Sub Variables | Values      | RI           | Impact |
|-------|---------------------|---------------|-------------|--------------|--------|
| Q1-Q3 | Social Framework    | Collective Context | Spatial Images | 59.11 %     | Medium |
|       | Representations      |               | Social Behaviour | 46 %         | Weak   |
| Q4-Q5 |                     |               | Collective Awareness | 41.06 % | Weak   |
| Q6-Q10|                     |               | Social Needs    | 41.8 %       | Weak   |
| Q11-Q15|                    |               | Social Practices | 30 %         | Weak   |
| Q16-Q19|                    |               |               |              |        |

C. Physical Framework Representations: The mean value for the physical frameworks representations has reached 2.15, which is smaller than the value of the hypothetical mean of 3, meaning that the effect of the physical frameworks representations is weak on graduation projects. The average relative importance of 42.93% for physical frameworks representations in graduation projects is weak.

The highest values within the variables of physical frameworks representations and have a medium impact are the archaeological buildings within the physical formations, their relative importance has reached 56%, and a medium impact on student products. Other values followed with a weak impact on the architectural products of graduation projects. Physical frameworks representations include two values (physical formations, spatial spaces), both of which have weak impact on the architectural products of graduation projects (Table 5) (Figure 5).

Figure 4. The relative importance of the values of social framework representations (Authors).
D. Historical Frameworks Representations: The mean of historical frames representations has reached 2.43, which is smaller than the value of hypothetical mean of 3, meaning that the impact of historical frames representations is weak on graduation projects. The average relative importance of 48.67% of historical frames representations in graduation projects is weak.

E. The highest values among the variables of historical frames representations are the evocation of historical symbols with a relative importance of 70.67%, followed by a relative importance of 69.33% for each of the history of the place, collective identity and stereotypes, and a relative importance of 68% for the architectural formations of the archaeological buildings, and these values have a strong impact on architectural products for graduation projects. The values with medium impact on the architectural products of graduation projects were the culture transmitted through generations, the memories of the place, the group's representation of its history, evocations of past experiences and collective agreement. The rest of the values were of weak impact on the graduation projects.

Historical frameworks representations include five values (architectural formations that have been built throughout history, temporal transformations, political transformations, intellectual traditions, cultural traditions), and the importance of physical representations of history being more important than social representations of history, as Table 6 includes temporal transformations through the recall of historical symbols and past experiences, as well as physical architectural formations built throughout history that have a medium impact on the architectural products of graduation projects, and that the rest of the values have a weak impact (Figure 6).

Table 5. Values of Physical Frame Representations in Graduation Projects

| No.     | Secondary Variables | Sub Variables                          | Values     | RI          | Impact   |
|---------|---------------------|----------------------------------------|------------|-------------|----------|
| Q20-Q21 | Physical Frame Representations | Physical Frameworks for Collective Memory | Physical Formations | 44.67 %    | Weak     |
| Q22-Q24 |                      |                                        | Spatial Spaces | 41.78 %    | Weak     |

Figure 5. The Relative Importance of Values for Physical Frames Representations (Authors).
The results of the analysis show that the most important sources that students use in their collective memory representations in their architectural products are representations of historical frameworks based on physical representations of formations and historical structures that were built throughout history by taking advantage of the history of the place, the collective identity of it, architectural compositions, evocation of historical symbols and stereotypes of intellectual traditions. And that most of these historical material representations come from the architectural curricula that are taught in the sections of architecture, and thus show the limited and weak representations of collective memory in the architectural school curricula. And that most of these historical physical representations come from the architectural curricula that are taught in the departments of architecture, and thus show the limited and weak collective memory representations in the architectural curriculum.

The overall level of collective memory representations represented by its social, physical and historical frameworks has a weak impact on student graduation projects, which shows the weak interest of students in the importance of collective memory in architectural products, which have a role in strengthening and enhancing architectural products at the intellectual and physical levels.

6. Conclusions
A. Weak collective memory representations in the products of graduation projects for students of the Department of Architecture - Al-Mustansiriya University, due to weak knowledge in the fields of social, material and historical representations frameworks related to the curricula given to students of architecture on the one hand and the weak culture of experience and interaction with the community and retrieve events and spatial images of collective memory and employ them in architectural products, to increase the student's intellectual and cognitive architectural knowledge.
B. Students reliance on physical resources, such as archaeological and heritage buildings, as a single source of collective memory in inspiring the intellectual and formal aspects and employing them in the architectural products of the departments of architecture, as a result of students feeding
mental images of historical and heritage buildings within the academic subjects related to the architectural history of civilizations and different architectural trends and shortening it in this aspect only, and not feeding students with subjects with mental images related to collective social and cultural events, with visual stimulation and shared group perceptions in society that are a source of collective memory that can be used in architectural products as a driving force for architectural creativity.

C. The collective memory retrieval of architecture students that have a strong impact on graduation projects for architecture students is limited to social events, collective perceptions, stereotypes, place history, collective identity, architectural compositions of historical structures, and evocation of historical symbols, stored in the student's collective awareness in long-term memory, which are mainly derived from the architectural curricula, without the importance of culture, social needs and practices, is important in retrieving the collective memory from these important sources, which represent the collective context of the place.

D. Most of the projects that evoke the collective memory depend on the forms of monuments in that place, because the architecture student is limited to retrieving the physical features of the place easily, and not trying to increase the recognition of the historical layers of the place from the intellectual, human, social and cultural aspects that are the basis for the emergence of the physical historical monuments in the place.

E. The majority of projects ignore the historical memories responsible for memory, and students work to evoke historical symbols through historical decorations in their designs as a form of nostalgia to past or as a form of current thinking, rather than fully understanding or appreciating history, and the designer obscures and may even help to erase the past and the collective identity of society.

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