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Review Article:

Impact of Architectural Design Concept Source on Application Level of Interior Design

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Abstract

Architectural education nowadays is considered one of the most important fields in architecture. The origin of learning in architecture is about the objective perception of the architectural concept in terms of its sources and levels of application. This research is generating from the question of the existence possibility effects of the architectural concept source in its application level to get to the essence that is forming from the architectural concept. The theories that dealt with this idea clarified a fragmented description which produces a knowledge gap. The problem statement of the research represented by the lack of knowledge that concerned with the effect of the architectural concept source on the application levels. The results of the case study were supporting the research hypothesis in the field of interior design. Cases were selected based on the clarity of their elements and levels of design. The search concluded that the concept source that is representing by the analogy symbolic concept, the analogy between nature and the project- was the most affected in the floor plan level.

1. Introduction

As architects, we deal frequently with many types of projects in design from the large scale projects to the small details within an interior space. And for each of those projects even the huge scale projects or a project with a small space, we need to mark an identity by selecting a concept that translates the function, the client desires, and the style of the project into a building that reflects the touch and sense of the architect with the requirements.

Traditionally, architectural concepts have been the designer's way of responding to the design

situation. It means translating the non-physical problem statement into the physical product. And the concept sources are representing the essential for the architectural projects in which any project must have a start with a variety of inputs that generates the first start of the project.

According to interior spaces, the designer followed the same process in dealing with the concept, with the elements of interior design such as floors, walls, ceilings, and volumes. Therefore, the research aims to discover the concept impact on the elements of interior design to find the connection between architectural concept sources and interior design elements.

The question of the research is about the relationship between the architectural concept sources and the application level in the interior space. In which the main question is which elements and application levels of the interior space has the maximum impact on the concept sources? To answer this question, a survey of the previous studies is needed to find the knowledge gap to be covered in this research.

2. Literature Review

In the study of (a vocabulary of architectural forms), White discussed the term of concept in many levels starting from the definition of the concept by giving many topics for that term. The study also discussed how the architects, architecture students, and the design teachers could involve with this term in the process of design.

The study presented the details that could be derived from the whole fields in terms of dealing with the concept and clarified that the concept is changing through the generations as long as the fields of different parts of life are changing every day. This study also discussed the concept scales according to the classification of the matters starting from the universal scale to the details of a zone within an interior space (White, 1975).

And in the study of McGinty, many definitions for the concept was reviewed. The study discussed the synonyms that may represent the concept in each case in terms of choosing the best scheme for a project and making satisfaction for the client. For each case, the study gives an architectural example to discuss that synonym. The study discussed the term of the conceptual scenarios in which the architect should offer short essays or scenarios that tie together all the important factors and ideas that influenced their solutions. (McGinty, 1077).

While in the study of Ching and Binggeli, the connection between design concepts and sketch operation for architectural design novices were discussed. The study also clarified the term of concept with relation to the sketching and clarified that the designer should start his project with sketches to represent his concepts.

The sketching is a learning process during design education where architects learn to think with drawings, develop their ideas and solve complex problems during their practice sketching skills till they become professionals. The study concluded that the designer cannot complete his design process without using the sketches in which he will not be able to develop his concepts and thoughts and the design solution will be impossible in this way to be achieved. (Ching, Binggeli, 2005).

And El-Ghobashy and Mosaad discussed the term of nature as to be the emotional element within the surrounding environment and an important aspect to deal with every day affecting everything around human. They considered that nature has a large number of resources which the designer could use in the process of borrowing the concepts.

The study included a historical background for the borrowing process in the architectural examples through the history and the new design metaphors which gave the capability to create new understanding, new relatives and new architecture integration with the environment to achieve human needs and satisfaction. (El-Ghobashy, Mosaad, 2016).

Through the discussion of the literature review, the concept was discussed in many aspects and classified into vocabularies, and many fields of

resources for the concept were mentioned in the design or interior design. But the relationship between the concept with the elements of interior design and the levels of implementation was not discussed, therefore the knowledge gap is a lack of knowledge of the impact of the architectural concept sources on the application levels of the interior design elements.

This defines the research problem represented by the lack of knowledge about the architectural concept sources and their impact on the interior design elements. The goal of the research is to find the best concept source and the elements affected by it. The research will be a reference for the interior design students to follow.

Below the research will discuss the vocabularies of each of the concept and interior space elements to find the relationships between them. And conclude some vocabularies and relationships to be used in the case study.

3. Source of Concept

A simple definition of a concept suggests that concepts are ideas that integrate various elements into a whole. In the context of this text, these elements can be ideas, notions, thoughts, and observations. In architecture, a concept suggests a specific way that programmatic requirements, context, and beliefs can be brought together, thus concepts are an important part of architectural design. (McGinty, 1977, p.208).

The term "Concept" is defined in the English Oxford dictionary as an abstract idea, a plan or intention, an idea or invention to help sell or publicize a commodity, an idea or mental image which corresponds to some distinct entity or class of entities, or its essential features, or determines the application of a term –especially a predicate-, and thus plays a part in the use of reason or language.

In the Merriam-webster dictionary, the concept is defined as something conceived in the mind, though, notion, an abstract or generic idea generalized from particular instances, the basic concepts of psychology, and the concept of gravity.

(www.oxforddictionary.com; www.merriam-webster.com).

Architects, architectural students, and design teachers are all involved with the making of building forms. There are many valid techniques, models, paradigms, idioms and processes for designing, learning design and teaching design. All with the same essential goal of providing successful architecture in every sense.

They all serve as vehicles or catalysts for improving our effectiveness as designers, to broaden and deepen our understanding of design activity and to recognize and present information about designing. There are several statements about concepts which, taken together, can convey a sense of what they are.

A concept is an initial generalized idea, a generation which is to be expanded and developed later in more detail, an embryonic framework which is to accommodate a richer complexity, a perception about form resulting from an analysis of the problem, a mental image deriving from the project situation, a strategy for moving from the project needs to building solution, the rudimentary set of tactics for proceeding with design, the preliminary grammar for developing the principal project issues, and the designer's first ideas about building morphology. (White, 1975, p.10).

The concepts may be process or product-oriented, take place at any stage in the design process, occur at any scale, be generated from several sources, have a hierarchal nature, possess intrinsic problems and be plural in number and concern within any single building. (White, 1975, p.10).

The designer often relies upon catalysts methods for idea simulation, some of the sources that are used are: Thumbing through architectural books and magazines, studying buildings that have addressed similar design problems, recalling applicable concepts used in the past that have proven successful, reviewing checklists of architectural concerns in building design, making a list for key concerns and issues in the problem,

brainstorming the project with fellow designers, restating the description of the project in the designer's own words, restructuring the program format to describe the project as the designer understands it, making a list of keywords that seem to capture the essential project qualities and issues, translating key issues into visual images through diagramming, reviewing a list of buzz words meant to trigger concepts through metaphor and analogy, doing an in-depth analysis of a related building type, drawing upon analogous and metaphoric associations found in nature, art objects, other disciplines such as music, art, poetry, physics, and physiology and other building types. (White, 1975, p.19).

The following synonyms have been used by various designers to describe their search for concepts: architectural ideas, themes, super organizing ideas, esquisse, and literal translations. (McGinty, 1977, p.209).

- **Architectural Ideas**

Concepts that have been reduced to a formal architectonic concern like daylight, space, sequences of spaces, integration of structure and form and sitting in the landscape. Each can influence the general design of a building; the specific architectonic concern is then used as the basis for the design decisions that follow. (McGinty, 1977, p.209).

- **The Theme**

It is a specific pattern or idea that recurs throughout the design of a project. It can be narrow in intention like a specific geometric theme that appears throughout the project, or it can be more general. (McGinty, 1977, p.209).

- **Super Organizing Ideas**

It refers to the general geometric configurations or hierarchies that the parts of a project should respect; a super organizing idea allows variations among the parts just as long as they reinforce the overall pattern. (McGinty, 1977, p.209).

3.1. Types of Concepts

There are five types of concepts: analogies -looking at other things-, metaphors -looking at abstractions-, essences -looking beyond the programmatic needs-, programmatic concepts -looking at the stated requirements-, and ideals -looking at universal values-. (McGinty, 1977, p.223).

3.1.1. Analogy

Analogies are probably the most frequently used device for formulating concepts, analogies identify possible literal relationships between things, and one thing is identified as having all the desired characteristics, and thus becomes a model for the project at hand. (McGinty, 1977, p.223).

3.1.2. Metaphor and Similarity

Like analogies, metaphors identify relationships between things. However, the relationships are abstract rather than literal. Similes are metaphors that use the words "like" or "as" to express a relationship. Metaphors and similes identify possible patterns of parallel relationships. (McGinty, 1977, p.223).

There are two types of metaphors; direct metaphor which is headed the metaphor form to harmony with the surrounding and with the receiver by the form stimulation to objects seen before and became familiar and a part of the memory and indirect metaphor which borrows the objective principles that guide the environmental composition (typology). There exist different sources of metaphor as: from architecture to outside architecture such as literature, religion, environment, art and man-made. (El-Ghobashy, Mosaad, 2016, p.575).

From the beginning of creation, the human being was surrounded by nature. Nature has been a source of inspiration for human beings in different aspects of their life and it can be a

reflection of a person's believes and desires. Human is considered a part of the surrounding nature and also the surrounding environment has an impact on human, the effects of the environment on human are through responses of an emotional nature. (El-Ghobashy, Mosaad, 2016, p.575).

3.1.3. Essence

Essences distill and concentrate aspects of more complex issues into terse, explicit statements. Essence connotes insights into the most critical and intrinsic aspects of the thing being analyzed. A statement of the essence of something can also be the result of discovering and identifying the roots of an issue. (McGinty, 1977, p.223).

3.2. Concept Source (Generating the Concept)

There are a lot of factors that affect the generating of the concepts such as the function of the project, site plan, society, culture, client, and the memory of the place or the client, the goal of the project.
And there are a lot of ways to get the inspiration for a new concept such as a sense of a thing, a word or a picture within a film, a pattern on an old wall. All of that is achieving by the process of the brainstorming through watching and producing a lot of concepts and options that help to get the final concept, there are some types and sources of the concept as following: (www.site.iugaza.edu.ps).

3.2.1. Technical Concept Source

This concept deals with the essence of the design problem directly through the technical solutions, and to solve these problems, many technical instruments and particular inventions must be applied. (www.site.iugaza.edu.ps).

3.2.2. The Philosophy Concept Source

The philosophical approach is considered from the strongest intellectual doctrines that have the ability to delivering the general concepts, and in the same time, the concept will be richer especially when the philosophy transforms to a novel with many chapters and the richness of this kind of concepts will be richer by the multiple idea links and its particles with the project. (www.site.iugaza.edu.ps).

3.2.3. Inspirational Concept Source

Each point, line, and plane have an impression in the human brain when that elements mix like a three-dimensional form, a general inspiration will be generated in the brain with a particular character such as happiness, hope, sadness, balance, nervousness. This kind of concept often is using with other kinds of concepts cause there is no guaranty that the recipient with gets the inspirational idea in the right way. (www.site.iugaza.edu.ps).

3.2.4. Symbolic concept source

Is similar so far with the inspirational concept but not depending on the meaning of the point, line, and plane translated by the human brain, but through the connection between the form and the project through some symbols like the relationship between types of food with the restaurant, the money with the bank. here the elements are represented by primary shapes or lines that must not reflect the basic shape for the element but just a symbol for it. (www.site.iugaza.edu.ps).

3.2.5. The Impressionist Concept Source (Direct Analogy Concepts)

This concepts represents a superficiality concept and doesn't need a lot of information and searching or inspiration, in which an element may be cached that has a relationship with the

project as using the shape of a tree for a house within a forest site or using the shape of a shoe for an Expo for shoes. (www.site.iugaza.edu.ps).

3.2.6. Abstraction concepts source

The designer borrows a particular element with a symbolic or inspirational character, then he may abstract it to get a new form that can achieve distribution of the masses according to the project studies, this type of concept may be richer if it mixed with a philosophy in the process of abstraction. (www.site.iugaza.edu.ps).

3.2.7. Structural concept source

This type of concept is producing by the abstraction of a structure within nature. It is using to solve a structural problem uniquely, and this type of concept represents a branch of the abstraction concepts. (www.site.iugaza.edu.ps).

The topics above are showing infinity vocabularies that the architect could conclude from it. Table (1) shows the concept sources and their sub-vocabularies.

4. Interior Space

Space is a prime ingredient in the designer's palette and the quintessential element in interior design. Through the volume of space, we not only move, we see forms, hear sounds, feel gentle breezes and the warmth of the sun, and smell the fragrances of flowers in bloom. Space inherits the sensual and aesthetic characteristics of the elements in its field. (Ching, Binggeli, 2005, p.2)

The volume is the special characteristic of the space, and it that thing that been percept first about the nature of the space (length, width, and height), and the standard quality of the volume is characterized importantly in defining of the space characteristics, and it specified from the volume of space by the dimensions and proportions of the human. (Naama, 2007, p.75).

The geometric elements, point, line, plane, and volume can be arranged to articulate and define space. In architecture, these fundamental elements become linear columns and beams and planer walls, floors, and roofs. As the topics below. (Ching, Binggeli, 2005, p.3).

- A column marks a point in space and makes it visible in three dimensions.
- Two columns define a spatial membrane through which we can pass.
- Supporting a beam, the columns delineate the edges of a transparent plane.
- A wall, an opaque plane, marks off a portion of amorphous space and separates here from there.
- A floor defines a field of space with territorial boundaries.
- A roof provides shelter for the volume of space beneath it. (Ching, Binggeli, 2005, p.3)

Upon entering a building, we sense shelter and enclosure. This perception is due to the bounding floor, walls, and ceiling planes of interior space. These are the architectural elements that define the physical limits of rooms. They enclose space, articulate its boundaries, and separate it from adjoining interior spaces and the outside. The floors, walls, and ceilings do more than mask off a simple quantity of space.

Their form, configuration, and pattern of window and door openings also imbue the defined space with certain spatial or architectural qualities. We use terms such as grand hall, loft space, sunroom, and alcove not simply to describe how large or small space is but also to characterize its scale and proportion, its quality of light, the nature of its enclosing surfaces, and how it relates to adjacent spaces. (Ching, Binggeli, 2005, p.6).

4.1. Interior Building Elements

Interior spaces within buildings are defined by the architectural components of structure and enclosure, such as columns, walls, floors, and roofs. These elements give a building its form, demarcate a portion of infinite space and set up a

pattern of interior spaces. (Ching, Binggeli, 2005, p.146).

Floors are the flat-level base planes of interior space, as the platforms that support our interior activities and furnishings; they must be structured to carry the resultant loads safely. (Ching, Binggeli, 2005, p.148).

Walls are essential building elements of any building; they have traditionally served as structural supports for above-grade floors, ceilings, and roofs. They form the facades of buildings. They enclose, separate, and protect the interior spaces they create; interior walls subdivide the interior spaces of a building, provide privacy for these spaces, and control the passage of sound, heat, and light from one space to the next. (Ching, Binggeli, 2005, p.150).

The third major architectural element of interior space is the ceiling. Although out of our reach and not used in the way of floors and walls, the ceiling plays an important visual role in shaping interior space and limiting its vertical dimension. It's the sheltering element of interior design, offering both physical and psychological protection for those beneath its canopy. (Ching, Binggeli, 2005, p.162).

4.2. Levels of Applying the Concept

The designer can achieve a lot of goals through applying the architectural concepts, and with the variety of the projects, that goals are changing or the final result by applying those goals will change, therefore, the levels of applying the architectural concept are as follow:

4.2.1. Functional Level.

Changes in the interior function took place due to the technological developments, in which the main reason for designing an interior space is achieving a suitable living respecting the interior and the exterior environment and achieving the future needs for the human. (El-Ghobashy, Mosaad, 2016, p.577).

4.2.2. Form Level

a) The appearance of new techniques for floors such as sense flooring and flooring reacting with lightings influenced by systems of living creatures; Appearance of moving topological flooring influenced by the motion of trees due to wind. (El-Ghobashy, Mosaad, 2016, p.577).
b) The appearance of genetic algorithm walls influenced by the creature's relaxation and reaction towards their environment, also the reacting walls used for elevations influenced by the DorseraCapensis plant. (El-Ghobashy, Mosaad, 2016, p.577).
c) New types of ceilings appeared such as fixed environmental metaphoric ceiling influenced by tree shape and movable environmental metaphorical ceilings influenced by birds' wings. (El-Ghobashy, Mosaad, 2016, p.577).

4.2.3. Volume Level

Changes in the interior space took place due to the technological developments, several studies are done due to these changes resulting in the creation of new buildings spaces called "electronic spaces" or "space of flows" which is integrated with the surrounding environment. (El-Ghobashy, Mosaad, 2016, p.577).

4.2.4. Circulation Level According to the Arrangements of Furniture and Partitions.

New concepts have appeared in furniture styles such as new naturalism influenced by the surrounding environment and the multipurpose furniture some are influenced by earth shape and the genetic furniture influenced by the systems of living creatures and the morphological furniture influenced by the plants, insects, sea creatures, planets. (El-Ghobashy, Mosaad, 2016, p.577).

The research concludes from above the main levels that the designer could apply his concepts on it that is represented in the table (2)

The vocabularies that are concluded from the theoretical framework represented by the architectural concept sources vocabularies and application levels of the interior space elements. Both will be merged as the main variables to get the relationship as it is shown in the table (3) which is the form of analysis that will be used in the case study. The research hypothesis consumes the impact of the architectural concept sources on the interior design elements on two levels, the first one is the most used concept source, and the second one is the most used level from the design elements.

5. Method

According to the vocabularies that were concluded in the table (3) and the research hypothesis, the search will test the samples of the study that are representing by the data that are submitted by a group of students. The case study method will be a questionnaire form as it is shown in the table (5) that represents a test of one student, containing a set of questions that improves the relationship between the variables shown in table (3).

The limitation of the study is representing by two levels, the first one is the set of architectural concept sources and the design elements that are concluded from the theoretical framework. The second one is the students that passed the course of interior design in the architectural department-university of Duhok- the fourth and fifth stage students-. The questionnaire was 30 forms, passed forms that had been analyzed were 25 forms, to test the information that they studied in this subject.

The statistical analysis of the previous variables depends on the specialist programs of the statistical applications (the statistical program for social science SPSS version 21).

5.1. The Relative Frequency Analysis of the Variables

It includes finding the number of repetitions for each of the statements with the relation of these data concerning all statements. It is possible to identify the dominant situation of the data repetition for any variable, and the sum of the relative frequencies is always equal to one. (Berwari, 2010, p.113).

6. Results Discussion

6.1. Discussing the Results of Using the Technology as a Concept Source

The statistical analysis shows a maximum achieving rate for the ceilings with a percent of (35.8%) and frequency of (19) out of (53). The minimum achieving rate for the function with a percent of (5.7%) and frequency of (3) out of (53), as it is shown in figure (1).

We can consider that using the horizontal planes represented by the ceilings is the better part to use the technology as a concept source in which the designer could use many techniques to give the impression of technology above the recipient.

6.2. Discussing the results of using a metaphor analogy (architectural theoretical source) as a concept source

The statistical analysis shows a maximum achieving rate for the floor plans with a percent of (19.2%) and frequency of (14) out of (73). The minimum achieving rate for the ceilings with a percent of (8.2%) and frequency of (6) out of (73), as it is shown in figure (3).

The floor plans or ground level is the best level of the space elements to apply the metaphor analogy in its architectural theoretical source that the recipient could live the concept during his movement through the floors.

6.3. Discussing the Results of Using a Metaphor Analogy (Translating a Story to a Concept) as a Concept Source

The statistical analysis shows a maximum achieving rate for the function with a percent of (21.5%) and frequency of (14) out of (65). The minimum achieving rate for the circulation through the partitions with a percent of (7.7%) and frequency of (5) out of (65), as it is shown in figure (4).
The separation of the spaces through the zones of function is most appropriate for achieving the metaphor analogy through translating a story to a concept in which each function could tell a story through its characteristics and style such as a part of a movie or a novel.

6.4. Discussing the Results of Using an Inspirational Concept (Ideological Concept) as a Concept Source

The statistical analysis shows a maximum achieving rate for the walls with a percent of (19.7%) and frequency of (14) out of (71). The minimum achieving rate for the circulation through the furniture with a percent of (5.6%) and frequency of (4) out of (71), as it is shown in figure (5).
We can achieve the concept vocabularies of the inspirational concepts in its ideological sources with a high percentage on the walls level and the floor plans level in which the ideological sources will be more detailed and clear to the recipient.

6.5. Discussing the Results of Using an Inspirational Concept (Formal Concept) as a Concept Source

The statistical analysis shows a maximum achieving rate for the three dimensional volume with a percent of (20.8%) and frequency of (10) out of (48). The minimum achieving rate for the ceilings with a percent of (6.3%) and frequency of (3) out of (48), as it is shown in figure (6).
The concept vocabularies of the inspirational concepts in its formal sources has an impact on the three dimensional volume in which the shapes of the concept may be translated into a three dimensional forms.

6.6. Discussing the Results of Using Symbolic Concept (the Analogy between the Nature and the Project) as a Concept Source

The statistical analysis shows a maximum achieving rate for both of the floor plans and the circulation through the furniture with a percent of (20.4%) and frequency of (11) out of (54). The minimum achieving rate for both of the function and the circulation through the partitions with a percent of (9.3%) and frequency of (5) out of (54), as it is shown in figure (7).
We can achieve the using of the analogy between the nature and the project through the floor plan and function level with the most impact in which the details derived from the nature could be used as 2D in the floor plans and as 3D on the separation between zones.

6.7. Discussing the Results of Using a Symbolic Concept (the Analogy between the Name of the Project and the Concept) as a Concept Source

The statistical analysis shows a maximum achieving rate for the three dimensional volume with a percent of (23.2%) and frequency of (13) out of (56). The minimum achieving rate for the ceilings, walls, and the circulation through the partitions with a percent of (10.7%) and frequency of (6) out of (56), as it is shown in figure (8).
The most impact of the analogy between the name of the project and the concept is on the three dimensional volume level in which the formation of the concept will become more attractive on the three dimensional volume to represent the volume itself.

6.8. Discussing the Results of Using an Abstraction Concept (Ideological Concepts) as a Concept Source

The statistical analysis shows a maximum achieving rate for the floor plan with a percent of (23.4%) and frequency of (11) out of (47). The minimum achieving rate for the ceilings with a percent of (2.1%) and frequency of (1) out of (47), as it is shown in figure (9).
We can consider that the using of the abstraction concept source with its ideological source has better impact on the floor plan level in which the abstraction will be more detailed on the floor level through the movement of the recipient.

6.9. Discussing the Results of Using an Abstraction Concept (Formal Concepts) as a Concept Source

The statistical analysis shows a maximum achieving rate for the walls with a percent of (22.2%) and frequency of (14) out of (63). The minimum achieving rate for the circulation through the furniture with a percent of (4.8%) and frequency of (3) out of (63), as it is shown in figure (10).
We can consider that the using of the abstraction concept source with its formal source has better impact on the walls level in which the abstraction will be more detailed on the vertical plane through the movement of the recipient.
The table below shows the percentage of achieving the levels of the interior spaces due to the architectural concept sources.

7. Conclusions

1- The first part of the research concludes a theoretical framework for the impact of the design concept source on its application level. In which the mental image for the design concept is resulting from its primary basis or the primary sources represented by technology as a concept source, metaphor analogy –architectural theoretical source-, metaphor analogy –translating a story to a concept-, inspirational concept –ideological concept source-, inspirational concept –formal concept source-, analogy symbolic concept – the analogy between nature and the project-, analogy symbolic concept –the analogy between the name of the project and the concept-, abstraction concept source – ideological concept source-, and abstraction concept source –formal concept source-.
2- The personality of the architectural production reflects its source significantly or unconsciously, which is clear in the features of the design concept in its representation levels especially in the interior design. The representation or application levels can be restricted by the floor plan level, ceiling level, wall level, volume level, and function level – dividing by functional zoning-, furniture level –circulation through the furniture-, and the level of the partition –circulation through the partitions-.
3- The results related to the technology as a concept source clarified that the ceiling is the most used level to represent the concept source. This result refers that the students have a high sense according to the nature of that level as its connections generally with the lighting sources and other instruments.
4- The results related to the metaphor analogy – architectural theoretical source- as a concept source clarified that the floor plan is the most used, and that refers that the students are dealing with the plans as the papers that they are making their sketches on it and translating their ideas.
5- The results related to the metaphor analogy – translating a story to a concept- as a concept source clarified that the function is the most using level, and that refers that the students are dealing with the zones as to be a part of a story and the movement through them represents the reading of the story.
6- The results related to the inspirational concept-ideological concept source- clarified

that the wall level is the most using level, and that refers that the students tend to use these concepts on the eye-level vertically through the movement of the human.

7- The results related to the inspirational concept-formal concept source- clarified that the volume level is the most using level, and that refers that the students tend to use these concepts in three-dimensional forms to be inspired in all dimensions.

8- The results related to the analogy symbolic concept-the analogy between nature and the project- clarified that the floor plan and furniture level are the most using levels, which refers that the students have a high sense of dealing with the horizontal ground facilities to represent their analogies.

9- The results related to the analogy symbolic concept-the analogy between the name of the project and the concept- clarified that the volume level is the most using level, which refers that the students have a high sensitivity with the three-dimensional forms to represent these concepts.

10- The results related to the abstraction concept source-ideological concept source- clarified that the floor plan level is the most using level, which refers that the horizontal ground level is the best surface to explain the ideological sources.

11- The results related to the abstraction concept source-formal concept source- clarified that the wall level is the most using level, which refers that the vertical levels are the best surfaces to explain the formal sources.

12- The analogy symbolic concept – the analogy between nature and the project- is the most influential source on the application levels in general, and this is what is consistent that the student is starting with the strategy of building the concept in the interior design with specified symbolic points connected with the main context of the project and thus, the naturalization of the other sources.

13- According to the pluralism of the architectural concept sources, the students in general, consciously, and unconsciously tends to one source of the design concept in the interior design, that refers to the pluralism of dealing with the design concept in terms of its sources in a hand, and its centrality about a specified axis in another hand.

14- At the same time, the converged results of the students in terms of their choice of the concept sources and its implementation on the application levels are an indication of an excellent perception of the students to create different ideas that achieves specific visions for each student. And this leads to what we are calling the specific architectural structure for each student to build its design concept, that pluralism and totalitarian are what lead to the true design concept.

15- The concentration of the students to adopt a variety of sources is an indication that the students are starting their concepts building from a specific point and trying to implement it at a specific level which gives, in turn, an expressionist power to the concept through a specific level.

16- The results indicate that the students are adopting intellectual sources that are much abstract and symbolic which are connecting in specific formal forms which gives the design concept a direct specific understanding of the inspiration and this concentrate the perception of the students for the importance of the no direct in most of the cases and it is a various perception.

17- The cases of students' perception of the immediacy in the concept expression through its symbolic source had coupled in general with two specific levels which are indicated for deep perception for the importance of the clarity of the concept pivotal as a source and representation.

18- The students, in general, tend to the unilateral of the design concept as a source and representation instead of the pluralism.

19- The students, in general, tend to the totality instead of the partiality.

20- The students, in general, tend to the non-directionality instead of the directionality.

اثر مصدر الفكرة المعمارية على مستوى التطبيق في التصميم الداخلي

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المستخلص

في حقل العمارة ، يتم التعامل مع مختلف الانواع من المشاريع والحالات التصميمية سواء اكانت مشاريع ذات طابع معقد او على مستوى التفاصيل ضمن الفضاء الداخلي ،وفي جميع الحالات يتحتم على المصمم ايجادوهوية محددة لكل مشروع من خلال ايجاد مجموعة من الافكار التي تترجم الوظيفة ، رغبات الزبون ، بالاضافة الى طراز المشروع وبالتالي وضع لمسة المصمم لتلك المشاريع. وعند التعامل مع الفضاءات الداخلية ، يحتاج المصمم الى نفس العملية في التعامل مع الافكار ، وهنا يجب التعامل مع عناصر التصميم الداخلي من ارضيات ، جدران ، سقوف ، بالاضافة الى الحجوم الثلاثية الابعاد ، وهنا سوف نكتشف اثر الفكرة المعماريةعلى تلك العناصر التصميمية للفضاء الداخلي والتي تعرف مشكلة البحث والتي تتمثل ب (على اي مستوى من عناصر التصميم الداخلي تؤثر الفكرة التصميمية؟ قصور المعرفة فيما يتعلق باثر الفكرة التصميمية على مستويات التطبيق في التصميم الداخلي) ، وبالتالي يتم الاستنتاج بكيفية التعامل مع عناصر الفضاء الداخلي من خلال تطبيق الافكار عليها والذي يعتبر كهدف للبحث ، وتقوم فرضية البحث على اساس مجود اثر للفكرة التصميمة على مجمل العناصر ابتداءا من النقطة الى الفضاء الثلاثي الابعاد بمجمل تفاصيله.

الكلمات المفتاحية : الفكرة التصميمية ، عناصر التصميم الداخلي ، مصدر الفكرة ، المحاكاة.

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Table 1: Showing the vocabularies concluded from the concept sources. (Source: Researcher)

No.	Vocabulary	Sub-Vocabulary	Notes
1.	Technical concept source	Using the technology as a source	
2.	Philosophy concept source	Theoretical source	
		Translating a story to a concept	
3.	Inspirational concept source	Ideological source	
		Formal source.	
4.	Symbolic concept source	Formal sources	
5.	Abstraction concept source	Ideological source	
		Formal source	

Table 2: Showing the levels of applying the concept. (Source: Researcher)

No.	Level of application	Vocabulary		Notes
1.	Functional level	Dividing the main zones		
2.	The form level	Horizontal planes	Floor plan	
			Ceiling plan	
		Vertical planes	Walls	
		Volume level	The three dimensional space	
3.	Circulation level	Furniture		
		Partitions		

Table 3: Showing the measurement of variables form for the interior design vocabularies. (Source: Researcher)

No	Vocabulary	Sub-vocabulary	Form level				Function level	Circulation level	
			Floor plan	Ceiling	Walls	Three dimensional volume	Dividing by functional zoning	Furniture	Partitions
1	Technical concept source	Using the technology as a source							
2	Philosophy concept source	Architectural Theoretical source							
		Translating a story to a concept							
3	Inspirational concept source	Ideological source							
		Formal source							
4	Symbolic concept source	Formal sources							
5	Abstraction concept source	Ideological source							
		Formal source							
6	Other sources	Ideological source							
		Formal source							

Table 4: Clarifies the percentage of achieving the levels of the interior space due to the architectural concept sources. (Source: Researcher)

	Concept vocabulary	Floor plan	Ceiling	Wall	Volume	Function	Furniture	Partitions
1	Technology as a concept source	17%	35.8%	17%	9.4%	5.7%	7.5%	7.5%
2	Metaphor analogy (architectural theoretical source)	19.2%	8.2%	15.1%	15.1%	15.1%	15.1%	12.3%
3	Metaphor analogy(translating a story to a concept)	12.3%	12.3%	13.8%	20%	21.5%	12.3%	7.7%
4	Inspirational concept (ideological concept source)	18.3%	14.1%	19.7%	16.9%	15.5%	5.6%	9.9%
5	Inspirational concept (formal concept source)	14.6%	6.3%	18.8%	20.8%	12.8%	14.6%	12.5%
6	Analogy symbolic concept (the analogy between the nature and the project)	20.4%	11.1%	13%	16.7%	9.3%	20.4%	9.3%
7	Analogy symbolic concept (the analogy between the name of the project and the concept)	14.3%	10.7%	10.7%	23.2%	17.9%	12.5%	10.7%
8	Abstraction concept source (ideological concept source)	23.4%	2.1%	14.9%	17%	17%	10.6%	14.9%
9	Abstraction concept source (formal concept source)	15.9%	17.5%	22.2%	14.3%	11.1%	4.8%	14.3%

Table 5: Clarifies the questionnaire sample of a random student. (Source: Researcher)

Questionnaire Form: Draw a true mark in the field that you think is the most use in the design process.

No		Implementation						
		Floor plan	Ceiling	Walls	3D volume	function	Circulation through the furniture	Circulation through the partitions
1	Using a technology as a source like an electric or hydraulic system or a specific mechanical system							
2	Using a metaphor analogy (philosophy source) like a story of a film, war, love story, a novel….etc.							
3	Using a metaphor analogy (philosophy source) like an architectural theory, school, movement, character of an architect…etc.							
4	Using an inspirational concept source depending on the meaning of a thing, like the meaning of the vertical line, vertical plane, the horizon line…etc.							
5	Using an inspirational concept source depending on the meaning of a thing, like the meaning of the hope, force, balance, power…etc.							
6	Using direct analogy symbolic concept source like the analogy between the nature and the project, (trees, plants, flowers, sand, mountains, desert, lake or sea, ice…etc.							
7	Using direct analogy symbolic concept source like the analogy between the name of the project and the concept, for example a fish body for a museum of the sea world.							
8	Using the abstraction concept source like the abstraction of an architectural theory, story, philosophy…etc.							
9	Using the abstraction concept source like the abstraction of a painting, car lines, loge…etc.							

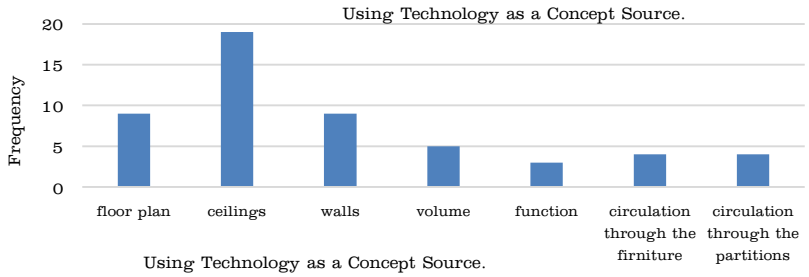


Fig.1: The impact of using the technology as a concept source on the design elements. (Source: Researcher)

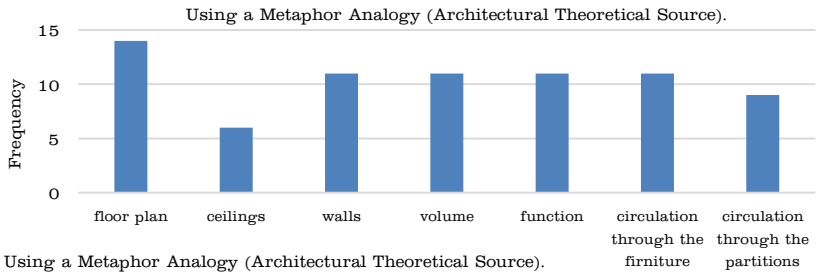


Figure 2: The impact of the metaphor analogy (architectural theoretical source) as a concept source on the design elements. (Source: Researcher)

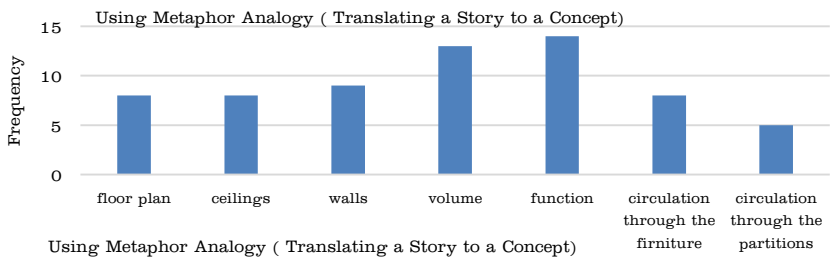


Figure 3: The impact of the metaphor analogy (translating a story to a concept) as a concept source on the design elements. (Source: Researcher)

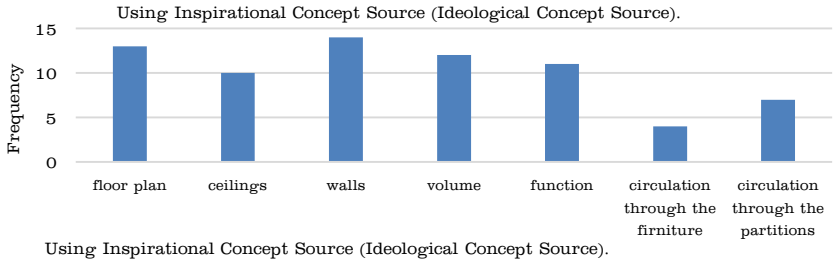


Figure 4: the impact of the inspirational concept (ideological concept source) as a concept source on the design elements. (Source: Researcher)

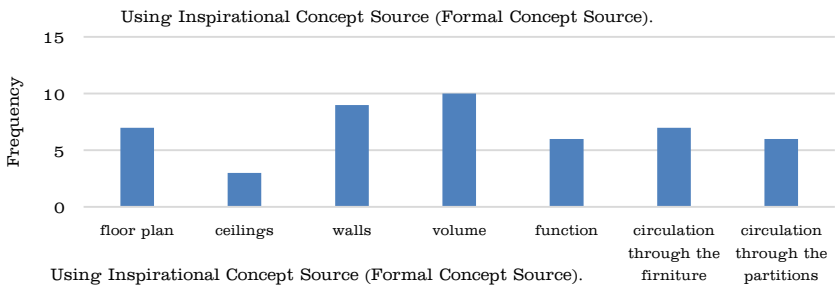


Figure 5: The impact of the inspirational concept (formal concept source) as a concept source on the design elements.(Source: Researcher)

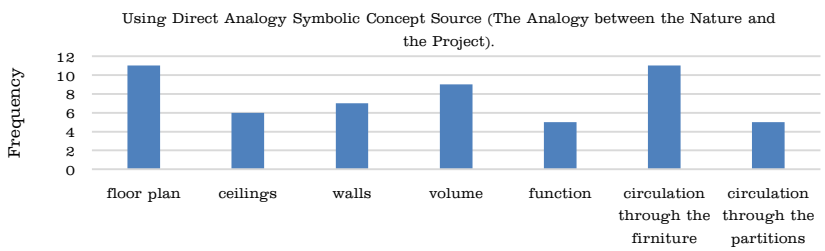
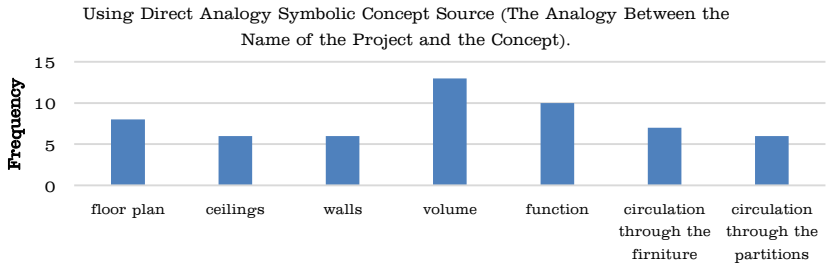
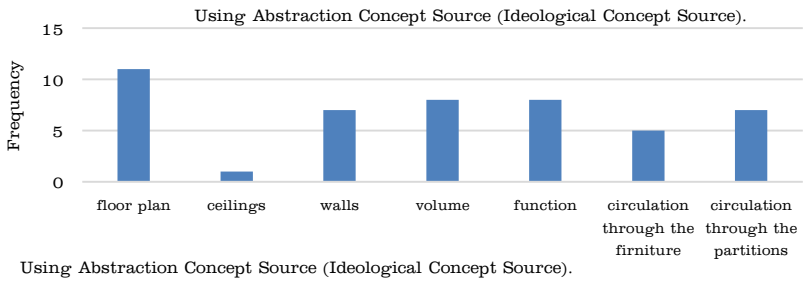


Figure 6: The impact of the analogy symbolic concept (the analogy between the nature and the project) as a concept source on the design elements. (Source: Researcher)



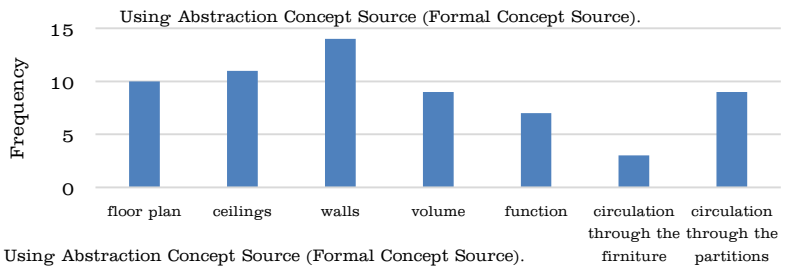
Using Direct Analogy Symbolic Concept Source (The Analogy Between the Name of the Project and the Concept).

Figure 7: The impact of the analogy symbolic concept (the analogy between the name of the project and the concept) as a concept source on the design elements. (Source: Researcher)



Using Abstraction Concept Source (Ideological Concept Source).

Figure 8: The impact of the abstraction concept source (ideological concept source) as a concept source on the design elements. (Source: Researcher)



Using Abstraction Concept Source (Formal Concept Source).

Figure 9: The impact of the abstraction concept source (formal concept source) as a concept source on the design elements. (Source: Researcher)