



Visual Literacy in Built Environment Context **A Theoretical Study of The Potential to Write and Read Architecture**

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ABSTRACT

Architecture as a language is not a new subject that has been brought up on the table recently but rather is an assumption that has arisen since the last century. The purpose of this research is to understand how can this language be read visually as long as its designs are written text by formulating terms adopted by the basic concept of Literacy which has been defined as the ability to read and write. This paper refers to architectural projects as written text in a built environment, and perception will be referred to as reading. In the formulation of this concept, the research methodology is designed to establish a framework of analysis through the use of theoretical factors derived from previous studies and mainly focused on the work of Gestalt Theory. The research concludes that the audience is literate and conscious of architecture, which indicates that the potential to read architecture can be acquired.



I. INTRODUCTION

This paper represents the relation between two sorts of studies, Architecture which is a wide area to study, and Literacy through Visual communication. This relationship originates from the assumption that architecture is a system evolving to a language that requires literacy abilities to understand the relationship of the architectural appearance (style) in a built environment (context) throughout the visual communication. “Architecture is a communication system that evolving to a language.” (Khayyat, 1995). Language is vocabulary and grammar that formats a sentence, where the architectural elements (vertical and horizontal building elements) are the vocabulary, and the architectural forms (mass and shape) are the Grammar (Khayyat, 1995). These together (elements and forms) build-up to construct the architectural sentence where the architect builds (writes) the context of the built environment (text), so the receiver (audience) perceives (reads) these sentences visually, and here literacy comes into the scenario. The first internationally agreed-upon definition of literacy stems from the UNESCO Recommendation of 1958 concerning the International Standardization of Educational Statistics, it states that “A literate person is one who can, with understanding, both read and write a short simple statement on his or her everyday life.” (UNESCO, 2004). “Literacy generally refers to reading and writing effectively in a variety of contexts.” (Jodi Pilgrim, Elda E. Martinez, 2015). The understanding of literacy as the text is a more recent development whereby literacy is seen as an engagement with a particular form of symbolic ‘meaning-making’ (Fransman, 2005). Today, literacy is not only limited to reading and writing, but visual literacy has become more important in line with the requirements of the current era. Brian Street in *Understanding and defining literacy*, 2006 notes that many views are based on deeper assumptions about the cognitive outcomes of literacy, including the claim that writing is a transcription of speech, similarly, some argue that the alphabet is superior to other forms of text rather than images to denote meaning (Fransman, 2005). “Visual Literacy: We take in more visual information than ever. The ability to comprehend – and to create – videos, photos,

infographics, and other visuals has become essential for daily life and career success.” (Nickey Pietila, 2017). “Photographs, symbols, and words, in themselves and apart from the meanings and interpretations are given them by persons or other creatures possessing mentality, are only so many marks on paper.” (McIntyre & Smith, 2008). It can be said that visual literacy is a visual understanding process to communicate by visual materials with the human in a certain medium through natural or artificial factors such as light, colour, movement, pattern, texture, line, direction, scale, proportion, harmony, contrast, accessibility, co-existence with the environment and shape (Gregg P. Macey, 2013). The visual language does not go to extremes and end with the common person failing to understand it, it shall be a fine balance linking exciting communication and the actual design (Pingale, Tejas B; Damugade, Snehal Y; Jirge, Neela D, 2017). Architecture is more than visual understanding but means of visual communication by applying design thinking to make messages through drawings, 3D presentations, and using appropriate terminology (Pingale, Tejas B; Damugade, Snehal Y; Jirge, Neela D, 2017). Color, space, and light are architectural elements that respond to the mind and are called Cognitive in terms of psychology, but in terms of architecture are understood through the perceptions of the individual (Lakshmi Priya, 2017). These self-comprehension were noticed as in the "Theory of Human Motivation" for Abraham Maslow incorporated into the perception of architecture for many decades and offered a way that could help to fulfill the human psychological needs, moreover, the five levels structure of this theory has offered a way that could help to provide a fundamental tool to measure the effect of built space on the human psyche (Webber, 2019). “No design can meet all of everybody’s needs simultaneously,” (Lang, 1994) (Baches, 2016). The received image of the design is materially incomplete, but the mind makes unconscious additions to finalize the image depending on what the mind has housed out from previous observations and experiences of the same respondent.

II. Literature Review

A range of sources has had listed to explain the most important architectural theories as they played an important role in laying the groundwork for this study. These theories are the preceding studies of the most influential thinkers and philosophers. "Any study of architecture and language dives into familiar but dangerous water." (Paul Crossley, Georgia Clark, 2000). But It seems interesting to note that the language appeared almost all times before architecture. The Linguistic theory addresses language questions and what it is, and how it is understood and used (Langendoen, 1998). Georgia Clarke and Paul Crossley questioned in the book *Architecture and Language* the identification between architecture and language and how it lies in their common powers. They (architecture and language) are sharing between semiotic and semantic, where architecture is defined by many debates "as a system of communication and expression, though (the ambiguities of image and form) versus (the clarity of verbal discourse) mean that architectural significance will never have the semantic precision of the spoken or written word." (Paul Crossley, Georgia Clark, 2000). Hereby, Umberto Eco questioned architecture and built environment as a system of semiotics in his book *Function and Sign: Semiotics of Architecture*. Merleau-Ponty asserted that "language involves our total being-in-the-world, that it cannot simply be reduced to something altogether contingent on thought." (Lapointe, 1973). "But already we find that what we see has led us beyond the mere object." (Munro, 1987). "Ultimately, however, language is designed to allow us to communicate with each other how the world is like, to make each other do or believe something, and so on." (Kracht, 2007). Broadbent and Bonta identified the architecture as a medium of communication whereby the grammar applies (Bonta, 1979). Where takes a place in the viewer mind unconsciously by the transmission of information and ideas, and takes three forms are Verbal, non-Verbal, and Visual by using symbols and imagery (White, 2018). "The functioning of the architectural process is impossible without communication, i.e. without interaction between its participants." (Tarasova & Markova, 2018). "The primary purpose of architecture is



hence to make a world visible. It does this as a thing, and the world it brings into presence consists in what it gathers." (Norberg-Schulz, 1983). And being visible is described in the theory of phenomenology for Husserl which is the basis for the emergence of aesthetics in architecture and stated that "systematic investigation of consciousness and its objects." (Gamez, 2014). "Consciousness, awareness, and experience depend on and are constituted in and through social acts of meaning-making (signification)" (Kalelioglu, 2017). The relationship between form and meaning is explained by the theory of significance which Bonta quoted that the architectural result is the composition of shapes and that each shape is a set of signs (Atkin, 2010). According to Jencks, architecture must be positioned within a process of meaning based on cultural values, rather than consisting of clear meanings dependent on psychological factors of perception (Necipoğlu, 2015). However, Merleau-Ponty extended the idea of Language as a gestural or existential significance, and the spoken word is identified with a gesture, moreover, Ponty identified the gesture with expression, "we do not comprehend the meaning of the gesture cognitively." (Lapointe, 1973). "Architecture has been prevalent since the day man decided to create shelter. Whether you notice it or not, every space you live, work and play has been designed with a certain intention." (Avila, 2018). This intention might be as a result of what is there in the mind or for a certain purpose, that all been collected in the memory as explained in the theory of intentionality by Bernanto. Now, the process of gathering and analyzing the data gotten and comparing it to the existing data, and defining new responses or conclusions based on past encounters as well, is the process of Perception. Yolanda Williams defined perception as "our way to recognize and interpret the information we've gathered through our senses. This also includes how we respond to a certain situation with the given information." (Essays, 2018). "Our eyes play a role in perceiving information to our brain, but really, our mind has the most power." (Essays, 2018). "The human brain is exceptionally good at filling in the blanks in an image and creating a whole that is greater than the sum of its parts. It's why we see faces in things like tree leaves or sidewalk cracks."



(Pingale, Tejas B; Damugade, Snehal Y; Jirge, Neela D, 2017). "Gestalt theory emphasizes that the whole of anything is greater than its parts." (Encyclopaedia Britannica, 2020). The Austrian philosopher Christian von Ehrenfels introduced this movement its name in his most famous book *The Attributes of Form*. "The earliest gestalt work concerned perception, with particular emphasis on the visual perceptual organization as explained by the phenomenon of illusion." (Encyclopaedia Britannica, 2020). Ehrenfel used Gestalt's concept of generalized geometry in the greatest detail. In theory, Ehrenfel acknowledged that the concept applies to all forms of experience, both perceptual and non-perceptual (Smith, 1988). "Gestalt Principles are an essential part of visual design." (Foundation, 2020). Gestalt principles of visual perception, in particular, the gestalt theory states that the whole is structured and organized according to grouping principles, which are Figure and Ground, Proximity, Similarity, Closure, Symmetry, Continuity, Simplicity (Roth, 2017). "To get a good result from student work in design courses, the ways to complete architectural projects by using gestalt principles" (Uzunoglu & Uzunoğlu, 2011). The gestalt theory establishes a relationship between the stimuli and the response and explores how cognitive consistency is required to stimuli, and how this cognitive perception, in turn, translates into the response (Wasiti, 2001). This theory heavily relies on the individual's cognitive/ perceptual ability to understand the surrounding by the visual images with stimuli components that operate on the integration between the parts to create the whole based on the same individual's experience. The gestalt theory is premised on the idea that the human brain is trying to simplify and arrange complicated images or designs consisting of various elements by subconsciously organizing them into a system that creates a whole rather than a series of disparate elements. Hence, regarding the literature that was mentioned earlier, it is obvious that architecture is a language composed of words that construct sentences and are subject to grammar identical to those of the literary and poetic language. And if this assumption is to be acknowledged, then the designer of architecture and anyone who connects to this field is a writer of this language. The previous studies include broad

review relied on tremendous theories that were summarized in this paper, but Table 1 contains all the theories with the most significant findings. Based on the above, several factors related to the process of reading architecture, but the principles of gestalt theory are the capacity to perceive and recognize the surroundings through stimulating visual images. The most common factors in this study are then selected to be tested in greater depth. The factors are configuration, figure, form, organization, pattern, stimulation, structure, and totality with multiple polar adjectives to understand the process of reading. Therefore, the previous studies suggest that architectural designs are written texts, but these studies were ineffective in providing an understanding of the potential of reading such physical objects.

Table 1 Showing the Architectural Literature Theories, Source: Researcher

| Name of the Theory | Theorist | The main Subject Relate to | | | Theory Object |
|----------------------|-----------------|----------------------------|------------|--------------|--|
| | | Architecture | Visual | Literacy | |
| phenomenology | Husserl | Dwelling | Aesthetic | Culture | The interaction of the human body with its built environment |
| | Heidegger | | | | |
| | Gomez | | | | |
| | Schulz | Essence | | | |
| Linguistic | Langendoen | Meaning | Expression | Language | Meaning & its creation and Symbolism |
| | | | | Perception | |
| | | | | Production | |
| Semiotic | Jacobson | Aesthetic | Sign | Parallelism | The more complex the object becomes the more important the function of meaning |
| | Eco | Signs and Codes | | Culture | |
| | | Meaning | Semantic | | |
| Munro | Distinct Symbol | Sign | Meaning | | |
| Signification | Peirce | Object | Sign | Interpretant | Clarify the relationship between form and meaning |
| Perception | Broadbent | Physical object | Message | Connection | The human need greater cognitive |

| | | | | | |
|----------------|-----------|---------------|--------------|-------------------|---|
| | Gibson | Information | Sensory data | Evolution | knowledge to understand the information obtained |
| | Gregory | Knowledge | Memory | Distinct | |
| Gestalt | Ehrenfels | Configuration | Stimuli | Cognitive ability | The capacity to perceive and recognize the surroundings through the stimulating visual images |
| | | Idea | Organization | System | |

III. Problem Statement

The central issue to be considered is the skill to read the architectural designs that have been written by architects, which are embodied in an integrated visual environment. This paper aims to understand that through descriptive philosophical studies records of western researchers and theories mentioned earlier in this thread, and to provide an improved understanding of the ability to read architecture.

a. Research Questions

The fundamental question for this paper constitutes that:

- If architects design (write) architecture (text), then, will this architecture be perceived (read) by the public (audience)?
- How literate is the audience regarding architecture?
- To what extent does reading architecture reflect the writing?

b. Research Methodology

The research study began under the premise with the assumption that since architecture has been presumed as a language in prior theories, this language can be read visually, as long as its designs are a written text. Gestalt theory has been used as an approach for enhancing the assumption of architectural reading. A systematic methodology of several steps is established to achieve the assumption above as the following:

1. Setting up a theoretical framework based on the previous studies of western theories;
2. Extract theoretical parameters (factors) from the previous theories and transform them into quantitative data;
3. Select case studies from local buildings projects in Erbil/ Kurdistan- Iraq with different architectural styles;
4. Incorporate a survey questionnaire focused solely on visual data;
5. Statistically assess the architectural design findings by using the SPSS program to draw up the required approach.

IV. Theoretical Framework

To produce quantitative answers to the questions, the study extracts key factors to create a systematic structural framework that functions as a questionnaire survey to generate a measurable outcome. The previous literature summarized various factors related to the key subject of the research. The gestalt theory- with its principles- is selected for the methodology and the measurement model. "Gestalt psychology was in part an attempt to add a humanistic dimension to what was considered a sterile approach to the scientific study of mental life." (Britannica, 2020). This paper has determined that Literacy is the architectural style which is the building appearance full of geometric in five different styles working as A, B, C, D, E and considered as writing. This paper also has proposed the reading process in the process of perception.

a. Literacy is the architectural style

"We cannot understand history without reference to prevailing styles, sometimes one style dominates the whole architectural production, most buildings look similar to one another because architects are selecting from the same set of typical forms" (Brown, 2015). Buildings are physical objects, and architecture is the resemblance between these physical objects. Architecture that characterizes these buildings that translated from a design of elements from a given vocabulary-the selection and combination of elements- to fit the particular context. If architecture is the

resemblance between buildings then the style is the local language of that context. Hence, styles can now cross-cultural boundaries as global communication (Brown, 2015). Style arises from selecting and combining from each other's work. "Built form (shape) can be defined as a physical appearance in architecture. Nevertheless, it constitutes a space having configurational properties which also have social and cultural meanings." (Hasgül, 2015). Architecture is a collaborative enterprise, a network of interacting systems and it develops and evolves among many, many architects through the communication and interaction of ideas and forms. The vocabulary of modern architecture was not invented by Le Corbusier, Mies van der Rohe, or Walter Gropius, but what they did is that saw which way the wind was blowing, in the midst of babel they produced models of those key ideas that could be imitated. Consequently, if the context is dominated by a certain architectural style. The questionnaire included an explanatory table that describes the most popular characteristics of the styles that have been chosen to assess the projects and were used to help the audience to understand yet also assess their preference based on their interpretation.

b. Visual is the Perception











An article published by Maria Lorena Lehman in MLL Design Lab with the title *Gestalt Principles in Architecture: Achieving Design Balance*, where the question that must be answered is: Can theories, like the Gestalt Principles, highlight why a design works the way it does. "Architecture usually tries to achieve some sort of design balance, whether asymmetrical or symmetrical." (Lehman, 2020). Lehman continued that when viewing a building, for example, from almost all distances and perspectives, the observer may be pulling from one of the Gestalt Principles of visual perception. Simply looking into why human brains are wired for symmetry will provide deep knowledge for designers. How and why all the elements in a scene are regarded at once by our brains will help us understand why architecture is always greater than the sum of its parts. "Architectural design success can become a visionary and creative act, by genuinely making laws like the Gestalt Principles." (Lehman, 2020). In another article

on *A Guide to Gestalt Theory, Good Design Psychology*, suggesting that each year there is a new trend and distinct way in all design trends that have been formed, what then do designers rely on as the constant on which to model their designs? Well, the answer is, human behaviour (Design, 2019). Particularly in terms of perception, the underlying psychological tendencies of human behavior remain reasonably constant. The Gestalt theory is a system of psychological principles for visual design. The central core of the theory is based on the psychological principle that humans see a picture as a unified whole instead of perceiving each part differently (Design, 2019). Such theories pick up on combinations of elements reflecting patterns like similarity, continuation, closure, proximity, and figure/ground. And these formed the base for the factors which are configuration, figure, form, organization, pattern, stimulation, structure, and totality. It's quite an interesting topic to learn how humans understand patterns and balance. An explanatory table was included in the questionnaire also, the principles of gestalt theory were adopted and polar adjectives were selected to measure each project according to respondents' perception.

V. Case Study

The selection of the case study for the implementation depends on five styles of design and architecture (building appearance). The case studies are 10 public project designs of local construction. These 10 projects have been chosen for their specific and unique design, most of which are iconic and landmark projects in the city of Erbil as shown in Table 2. These projects were visited by the researcher and had an observation experience. Multiple pictures were taken for the projects and used in a questionnaire based on the gestalt theory formulated and designed according to the theoretical framework, to measure the perceptual reading of selected groups to evaluate the projects according to the provided pictures and the process of how they translate it as part of the perception process.

Table 2 Showing the case study projects

| | |
|--|---|
| <p>P 01 ALBIT Construction Project</p> | <p>P 02 Asti Jilamo</p> |
|  |  |
| <p>P 03 Empire Business Complex</p> | <p>P 04 Erbil City Center</p> |
|  |  |
| <p>P 05 Erbil Martyr</p> | <p>P 06 Jalil Khayat Mosque</p> |
|  |  |
| <p>P 07 Khanzad Castle</p> | <p>P 08 MRF Quatro</p> |
|  |  |
| <p>P 09 Park View</p> | <p>P 10 Rubar Restaurant</p> |
|  |  |

VI. Results

The results of this paper represent the questionnaire survey analysis of 125 respondents. The selected sampling was limited to Erbil City. Two groups have been classified as readers and writers, where the readers of non-architects (audience) who exploit 44.8% of the selected sample tend to interact and engage with the psychological questions while the writers group (Architects) whom practitioners of 32% and architecture engineering students of the grade 5th 23.2% were more conscious and aware of the projects shown in the questionnaire, and they have

seemed to prefer to choose Neutral scale less in their evaluation. They tend more to evaluate the building structure and design.

a. Literacy Analysis

Merely five architectural design alternatives operate for this literacy measurement assessment. Table 3 showing the analysis of the case studies according to the features of each project, some of the projects were falling into two styles.

Table 3 Showing the case study projects Analysis according to their features

| Architectural Style | Characteristics | Projects |
|---|--|----------------------------|
| 1 High Tech International/Late Modernism | Long Span and Exposed structures; | Empire Business Complex |
| | Steel/ Glass/ Concrete materials; | Erbil Martyr |
| | Repeated Elements and Lightweight construction; | MRF Quatro |
| | Structural Expression. | Park View |
| 2 Local Architecture | Respond to the site; | Erbil City Center |
| | Draws on local traditions, materials, and crafts. | Khanzad Castle |
| 3 Metaphoric Architecture | Direct use of metaphor and analogy as the key design inspiration. | Rubar Restaurant |
| 4 Monumental Architecture | Relatively large human-made structures are used as public buildings. | Erbil Martyr |
| | | Jalil Khayat Mosque |
| 5 Post Modernism | Sculptural objects and Ornaments; | ALBIT Construction Project |
| | Flying buttresses and High ceilings; | |
| | Does not integrate completely with its surroundings; | Asti Jilamo |
| | Cultural Expression. | Jalil Khayat Mosque |

The questionnaire conducted this question for each project and the respondents answered by ticking one of the five styles. The results of the respondent's rate of

cooperation on the styles were remarkable and not surprising as long as the responses of the participants were rather close to the analysis. The findings in Figure 1 below have shown that, in the context of the local built environment, the audience is conscious of the architectural form, where the high percentage of consensus on the style of each project is closely related to the features of each style.

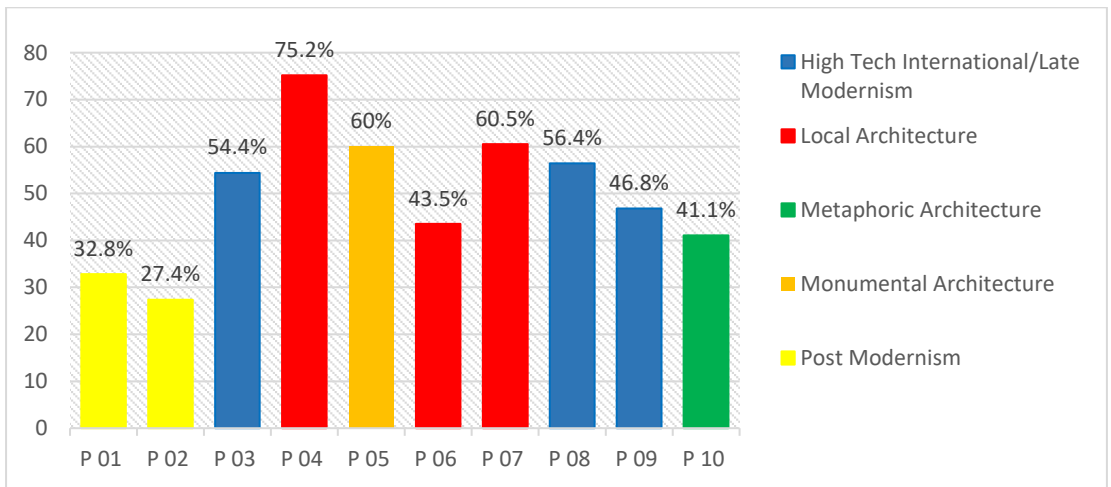


Figure 1 The analysis of the audience to the architectural styles for the

b. Visual Analysis

The questionnaire included 15 questions as polar adjectives with five scales of Strongly Related, Related, Neutral, Not Related, and Strongly Not Related. The factor analysis by the SPSS analysis of each project has been shown in Table 4, where included the most ranked adjectives with a high percentage for the scale Related. The factors used to describe each project and how the audience responding to the pictures shown in the questionnaire. P 01- ALBIT Group Construction gets noticed for the similarity of the pattern, its geometrical configuration with the plain white surface. P 02- Asti Jilamo Restaurant was relevant to its context and noticed for its geometrical configuration and Eyes catching as a figure of plain façade and human status, and the organization. P 03- Empire Business Complex was chosen as a context



relevant with 82.6% and a clear configuration of geometric shapes and lines with the notice of its similarity. P 04- Erbil City Center is a similar set of objects as a pattern, and an eye-catching for the material used and strongly related to the context with 83.5%. P05- Erbil Martyr Monument is a clear presentation of Geometrical configuration and people noticed that with a high percent of 77.4%. P 06- Jalil Khayat Mosque is a powerful figure with distinguishing shapes, geometric and eye-catching alongside the grouped elements as a totality and arranged structure. P 07- Khanzad Castle is relevant to the context with 81.6%, similar pattern with 75.4%, and geometric configuration with 74.4%. P 08- MRF Quatro is a geometrical configuration that draws the attention by 77.3% eye-catching and a similar pattern of cubic composition. P 09- Park View is 79.4% eyes-catching with the high-rise structures that relevant to the context with 78.9%. The last project, P 10- Rubar restaurant is relevant to the context and catching attention with its metaphoric design that looks like a dynamic structure with 73.9% .

Table 4 Showing the factor analysis by SPSS with high rank of the scale “Related”

| Projects | <i>The Frequent used Factors</i> | | | | | | | | | | | | | | |
|----------|----------------------------------|-----------|---------------|----------|--------------|---------|-----------|-------------|-----------|-----------|----------|----------|----------|---------|------------------|
| | Configuration | Figure | | Form | Organization | | Pattern | Stimulation | | Structure | | Totally | | | |
| | Context Relevant | Geometric | Eyes catching | Powerful | Bold | Dynamic | Duplicate | Public | Connected | Similar | Exciting | Peaceful | Arranged | Complex | Grouped Elements |
| P 01 | | 75.2% | 74.1% | | 70.6% | | 72.2% | | | 76.5% | 73.9% | | 75.7% | | 73.9% |
| P 02 | 75.8% | | 74.7% | | 70.4% | | 73.6% | | 70.9% | | | 73.1% | 72.3% | | 68.8% |
| P 03 | 82.6% | | | 78.9% | | 73.6% | | 75.8% | | 79.0% | 78.4% | | 76.5% | | 78.4% |
| P 04 | 83.5% | | 75.4% | | 73.1% | | | 75.4% | | 78.4% | | 72.2% | 75.7% | | 73.0% |
| P 05 | | 77.4% | 76.8% | | 73.9% | | 71.4% | | 72.2% | | 69.4% | | 70.7% | | 70.2% |
| P 06 | 86.2% | | | 84.0% | 78.9% | | 77.8% | | | 79.2% | | 81.3% | 79.2% | | 79.4% |
| P 07 | 81.6% | | 73.3% | | 67.7% | | | 73.0% | | 75.4% | | 74.2% | 72.5% | | 74.1% |
| P 08 | | 80.0% | 77.3% | | 75.5% | | 75.0% | | | 76.0% | 74.8% | | 75.2% | | 73.4% |
| P 09 | 78.9% | | 79.4% | | 75.8% | | 77.1% | | 77.9% | | 77.9% | | 78.7% | | 78.7% |
| P 10 | 80.0% | | 77.0% | | | 73.9% | 71.8% | | | 70.4% | 73.0% | | | 72.5% | 70.9% |

VII. Conclusion

The research study logical endpoint for the ability to read the written text of the built environment. this study outlined the following conclusion by analyzing the outcomes of the questionnaire where Research findings suggest that the visual formation would label the building in a particular context and define its architectural style, but with no reference to the memory of the audience unless it has been done consciously and deliberately, as long as it was clarified and explained in the questionnaire and the respondents have been following. However, the agreement on the projects by the respondents indicates that the audience is literate and aware of architecture and The projects are related to the local context. People who have limited knowledge of architecture tended to use psychological adjectives to explain how they perceive each project But architecture doesn't make them feel the same way as their responses were varied over the 10 projects that have contributed which to the result that readers 'reading reflects the architects writing.

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خوینده‌واری بینایی په یوه‌ست به ژینگه‌ی بنیاتنراو

خویندنه‌وه‌یه‌کی تیوری بو توانای خویندن و نووسینی نارشیتیکتوور

کورت‌ه

نارشیتیکتوور وه‌کو زمانه‌وانی بابه‌تیکی تازه نییه بورووژینریت له‌م دواپپانه، به‌لکو نه‌گه‌ریبیکه که له سه‌ده‌ی رابردوووه په‌یدابوو. ئامانج له‌م توپژینه‌وه‌یه تیگه‌یشتنه له‌م چوئیه‌تی خویندنه‌وه‌ی نه‌م زمانه به بینایی تا دیزاینه‌کانی ده‌قی نوسراو بن‌ه‌ویش له‌ریگای له‌خوگرتنی شیوه‌ی دهربرینی نه‌و

چه مکانه‌ی تیگه‌ی بنه‌رته‌ی خوینده‌واری که بیناسه‌کراوه به توانای خویندنه‌وهو نووسین. له‌م توئژینه‌وه‌یه وه‌ک ده‌قیکی نوسراو له ژینگه‌ی بنیاتنراو ئاماژه به پرۆژه ئارشیتیکتووره‌کان ده‌کریت، به پیبی ئاگایی خویندنه‌وه ئاماژه ده‌کریت بۆ دارشتنی ئەم چه‌مکه، ریره‌وویکی توئژینه‌وه‌یی دیزاین کراوه بۆ بنیاتنانی چوارچۆیه‌یه‌کی شیکاری له ریگای به‌کاره‌ینانی هۆکاری وه‌رگیراو له خویندنه‌وه تیۆرییه پیشووه‌کان به‌لام به‌شپۆه‌یه‌کی سه‌ره‌کی پشت به تیۆری گیستالت به‌ستراوه. ده‌رئه‌نجامی کورته‌ی ئەم توئژینه‌وه‌یه ئاستیکی تازه‌یه له ئاگایی بینایی له‌لایهن وه‌رگران که ئاماژه‌یه به ئەگه‌ری به‌ده‌ست هینانی توانای خویندنه‌وه‌ی ئارشیتیکتووری.

الأمیة البصریة فی سباق البیئة المبنیة دراسة نظریة لإمكانیة كتابة وقراءة العمارة

خلاصة

ان العمارة كلغة ليست موضوعاً جديداً يتم طرحه على الطاولة مؤخراً ، بل هو افتراض نشأ منذ القرن الماضي. الهدف من هذا البحث هو فهم كيف يمكن قراءة هذه اللغة بصرياً طالما أن التصميم المعمارية هي نصوص مكتوبة وذلك من خلال صياغة مصطلحات تتبنى المفهوم الأساسي لمحو الأمية والذي يتم تعريفه على أنه القدرة على القراءة والكتابة. في هذه الورقة البحثية سيتم الإشارة إلى المشاريع المعمارية كنص مكتوب في البيئة المبنية ، وسيشار إلى الإدراك بالقراءة. ولصياغة هذا المفهوم ، تم تصميم منهجية بحثية وذلك لإنشاء إطار للتحليل من خلال استخدام عوامل مستمدة من الدراسات النظرية السابقة ولكن بشكل أساسي تم الاعتماد على نظرية الجشطالت. بالنتيجة يخلص البحث إلى أن هناك مستوى جيد من الوعي البصري لدى المتلقين ، مما يشير إلى إمكانية اكتساب القدرة على قراءة العمارة.



APPENDIX

Salahaddin University, Architecture
Engineering Department

2020

MSc Questionnaire

**Visual Literacy and Architecture
“Architectural Visual Distinctions with their Contexts”**

Dear Respondent,

This questionnaire survey is a fundamental requirement for academic purposes as part of the research thesis requirements for MSc degree in Architecture Engineering, Salahaddin University, namely (Visual Literacy and Architecture “Architectural Visual Distinctions with their Contexts”). It was planned and designed by the MSc student (Hameeda Ibrahim) and intended to gather information. To fill in this questionnaire, a number of questions and pictures are listed below with a set of scales to rate selected public buildings built in the city of Erbil. Kindly, do not base your opinion on the content design and quality of the pictures or the irrelevant objects, and base your own opinion directly on what the picture of the building will represent to you. Your objective evaluation to the questions will help to complete the study analysis. Your kind cooperation will be highly appreciated and helpful. For more information regarding the thesis, please do not hesitate to contact Hameeda.Muslat@su.edu.krd or call 0751 516 1004.

| Personal Information | |
|-----------------------------|---|
| Gender | <input type="radio"/> Male <input type="radio"/> Female |
| Age | <input type="radio"/> 20-30 <input type="radio"/> 30-40 <input type="radio"/> 40-50 <input type="radio"/> 50-60 <input type="radio"/> 60-70 |

| | |
|------------------------|--|
| Education Level | <input type="radio"/> BSc <input type="radio"/> MSc <input type="radio"/> PhD <input type="radio"/> Other |
| Occupation | <input type="radio"/> Student of Architecture- 5th grade <input type="radio"/> Architect <input type="radio"/> Non-Architect |

This part provides an explanatory presentation of the architectural styles of the selected projects with prominent characteristics to help you recognize the styles of the selected projects:

| Architectural Style | Characteristics |
|--|---|
| 1 High Tech International/ Late Modernism | Long Span and Exposed structures; Steel/ Glass/ Concrete materials; Repeated Elements and Lightweight construction; Structural Expression. |
| 2 Local Architecture | Respond to the site; Draws on local traditions, materials, and crafts. |
| 3 Metaphoric Architecture | A direct use of metaphor and analogy as the key design inspiration. |
| 4 Monumental Architecture | A relatively large human-made structures used as public buildings. |
| 5 Post Modernism | Sculptural objects and Ornaments; Flying buttresses and High ceilings; Does not integrate completely with its surroundings; Cultural Expression. |

And this part provides an explanatory presentation on selected factors that were included in the survey in order to understand each factor when rating the selected projects.

| | | | | | |
|----------------------|--|-----------|------------------|---|----------------------|
| Configuration | The result from a particular arrangement of parts or elements. | 1 | Context relevant | ↔ | Not context relevant |
| | | 2 | Geometric | ↔ | Organic |
| Figure | The distinguished or significant shape or form that makes the object noticeable. | 3 | Eyes catching | ↔ | Familiar |
| | | 4 | Powerful | ↔ | Weak |
| Form | The visible shape or external appearance of an object. | 5 | Bold | ↔ | Soft |
| | | 6 | Dynamic | ↔ | Stable |
| Organization | The arrangement of elements or patterns according to a particular system. | 7 | Duplicate | ↔ | Unique |
| | | 8 | Public | ↔ | Private |
| Pattern | A set of shapes that shows a regular arrangement of lines, colors with a repeated decorative design. | 9 | Connected | ↔ | Integrated |
| | | 10 | Similar | ↔ | Contrast |
| Stimulation | The source that arouses the sense of curiosity, excitement, and enthusiasm. | 11 | Exciting | ↔ | Boring |
| | | 12 | Peaceful | ↔ | Threatening |
| Structure | Objects arranged in a definite pattern as dominated by the general character of the whole. | 13 | Arranged | ↔ | Chaotic |
| | | 14 | Complex | ↔ | Simple |
| Totality | The quality of being total, the wholeness. | 15 | Grouped elements | ↔ | Scattered elements |

The following part showing how to answer the questions by ticking one of the following scales:

| | | | | |
|------------------|---------|---------|-------------|----------------------|
| Strongly Related | Related | Neutral | Not Related | Strongly Not Related |
|------------------|---------|---------|-------------|----------------------|

| Evaluation Process: | | | | | | | |
|--|------------------|------------------|---------|---------|-------------|----------------------|----------------------|
| Now, evaluate the following projects by ticking the proper architectural style and using the relevant scales: | | | | | | | |
| Project Name | | | | | | | |
| Project Picture | | | | | | | |
| Tick the proper architectural style and using the relevant scales: | | | | | | | |
| ○ High Tech International/ Late Modernism | | | | | | | |
| ○ Local Architecture | | | | | | | |
| ○ Metaphoric Architecture | | | | | | | |
| ○ Monumental Architecture | | | | | | | |
| ○ Post Modernism | | | | | | | |
| Factors | Semantic Scale | Strongly Related | Related | Neutral | Not Related | Strongly Not Related | Semantic Scale |
| Configuration | Context relevant | | | | | | Not context relevant |
| | Geometric | | | | | | Organic |
| Figure | Eyes catching | | | | | | Familiar |
| | Powerful | | | | | | Weak |
| Form | Bold | | | | | | Soft |
| | Dynamic | | | | | | Stable |
| Organization | Duplicate | | | | | | Unique |
| | Public | | | | | | Private |
| Pattern | Connected | | | | | | Integrated |
| | Similar | | | | | | Contrast |
| Stimulation | Exciting | | | | | | Boring |
| | Peaceful | | | | | | Threatening |
| Structure | Arranged | | | | | | Chaotic |
| | Complex | | | | | | Simple |
| Totality | Grouped elements | | | | | | Scattered elements |