

The Role of Young Architects as Entrepreneurship Generational Units in Shaping the Future of Architecture

Lecturer Attaa H. Al Obaidi

University of Technology / Department of Architectural Engineering
Baghdad / Iraq
attaa.h.alobaidi@uotechnology.edu.iq

Assist. Prof. Dr. Anwar. S. Al-Qaraghuli

University of Technology / Department of Architectural Engineering
Baghdad / Iraq
anwar.s.ramdan@uotechnology.edu.iq

دور المعماريين الشباب كوحداث جيلية ريادية في تشكيل مستقبل العمارة

مدرس عطاء حسن العبيدي

الجامعة التكنولوجية \ قسم هندسة العمارة \ بغداد \ العراق
attaa.h.alobaidi@uotechnology.edu.iq

أ.م. د. أنوار صبحي القره غولي

الجامعة التكنولوجية \ قسم هندسة العمارة \ بغداد \ العراق
anwar.s.ramdan@uotechnology.edu.iq



Abstract

Youth are the pillar of nations and the secret of their renaissance, the builders of their civilization and the line of defense, the main participants in basic planning processes, and the agents of change to build a world that is compatible with the aspirations of future generations. This applies to the field of architecture in terms of the importance of young architects in shaping it under the challenges it faces, which impose interaction in a manner commensurate with the emerging requirements and needs. This research is based on the consideration that young architects are an integrated phenomenon that contributes to shaping architectural production according to the data of the present and even the past, in a way that establishes a better future through their entrepreneurship role. Many architectural studies and proposals have touched on several aspects related to this topic, but they were not able to provide a clear and comprehensive knowledge vision., which constituted an incentive to conduct this research, in terms of its endeavor to provide the most comprehensive and clear knowledge of the entrepreneurship role played by young architects in shaping the future of architecture, in general, and what is related to the contemporary period, in particular. Achieving this goal necessitated adopting the descriptive approach in analyzing previous knowledge from inside and outside the field of architecture regarding young and the future and the relationship between them, to build a theoretical framework through which the role of young architects can be investigated in the contemporary period, which is witnessing many different challenges and transformations through reviewing several case studies.

Keywords: Young, Future, Young architects, Generational units and Entrepreneurship

المستخلص

يعد الشباب عماد الامم وسر نهضتها، وبناء حضارتها وخط الدفاع عنها، والمشاركين الاساسين في عمليات التخطيط الاساسية، وكلاء التغيير لبناء عالم يتناسب مع تطلعات الاجيال القادمة، وينطبق ذلك على حقل العمارة من حيث اهمية المعماريين الشباب في تشكيلها وبما يتوافق مع التحديات التي تواجهها، والتي تفرض التفاعل بأسلوب يتناسب مع المتطلبات والاحتياجات المستحدثة.

يقوم هذا البحث على اعتبار ان المعماريين الشباب ظاهرة متكاملة تسهم في تشكيل النتاج المعماري على وفق معطيات الحاضر وحتى الماضي وبما يؤسس لمستقبل افضل من خلال دورهم الريادي، وقد تطرقت العديد من الدراسات والطروحات المعمارية الى عدة جوانب ترتبط بهذا الموضوع الا انها لم تستطع ان تقدم رؤية معرفية واضحة وشاملة مما شكل حافزا لقيام هذا البحث، من حيث سعيه لتقديم المعرفة الاكثر شمولية ووضوح للدور الريادي الذي يقوم به المعماريون الشباب في تشكيل مستقبل العمارة، بالعموم، وما يرتبط والفترة المعاصرة، على وجه الخصوص، وقد استوجب تحقيق هذا الهدف اعتماد المنهج الوصفي في تحليل المعرفة السابقة من داخل وخارج حقل العمارة والخاصة بالشباب والمستقبل والعلاقة فيما بينهما، لبناء اطار نظري يمكن من خلاله تقصي دور المعماريون الشباب في الفترة المعاصرة والتي تشهد العديد من التحديات والتحويلات المختلفة، من خلال استعراض عدد من الحالات الدراسية.

الكلمات المفتاحية: الشباب، المستقبل، المعماريون الشباب، الوحدات الجيلية

والريادة



1- Introduction

Youth represent human wealth, an important resource, a pivotal tool for development and the workforce, creative production capacity, and the target goal of development programs and plans. They are also considered the standard by which the degree of success, achievement, or failure of any development experience is measured). Youth embody the future, as a committed representative with qualities such as hope, the possibility of remaking decisions, or starting in a better situation, in a way that contributes to transforming or advancing society (Bartels, *et al.*, 2015).

It should be noted that the United Nations has paid attention to the youth category since the sixties of the last century. The United Nations General Assembly, in its resolution 2037 (D-20), issued a declaration on the participation of youth as representatives of peace, mutual respect, and understanding among peoples. Many countries have also placed youth issues on their agenda of priorities as a group targeted by economic and social policies. They issued national reports on human development and youth as an important energy in the labor (United Nations Report, 2018) (Rezij, 2017), in addition to recognizing the civil, political, economic, social, and cultural rights of young people and the importance of enabling young people to acquire the knowledge, attitudes, skills, and behaviors necessary to reach adulthood (Kimberly, 2008).

This applies to the field of architecture, as architecture is changing fast, with a rhythm similar to what is happening in fashion, in addition to being characterized by dynamic and viral participation, which has required architects in general, and emerging ones in particular, to bear the social consequences



of this emerging industry within a future vision based on a qualitative reading of products with the potential to express multiple values through positions or approaches available to architects at any age, including young people (Phineas, 2015). Young architects live in a changing reality, so they struggle to survive. This did not prevent them from moving forward with enthusiasm, as they broke the constraints of the architecture industry and many young architects emerged, bringing new winds to the traditional architectural culture (Chen and Dai, 2020), to highlight the importance of young architects understanding continuous change, which requires meeting human needs through creativity and innovation, and it is among the most difficult tasks of architecture, which requires that young architects have artistic talent and compositional skills, and possess imagination and taste to be able to create unique products capable of making a difference (Wagner, 1990).

At present, several questions arise about what are the important challenges of the future that architects, especially young people, face, and the nature of the important future, as there are many factors affecting young architects in terms of economic and technological factors, the most prominent of which are the paths through which young architects define their roles. Some of them adopt the traditional approach in adopting previous architectural ideas, methods and styles. Some of them adopt a flexible approach that combines tradition with everything new. Some adopt an approach that goes beyond the traditional by developing methods that move with time to create innovative architectural products that achieve Openness and renewal, as well as the importance of enhancing knowledge and skills and adopting modern technological means within the entrepreneurial path (Lieftink, *et al.*, 2018).



It should be noted that the future of architecture is not guaranteed and each architectural generation needs to be formed in the image of advanced cultures, societies, and markets. The importance of the young generation of architects is highlighted in creating architecture that is linked to the culture of the place and reflects the values and traditions of the local community to enhance the role of architecture as a common visual culture, by adopting architectural styles and methods combine traditional methods that represent approaches agreed upon over time for form and content with advanced technological methods to enhance cultural familiarity, the human experience, and collective memory in accordance with a constructive ethical approach to the future of architecture that takes into account continuity and preservation of urban and environmental heritage, in addition to renewal within civic participation (Polyzoides, 2007), which necessitates exchanging ideas with young people, and guessing and anticipating how the world will look in the future by rethinking and rebuilding it, motivated by the youth's sense and ambitions for architecture, influenced by today's circumstances and looking forward to tomorrow. In addition to young architects' constant questioning about their inheritance, these ideas carry a set of speculations and offer promises to improve a lot, refine and prepare the scene of architecture that changes and responds to new and different ways of thinking, so that young architects thus establish new values, methods, and forms of practice, and formulate architectural discourse following technological, social and environmental visions, starting from the smallest technical process to its highest intellectual levels (Sterk, 2009), in addition to interest in continuing the relationship between young people and adults in terms of the role of architecture schools in educating and training young architects in a manner



consistent with the continuous change in the construction industry, as well as the multiple levels of challenges faced by young architects, represented by economic and health disturbances, the rapid technological development, and cultural change, which determines the task of young architects to rely on the past and try to control the future according to a building process that lies at the heart of the human condition (Dickinson, 2021), and in a way that enables young architectural practices to be invested with new realistic and optimistic visions with joint independence for a basic dual material, structural, intellectual, and cultural production that responds in a rational and coherent way to the motives and needs of contemporary society. (New generation,2020)

It is clear from the above that interest in the youth group has increased in various fields of life, including architecture, in a manner consistent with the pursuit of investing their potential and energies in building the present and shaping a better future following the overall challenges that abound in the current reality. Even though architectural studies and proposals touch on many aspects and dimensions related to young architects and shaping the future of architecture, they did not provide a clear and comprehensive objective vision, which constituted an incentive for this research. Youth and shaping the future in general were addressed from outside the field of architecture, first, to enrich the knowledge deficiency within the field of architecture, by introducing both the concepts of youth and the future to determine the role of youth in shaping the future according to a set of theoretical frameworks, to build the theoretical framework for young architects and shape the future of architecture in terms of identifying the general aspects of the concept of young architects and their entrepreneurship



role as generational units in shaping the future of architecture. Secondly, reviewing a group of contemporary study cases. Third, determining a set of conclusions and recommendations.

2- Young and Shaping the Future / Outside the Field of Architecture:

In general, it is the responsibility of young people to build the present and establish the future in terms of behaviors that confront the surrounding circumstances, make decisions, and assume multiple roles, to develop business and improve society following their interaction with social, economic, environmental, and technological challenges. Aspects of this topic can be identified in the following:

2-1 Introducing the Concept of Young

Linguistically, the concept of youth refers to the age group or stage that represents the period that goes beyond childhood, and the realization of puberty and has not reached the age of manhood. It is the early stage of existence, the stage of development, an intermediate transitional stage (crossroads), for a specific period, and is characterized by a group of traits and characteristics such as novelty, young, sharpness, activity, freshness, youthfulness, vigor, growth, movement, dynamism, ability, motivation, presence, strength, advancement, heat, and they are responsible for decision-making and behaviors in confronting the surrounding circumstances (Ibrahim, 2004) (Al-Fayrouzabadi, 2005) (<https://www.merriam-webster.com/dictionary/young>).

Technically, young has been defined as an age group with biological, psychological, and social stages, linked to both organic and physiological



growth, on the one hand, and mental-intellectual development, on the other hand, within the stage of testing roles and identities in society, to include both adolescence (14-17 years), young youth (17-20 years), early young (21-24 years), and adult young (25-35) years, which is characterized by traits of strength and energy in addition to revolutionary and emotional traits, and by multiple characteristics, most notably creativity, interaction, development, and transformation, which enable them to face many challenges that constitute factors affecting them as a whole, such as economic, social, cultural, political, environmental, and other factors, according to the relationship with ancestors/elders and multiple generations, which is based on support, empowerment, and development. (Tami, 2019) (Al-Omar, 2022) (Erikson and Erik, 1977).

2 -2 Shaping the Future

Today, early thinking about what will come in the future has become more important than ever due to the accelerating pace of technological and social changes, so the past, present, and future are a cycle that is repeated every day. What was present becomes the past, as the future is no longer an imaginary image of a reality that has not yet been achieved, but an understanding of the possibilities of the present. Therefore, studying and understanding the future is studying the principles upon which the perception of the future is based in any field of human knowledge (Bastawisi, 2007).

Linguistically, the concept of the future refers to the time that follows the present. It is a time that has not yet arrived, but its arrival is inevitable. It expresses a set of tomorrow's events that can be imagined according to the data of the present in a manner related to the needs of generations (Ahmed



Mukhtar, 2008) (Abu Al-Azm, 2013) (<https://www.oxfordlearnersdictionaries.com>) (<https://www.merriam-webster.com>).

- The future is a time that follows the present and is, from a philosophical point of view, independent of place and generally ranges between being real and not real, existing and not existing eternally (Yadri, 2018). From a physical point of view, it is linked to a place within space-time, in terms of the future being in the past (history repeats itself), the present visible future, it has either already begun but has not reached us yet or what happens to others and its impact reaches us later, and the invisible future that can be imagined through specific events and information (Goudarzi, 2007) (Hindawi, *et al.*, 2017), within immediate, short, medium, and long periods (Belmuden, 2013).
- The future is revealed as logical structures and imaginings of that time that can be imagined from the data of the present through exploratory (Intuitive) or targeted (Normative) methods, or both within feedback model, which expresses human events and achievements that may be within the possible and probable to a basic degree, each of them could be acceptable or preferred, to include the acceptable possibility, the preferred possibility, the acceptable possibility, and the preferred possibility of all those achievements, and what is related to the needs of the generations (Sharara, *et al.*, 2006) (Al-Naimi, 2012) (Al-Rawi, 2021).
- The future is linked to several concepts, the most prominent of which are planning, construction, reform, renaissance, renewal, liberation, and so on (Gamal, 2003).



Human civilizations throughout history have been concerned with the future, the possibilities of imagining and shaping it, and attempts to reveal it, which varied in terms of their anticipatory and prediction orientations, from ancient civilizations to the multiple orientations of the twentieth and twenty-first centuries, which were concerned with participation and planning for the future, so that the formation of the future is based on both anticipatory, prediction and foresight which is, in reality, the specific propositions of each of them. They are intertwined in their general aspects in terms of their capabilities in both reading and creating the future. However, it is possible, by relying on the aspects indicated by the conventional definitions of the future, to determine the specificity of each of these concepts within the levels of shaping the future and as follows:

- Reading the future through mainstream/emerging anticipatory and/or prediction (Ace, 2018) (Jamal, 2003) (Al-Rawi, 2021), in terms of the future being in the past (history repeating itself) and the future being the present (perspective-visible) and with direct, short, and medium ranges, relying on exploratory- intuitive methods to reach future achievements within the possible (acceptable and preferred), and the acceptable possibility.
- Creating the future through foresight (Al-Hindawi, *et al.*, 2017) (Rossel, 2011) as it is an invisible future in the medium and long ranges and by adopting various targeting methods based on strategic planning and imaginative projection that may reach the stage of colonizing the future and reaching future achievements within the preferred possibility and preferred potential.



2-3 The Role of Young in Shaping the Future

Multiple studies and proposals have determined the position of young people on shaping the future, according to their general trends regarding the past, present, and future, as they are either traditional conservative or liberal youth, contemporary modern young, or futuristic young, according to each of the following:

- Traditional conservative young: It is based on reading the future in the past in short ranges through the prevailing expectation and adopting repetition, total commitment, and even analogy and imitation within the total reliance on previous values, ideas, and methods, to find possible achievements that are acceptable in terms of being familiar, tried, and true within the actual reality that is close, sufficient, and appropriate, and that achieves present pleasure (Fawcett, 2020).
- Liberal conservative young: It is based on reading the future in the actual present through emerging expectations in the medium range, with relative reliance on previous values, ideas, and methods, in addition to limited reliance on everything that exists in the present, and relies on analogy, imitation, improvement, liberation, uniqueness, and skepticism, to find acceptable potential achievements. It is familiar, experienced from actual reality, and sufficient, limited, and appropriate to achieve current enjoyment (Fawcett,2020).
- Contemporary modern young: It is based on reading the future in the extended present, through prediction at a medium range, in terms of postponement, openness, flexibility, and adaptation, to



find the ideal, conscious, and rational achievements of the preferred possible (Woodman, 2011).

- Futuristic young: It is based on reading the future, through foresight and over long ranges relying on both strategic planning to colonize the future in ranges of innovation, discovery, flexible dealing, redirection, and development, to find the achievements of the preferred possibility (variable, hidden, uncertain, and unknown), in addition to adopting the imaginative projection of the invisible future, in ranges of exploration, aspiration, and creativity to find the achievements of the preferred possibility (imaginary, utopian, untried, mysterious, unknown, and unlimited) (Woodman, 2011) (Carabelli and Lyon, 2016) (United Nations, 2021).

2-4 Theoretical Frameworks Related to Young and Shaping the Future

There are many theories and theoretical frameworks related to the concept of young and the specificity of their relationship in shaping the future in general. Perhaps the most prominent of them is Mannheim's theory of generations, in which he explained many aspects related to generations, especially youth, from the standpoint of sociology. The theory indicates that a generation is a group of individuals of similar ages within the same social, cultural, and historical context, and sharing the same experiences and formative skills, according to what is called the mind of the generation, which is determined by age and cognitive, and the position of the generation within the social, cultural and historical context reflects the continuous generational chain through interaction and friction between elder and youth and the intermediate generation between them, which contributes to



innovation and intellectual and practical development to be compatible with new requirements and circumstances, and may reach the point of radical intellectual change, thus renewing the relational perspective of generations and society. Each generation also includes multiple generational units with different intellectual and social responses to the same historical stimulus. They may be conservative or progressive liberal so that one generation includes more than one generational unit in a way that reflects the multiple positions within that generation (Mannheim,1972).

On the other hand, the theoretical frameworks for entrepreneurship explain many aspects related to promoting reforms and development in both business and production patterns, which reach the point of revolutionizing under changing conditions and requirements, and which are closely linked to the youth category in many areas of life and what is known as entrepreneurs in terms of their ability to find innovative ideas and multiple positions to deal with the present and the future, within specific classifications The Clarence Danhof model classification highlights entrepreneurs at the level of readiness to find innovative ideas to include all of the following (Skoshi and Majdal, 2019,).

- Innovator: He is interested in collecting information and providing new groups of production factors that are characterized by creativity. He presents new ideas, technology, product, or markets, or creates new organizations, in a way that achieves a transformation in the lifestyle.
- Adoptive/Imitative: He is the imitator because he adopts the successful innovation presented by other innovative entrepreneurs, so he establishes his project in the same way. He also imitates the



technology and methods that others have invented, so he faces fewer risks, but he contributes to the growth of the culture of projects and entrepreneurship and provides ample employment opportunities for youth, hence he is treated as a factor for economic development.

- Fabian: He imitates other innovations only if he is certain that not doing so may harm his business. He is very skeptical in his approach to adopting or innovating new technology in his organization. He is not adaptable to the changing environment. He prefers to remain in the current business using old production techniques, but he adopts new technology only when he realizes that not adopting it will lead to a significant loss.
- Drone: He is committed to the character of traditional businesses, machines, or traditional work systems, where he feels comfortable with old production technology even though the environment and society have undergone major changes.

3- Theoretical Framework: Young Architects and Shaping the Future of Architecture

The importance of young architects building the present of architecture and establishing its future is highlighted in light of the multiple social, economic, environmental, and technological challenges it faces, and following the behaviors of confronting the surrounding circumstances, making decisions, and assuming multiple roles, to advance and improve the reality of both society and the environment, in addition to developing business and enhancing practice. Professional aspects of this topic can be



identified and a theoretical framework can be built by organizing knowledge for both architectural studies and proposals and applied practices, according to what was presented regarding young and shaping the future from outside the field of architecture according to each of the following:

3-1 General Aspects of the Concept of Young Architects

Young architects represent an integrated, multi-faceted phenomenon that contributes to the formation of architectural production and establishes a better future, as they are an age group that refers beyond the biological age of young people in general, and is determined according to professional experience to include the emerging young architect, the novice, and the practitioner compared to senior architects as experts (Adedapo, *et al.*, 2017), and the possibility of classifying them according to the stages they go through within the academic field so that architecture students are the emerging young group that is under supervision of senior architects to teach them architectural knowledge according to methods that work to develop awareness of their strengths and build their architectural personality with the help of new technologies. The category of young architects includes recent graduates and their capabilities to create innovative architecture that respects the challenges of the era, including environmental design (Spiridonidis, Voyatzaki, 2010). Architectural knowledge varies between the skills and experiences of the architect, including academic experience, life experiences, craftsmanship, acquired experiences, interests, hobbies, and even his movements and travels, in addition to the architect's self-reference in terms of his previous products and opinions (Al-Qaraghuli, 2009).



Based on what Mannheim proposed in terms of the similar chronological ages of the generation along with the mind of the generation, as well as the classification of the biological ages of young people in general, it is possible to determine the age phases of young architects according to both chronological and cognitive age to include both young architects students of biological age of (17-21 years), the early graduate (22-24 years), and the adult-professional graduate (25-35 years), with various cognitive ages linked to different experiences and knowledge. The adolescence stage has been neglected for young people (14-17 years) because it is outside the academic field of architecture.

On the other hand, young architects are characterized by the traits and characteristics of young people in general, being affected by all social, historical, economic, and other factors, with a focus on environmental and technological factors that constitute a large number of factors and are considered challenges. (Hendry, 2015) (Adedapo, *et al.*, 2017), so that they can contribute to building the present and establishing the future through their endeavor to redefine architectural work with new methods that respect the historical and cultural context, but may go beyond the traditional and establish innovative architectural works that contribute to improving society and may lead to building a new identity (Williams, 2018) (Proskuryakov and Bohdanova, 2020), and according to the relationship with senior expert architects, as this relationship is formed at the academic and professional levels through guidance, exchange of opinions and ideas, training, and working with multiple generations in a way that serves the provision of support and empowerment for young architects, which is reflected in the field of teaching, learning, professional practice, and even in the multiple programs and plans provided by institutions and organizations. (Boyle, *et al.*, 2016).



3-2 The Role of Young Architects in Shaping the Future of Architecture

In general, the future of architecture is dealt with as being material products that reflect values and ideas by adopting techniques and methods for design. Architectural ideas and values in terms of the general intellectual content, including ideas, concepts, dialectics, schools of thought, theories, studies ...etc., and related to the thought of the individual (the designer), on the one hand, interacting with the environment, cultural, civilizational, and social environment, on the other hand, so that this content has a fundamental role in the architectural vision, and the special architectural ideas and values in terms of the intellectual content of the designer's personality, linked to his different previous works and opinions. (Al-Qaraghuli, 2009).

Design methods also refer to a set of procedures, techniques, or auxiliary tools that designers use in the design process. They may be traditional, such as drawing and manual design, modern ones that combine traditional and new methods, or contemporary ones by adopting advanced technologies such as virtual and augmented reality and artificial intelligence, so that the architectural products will include all the material products that reflect the system of public and private architectural ideas and values that were created as a result of architectural design and composition.

Young architects contribute to shaping the future of architecture in that they are entrepreneurial generational units following Manheim's propositions within generational theory and the Clarence Danhof model for entrepreneurs, in a way that reflects their multiple positions and, trends, which can be clarified in each of the following:



3-2-1 Conservative Young Architects

The term conservative refers to everyone who adheres to traditions and inherited social and political values, and as such they are committed to a traditional nature, whether at the level of ideas and values or the level of material products and design methods. Even their desire for development is limited by a cautious approach in most cases. This category of Architects can be classified into the following:

3-2-1-1 Traditional Young Architects

This young architect reads the future in the past through prevailing anticipatory, which are used in daily life and as required by a need in the short range, considering that history repeats itself in recurring phenomena to find architectural products that are within the acceptable possibility.

Architects try to adopt the traditional roles of architecture and accomplish the tasks and responsibilities associated with production, to be consistent with the way of work that they were accustomed to in the past, to provide positive results following previous projects, even if this weakens the value of new experiences (Lieftink, 2018). Architects also adopt the traditional design language, whether in restoration or the design of new buildings, as traditions have proven of great importance in dealing with cities of a historical nature, Hassan Fathi's style is considered, in its beginnings, influenced by the global trend due to his education, but soon his approach began to be influenced by local architectural details, such as elements, building materials, methods, and construction. He combined traditional structural elements, which he derived from the sources of Nubian rural architecture built with bricks and mud, and from ancient houses and palaces in Cairo, in both the



Mamluk and Ottoman eras, which contributed to the construction of many architectural products in a way that reflects the cultural heritage. According to Hassan Fathi, instead of the feeling that human behavior is governed by architectural space, it is rather a call for harmony and integration between nature and industry, for technology to be subordinate to social traditions and meet human needs. He was more interested in building communities than constructing buildings, and he was a pioneer in providing models of buildings that respect the traditions of places and take into account all aspects of life (Steele, 2008).

Thus, this young architect fully adheres to previous architectural ideas and values (general and specific ones) and replicates or even copies physical architectural products in whole or in part, as well as imitating previous design methods and techniques to create products that, although familiar, tried, and true, are appropriate, sufficient, and currently enjoyable within the possible acceptable.

3-2-1-2 Fabian Young Architects

These young architects read the future in the actual present through the emerging expectations within the medium range, and work according to the data of both the past and the present, to draw and formulate a future based on somewhat new aspects resulting from repetitions to find architectural products within the acceptable possibility.

Young architects imitate senior architects and pioneers (star architects) in that values, ideas, concepts, and products are shared, analyzed, adapted, changed, and made relevant to new contexts and problems. That is, they imitate and borrow successful products and methods created by others



(Lieftink, 2018). For example, the group (The New York Five), which consisted of five young architects at the time: Peter Eisenman, Michael Graves, Charles Gwathmey, John Hejduk, and Richard Meier, borrowed the works of the modernist architect Le Corbusier while making some improving additions, as this was evident in their design of several architectural works, as can be seen in Figures (1-3) (Kwon, *et al.*, 2016).



Fig.1: Eisenman House
1967
Peter Eisenman



Fig. 2: Smith House 1966
Richard Meier

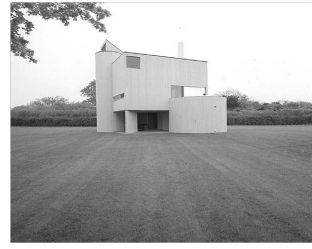


Fig. 3: Gwathmey House, 1966
Charles Gwathmey

<https://www.nytimes.com/2009/08/24/arts/design/24five.html>

Thus, these young architects make a relative commitment to previous architectural ideas and values (general and specific ones) and emulate and resemble previous material products, partially or completely, as well as a relative commitment to previous design methods and techniques, in addition to the partial integration of what is contemporary to create improved, liberated, and unique architectural products within the acceptable potential.

3-2-2 Modern Young Architects

The modern is everything that existed after it did not exist, and in most cases, it is the opposite of the old. Thus, modern young architects seek everything new and contemporary at the level of ideas, values, material products, and design methods, within interactive, adaptive, and innovative



trends that may sometimes reach innovation. This category can be classified into the following:

3-2-2-1 Adoptive/Imitative Architectural young

This architect reads the future in the extended present through medium-range forecasting, and works according to a systematic analysis of the present data of successful innovations that have already begun and are happening to others and have not reached us till now, but will arrive later, to be adopted and imitated to formulate what the future will look like to find architectural products within the preferred possibility.

The modernist influence on Iraqi architecture in the first half of the twentieth century is one of the most prominent examples that illustrate the generally adopted and interactive position, which will be clarified, but not limited to, as many architects (including young architects) adopted the modernist approach as a frame of reference that refuses to look at heritage as thought, which was reflected in many architectural works, as the idea of modernity prevailed and had a strong resonance with the emergence of the industrial revolution and its new secretions in architectural communities, as they called for the necessity of liberation from historical patterns and stopping their repetition and reproduction, with the aim of finding solutions for new functions that historical patterns cannot accommodate and calling for investing in the machine, openness to universal ideas and values, flexibility, adaptation to them within limited innovation, and the adoption of modern design methods, as in the works of the young architect Ahmed Mukhtar Ibrahim, who is considered one of the makers of Iraqi architecture in the thirties. He was distinguished by his style and was strongly influenced by the products of European architecture and modernist



architecture in terms of architectural ideas and methods, which appeared in his work, as he participated in designing and supervising the construction of the Iraqi Pavilion in 1937 with the French architects Albert Laprade and Léon Bazin.

The building brought back to life one of the Seven Wonders of the World, which is the Hanging Gardens of Babylon. The main mass mimics the shapes of the buildings of Iraqi civilization city in terms of its cubic shape and gradation. The entrance is guarded by two winged lions, and in the hall of honor stands a miniature model of the city of Babylon in its middle, all the way to the courtyard surrounded by columns, in the middle of which there is a statue of Charlemagne as a reminder on receiving a gift that was the first watch made in history, and it was one of the masterpieces of technical products that were invented in Iraq at that time. As for his design of the Olympic Club in Baghdad (1939), the building's design responds to the principle (less is more) proposed by Mies van de Roo in modernist architecture, as the building is considered an important synthesis between European models with a kind of adaptation to the local context, especially in terms of taking into account the climatic conditions. The front façade with its blocky curvature constitutes a distinctive urban element closely related to the shape of the square, as shown in Figures (4-5) (Al Chalabi,2016).

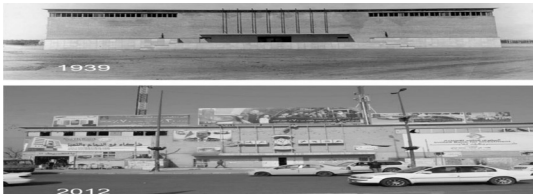


Fig. 4 : Olympic Club 1939, Baghdad (architect Ahmed Mukhtar).



Fig5 .: The 1937 Iraqi Exhibition at Expo Paris 1937 (Ahmed Mukhtar and others).



The architect Hisham Munir is considered the pioneer of modernist architecture in Iraq, and his influence on Western architectural discourse is evident in its early stages, as it was dominated by the character of modernity with a global orientation (International Style), as in his design of the Ministry of Commerce building in 1965, which shows his influence by the Boston Municipal Building, as shown in the Figures (6-7) (Al Chalabi,2016)

Thus, this young architect attempts limited renewal of architectural products and imitates modern design methods and styles after being open to architectural ideas, values, and international design methods and styles. Most of the time, he postpones the adoption of other future ideas, values, and design methods to find useful, ideal, and rationally conscious products within the preferred possibility.



Fig. 6: Boston Municipality 1963, in Massachusetts / USA, Architects Office: Kallman, McKinnell, and Knowles.



Fig7 .: Iraqi Ministry of Commerce Building 1965, by architect Hisham Munir

<https://elaph.com/Web/Culture/2011/5/656803.html>

3-2-2-2 Innovator Architectural Young

In general, these young architects create and colonize a better future through foresight and proactive long-range strategic planning. They work according to the approach of making decisions and exploring expected



alternatives for a better future to overcome potential events and problems through innovations that are characterized by creativity and lead to a transformation in the lifestyle to find architectural products that are within the preferred possibility.

New (young) architectural practices were able to challenge building standards and redefine specific levels of events through new roles for architects whose expertise goes beyond the traditional field of the profession and their pursuit of a proactive role through developing and acquiring new skills and establishing new connections so that the architecture profession moves with the times through insights and ideas critically into their added value to the construction industry and being open to taking on new tasks and responsibilities and changing existing tasks and responsibilities (Liefertink, 2018). The creativity in architecture represents a process of positive change, innovative advancement, and effective development that aims to organize the product. Therefore, change or new organization is a creative interaction, and in this way, the architect has created something new or added a new relationship to existence to be considered this type of engagement as “creative work” (Al-Qaraghuli, 2009). Creativity is characterized by the ability to perceive the world in new ways, find hidden patterns, establish links between seemingly unrelated phenomena, and find solutions (Meyer and Fourie, 2018).

For example, but not limited to, the two young architects Norman Foster and Richard Rogers, along with their wives, established Team 4 in 1964 in England. This young team created a new style of architecture based on advanced technology and became known as a company distinguished by its engineering designs inspired by technology. Norman Foster formulated part



of the conceptual ideas of the new trend as innovative and revolutionary in shaping the architectural appearance. Their projects in that period related mainly to industrial buildings, as it was a turning point in their work in building design. One of their projects in 1966, Computer Factory (Reliance Control), led to the establishment of high-tech trends (William, 1996).

Technological creativity for young architects lies in distinguishing the difference between imagination and creativity, which is the ability to achieve what you imagine. Creativity is distinguished from other forms of imagination. For an architect to be creative, he requires that he possess the origin of an idea, plan and study its feasibility, and the possibility of success if it is put into practice. This contradicts imagination as a superior mental process that has nothing to do with realistic or practical problems. The technology is considered an essential element in creativity for all projects related to construction and finding innovative solutions (Spiridonidis and Voyatzaki, 2010), as it achieves the innovative level in architectural products and it achieves everything that is unusual, uncommon, unfamiliar, and new (Al-Qaraghuli, 2009).

Thus, these young architects flexibly deal with ideas, architectural values, and contemporary products by discovering contemporary building materials and techniques that work to develop current design methods and techniques by innovating and redirecting new and previously unknown architectural design ideas, values, products, and methods to create desired products that are unfamiliar, not common, variable, and may be hidden within the preferred possibility.

3-2-2-3 Inventor Young Architects

In general, these young architects create a better, invisible future by anticipating long-range imaginative projection. They work according to the



approach of making decisions and exploring anticipatory alternatives for a future that cannot be achieved in the present is not linked to repetitions and can be imagined according to specific events and information to overcome potential events and problems through inventing the new and not previously existing, seeking to find architectural products that are among the preferred possibilities.

The inventive level in architecture is associated with breaking away from the old, emphasizing the new, the strange, and the abnormal, with creating absolute and violent change. The inventive level refers to penetrating established laws, principles, or schools of thought to present new starting points and ideas, and thus lead to the emergence of completely and radically new principles, theories, or assumptions, which may cause a sharp and dramatic break with the present and the past according to inflection and turning points (Al-Qaraghuli, 2009).

The importance of deriving architectural form from non-temporal formal principles emerges beyond specific environments, civilizations, and designers, as some forms have a timeless aesthetic that transcends the special circumstances of the design problem, the designer's subjectivity, and the prevailing culture (Al-Qaraghuli, 2009). The importance of exchanging ideas among young people and guessing to anticipate how the world will look in the future by rethinking and rebuilding it could be motivated by the feelings and aspirations of young people for architecture, influenced by today and looking forward to tomorrow. These ideas carry speculation and offer promises that enable much improvement and refinement and prepare the scene of architecture that changes and responds to new and different ways of thinking. Young architects often question their inheritances and establish new values, new methods, and new forms of practice (Sterk, *et al.*, 2009).



For example, but not limited to, the Archigram group in London was formed by three young architects in the 1960s: Peter Cook, Warren Chalk, and Ron Herron, who had recently graduated from architecture schools with three more famous architects: Dennis Crompton, Michael Webb, and David Greene, and they were joined by Theo Crosby, who produced virtual projects as shown in Figure 8, to express its vision of the future at that time. It addressed many architectural issues, including anti-heroism, the promotion of consumerism, mass production, etc., as a reaction to modernist architecture. The group drew a very unique and dazzling, often comic-like vision of a glamorous future machine age. They were inspired by technology and created visions of highly flexible and mobile spaces or even city infrastructure that could move from one environment to another in response to climate change. The group shook the solid foundations of architectural modernism by boldly promoting their unconventional ideas, as playful, pop-inspired visions of a technocratic future dominated their projects, which was expressed through virtual designs (Salder, 2005).

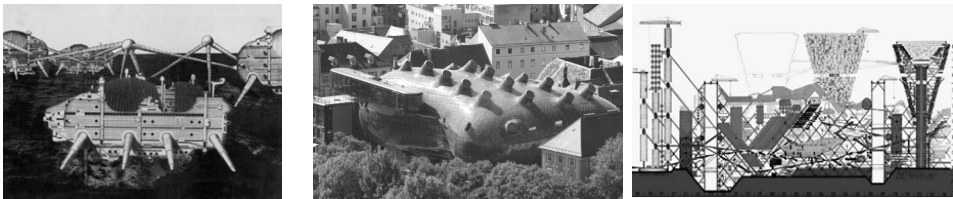


Fig. 8: Imaginative projects for future cities, Archigram

<https://revistabifrontal.com/archigram-la-arquitectura-como-rebelion-nomada>
Archigram



Thus, these young architects are looking forward to new architectural ideas and values (that do not previously exist), inventing and creating new products through exploring new materials, building techniques, and new design methods to find ideal/utopian, untested, and unlimited architectural products that are mysterious and unknown within the preferred possibility.

Based on all of the above, young architects can be identified as entrepreneurial generational units that contribute to shaping the future of architecture, according to the aspects shown in Table (1).

Table (1) Entrepreneurial Generational Units for Young Architects and Shaping the Future.

Conservative young architects			
Traditional young architects	Reading the future in the past by relying on the prevailing short-range anticipatory	Full commitment to the previous general and specific architectural ideas and values	
		Repeating and copying previous material products, in whole or in part.	
		Imitating previous design methods and techniques.	
		Others	
		Finding architectural products within the acceptable possibility	Familiarity
			The tried and tested
			The real one
			Actual realism
			Near
			Enough
Suitable			
To achieve the present enjoyment			
Other			



Fabian Young Architects	Reading the future in the actual present by relying on emerging mid-range anticipatory	Relative adherence to previous general and specific architectural ideas and values		
		Imitation and resemblance to previous material products, in whole or in part		
		A relative adoption of previous design methods and techniques		
		Limited borrowing of contemporary general and specific architectural ideas and values		
		Partial integration of modern architectural design techniques and methods		
		Integrating ancient architectural works with modern ones		
		Other		
		Finding architectural products within the acceptable potential	Improving	For the familiar
				For the experimenter
			Liberal	From actual reality
From the limited				
Unique	To be fit (suitable).			
	To achieve the present enjoyment			
Other				
Modern Young Architects				
Adoptive/ Imitative Young Architects	Reading the future in the extended present by relying on mid- range prediction	Limited renewal of architectural products		
		imitating modern architectural styles and methods		
		Openness	On universal architectural ideas, styles, and values	
			On current global design styles and methods	
		Flexibility and adaptation of current global products to suit the local context		
		Postponement	For future architectural ideas and values	
			For future methods and design techniques	
		Other		
		Finding architectural products within the preferred possibility	Useful	
			Perfect	
Rational and conscious				
Other				



Innovator Young Architects	Creating and colonizing the future through foresight and long- range strategic planning	Flexible handling	With contemporary architectural ideas and values
			Contemporary architectural products
		Discover new materials and techniques	
		Developing current architectural design methods and approaches	
		Innovation and redirection	New architectural ideas and values
			New architectural products, in whole or in part
			New design techniques and methods
		Other	
		Finding architectural products within the preferred possibility	Unfamiliar
			Uncommon
Changing			
Hidden			
Other			
Inventor Young Architects	Creating the invisible future by foresight long-range imaginative projection	Looking forward to new architectural ideas and values	
		Creativity and creation of new architectural products	
		Investigation	New building materials and techniques
			New design methods and techniques
		Other	
		Finding architectural products within the preferred potential	Utopian idealism
			Untested
			Unlimited
			The mysterious
			The unknown
	Other		

4- Case Studies

The research investigates the specificity of young architects in the 21st century, which was characterized by the emergence of many young architects' ideas that were considered future ideas for architecture, in terms of being a proposal for the ideas of cities and spatial suspended buildings,



and as a generalization of the ideas of curved, spiral, and spherical shapes, architectural electronic ideas, and comprehensive architectural ecology, as well as experiments in the trends of mobile, kinetic, and transformative architecture, and the design of interiors, furniture, and equipment in places that can change their functions within a short period. The development of ideas of “flexible architecture”, the creation of sculptural architecture, and the use of effective materials, such as aluminum, plastic, and polymers, also emerged. In addition to measures to eliminate existing differences between the city and the village, and to propose ideas of infinity and continuity in architecture (Proskuryakovand Bohdanova, 2020, P.111).

These ideas are compatible with all the challenges facing architecture, and the attempt of the new generation of young architects to confront them within consumer and capitalist civilization. The environmental challenge emerges as the most necessary challenge, which requires young architects to look at the broader picture of the future of the planet in light of the need for a sustainable built environment, in addition to the difficulty of the young architectural practice of this century because it involves a lot of competition, with the presence of the institutional policies of the large major architectural offices, and the difficulties of working for young architects, as well as the impact of the forces of the economic crisis on the built environment, which made small offices search for new types of practices.

Therefore, many young architects from different geographical regions have started to form research-based groups, in which they interact with communities to create customized experimental design tools, organize exhibitions, run educational workshops, and many other different platforms to actively share architectural knowledge in various fields, so that, it does



not follow traditional architectural design practice (Tan, 2015, p. 117). Many collective architectural practices emerged, including young emerging architectural companies or those individual practices with approaches that fit the specificity of contemporary challenges that were able to make a global impact through their work by seeking to change people's lives, not change the shape of the earth (Kathuria,2020).

Following the above, this research will review some of the architectural practices of each of the young architects aged (22-35 years) within the category of graduates and professionals who deal primarily with environmental and economic challenges in a way that is consistent with the scope of this research to determine the nature of the entrepreneurial generational units of each of them in shaping the future of architecture. It has been taken into account that these practices come from several countries in the world.

4-1 Young Architectural Practices for Startups

They are young, collective architectural practices with trends that are compatible with the specifics of contemporary environmental, economic, and even social challenges, which can be considered to have an impact on the future of architecture in general. Some of them will be reviewed to be clarified according to each of the following aspects (Kathuria, 2020):

- NLE Architects Group: It is a group of young architects led by Kunlé Adeyem aiming to improve social, economic, and environmental conditions through their work. The company has entrepreneurial projects in China, Korea, Italy, and Nigeria. Their main interest is to address problems resulting from climate change and rapid urban growth in coastal communities, including the floating school



project in Makoko, a flood-prone area in Nigeria, as well as the floating school in Venice, as both designs are appropriately adapted to local conditions and are easy to assemble, which usually takes (10) days as a maximum of four builders to assemble each of them, as shown in Figure (9), to represent the entrepreneurial generational unit of Fabian young conservative architects.

- YIN Tegnestue Architects Group: It is a group of Norwegian graduates, Andreas Jjersen and Jashar Hannstad. They created this company in 2008. Their goal was to provide realistic and immediate solutions for people living in poor and underdeveloped countries all over the world. They have life-changing projects in Thailand, Burma, Haiti, and Uganda. Community engagement is a key element of their design approach. As a result, local people actively contribute to the design and construction processes, adopting approaches to creatively reuse different objects in their structures. This strategy was evident in their use of recycling materials in the Klong Toey Community Lantern Complex, which is one of the largest and oldest slum housing located in Bangkok, a typical example of the efforts of young architects to address the contextual problem of unemployment, crime, and drug abuse, due to its design as a public playground. The building creates a visually open and narrow linear form that allows its residents to make iterations according to their requirements. The construction of the complex took approximately three weeks, during which the team of architects conducted workshops, interviews, and public meetings with the residents of the community. The project works in parallel



with its context and has changed its surroundings into a safe and pleasant area. Their design process involves healthy, detailed conversations with users to understand their problems and needs and to encourage community engagement. The architects believe in using locally sourced and reused materials that serve the dual purpose of being sustainable and creating a connection between the building and residents, as can be seen in Figure (10), to represent the entrepreneurial generational unit of Fabian young conservative architects.

- Buro Koray Duman Company: It is the company of the young Turkish architect Bora Koray Duman, born in 1978. He holds academic degrees in both Turkey and the United States. He has a diverse perspective in architecture, as he has a style in which he constantly challenges social and political traditions. His company won the title of Best Emerging Company at the A+ Awards for the year 2017 due to its future vision of the role of the architect, along with the desire to break the restrictions surrounding the profession. One of its most prominent works is the design of the highly transparent Islamic Cultural Center (2013) in New York, which aims to promote the coexistence of interfaith and cultural exchange in that it is open and welcoming and aims to change the image of Islam in the West from one of fear of the unknown to an amazingly enjoyable image and to create transparency from the outside to the inside by wrapping the building with a glass exterior and covering the interior areas not with walls, but with semi-transparent screens taking Islamic style, resembling a mashrabiya (McKnigh, 2016), as shown in Figure (11), to represent the entrepreneurial generational unit of innovator young modern architects.



Fig. 9: The floating school in Makoko, Nigeria,2012,NLE Architects Group
<https://www.archdaily.com/tag/nle-architects>



Fig.10: Residential complex, China,2012, YIN Tegnestue Architects Group
<https://www.archdaily.com/212214/klong-toey-community-lantern-tyin-tegnestue-architects>



Fig. 11: Islamic Cultural Center, New York, 2013, architect Bora Koray (McKnigh, 2016).

4-2 Individual Young Architectural Practices

They are young, individual architectural practices with trends that are compatible with the specifics of contemporary environmental, economic,



and even social challenges, which can be considered to have an impact on the future of architecture in general. Some of them will be reviewed to clarify this aspect, according to the following:

- Architect Anna Heringer: She is a German architect, born in 1977, and one of the advocates of sustainable architecture. In her projects, she relies on building using natural materials such as clay and bamboo. She has designed many prominent clay buildings, such as in the design of the METI School in Bangladesh, and the design of a guest house for the Center of alternative medicine treatment using materials within the site's assets and surroundings in Rosenheim, Germany, for which she won the Aga Khan Award for Architecture in 2007. Thus, to be within the entrepreneurial generational unit of young traditional conservative architects. Figures (12-13) illustrate these projects. (Anna-heringer,2008)



Fig. 13: School of Handicrafts, 2007, Bangladesh, architect Anna Heringer

<https://www.archdaily.com/51664/handmade-school-anna-heringer-eike-roswang>

Fig. 12: Treatment Center for Alternative Medicine, Germany, 2008, architect Anna Heringer

<https://www.asharqbusiness.com/article/2657>

- Architect Melike Altinisik, a Turkish architect who graduated from Istanbul Technical University in 2003 and worked in Zaha Hadid's office and established her office in Istanbul in 2006. In her designs, she seeks



to interpret the universality of science and technology within a framework that includes the geography, history, and culture of the place, and this is what she adopted in the design for the Kfas Headquarters and Convention Center in Kuwait (2018). She considered sunlight, sea climate, and strong natural elements to influence the main character of the place, so liquid and natural forms of bubble-shaped design were adopted instead of solid geometric shapes and perpendicular shapes, taking into account the relationship between sunlight and the roofs of buildings within features such as color, texture, and perforations of foldable roofs, which create semantic links with sunlight, sea, water, nature, and wind, exceeding the flexibility of adapting to the requirements of construction and physics, as shown in Figure (14) (<https://www.melikealtinisik.com/2-index/112-kfas-headquarters-convention-center/>), Thus, to be within the entrepreneurial generational unit of young modern architects innovator.

- Architect Mitchell Joachim, an American architect and urban designer, born in 1972, relies in most of his projects on innovative ways to draw inspiration from living biological materials in both manufacturing and design. One of his most prominent works is (The Fab Tree Hab), which is a virtual ecological house developed at the Massachusetts Institute of Technology, with Javier Arbona and Lara Greeden, aiming to reduce the burden that humanity places on the environment and create traditional housing by planting living, breathing tree houses according to a renovation concept that takes a new architectural form. It is built by allowing local trees to grow on top of a plywood scaffold that is removable once the plants become



interconnected and stable and designed with computer technology (CNC). The interior walls are made of traditional clay and plaster. A method of weaving tree branches together to form a mesh composition or living screens was adopted, and the walls and ceiling are interspersed with pockets of soil and growing plants so that this building is sustainable in terms of recycling waste and using rainwater to improve the lifestyle to return the favor to nature instead of exploiting it. The assumed lifespan of the building is also longer than standard structures of those built with brick and concrete, as shown in Figure (15) (Joachim, 2017; <https://www.archinode.com/>), Thus, to be within the entrepreneurial generational unit of Young modern architects innovator.

- Architect Samer Al-Sayyari: He is an Egyptian architect who has won many local and international awards, including the French Jacques Rogery Foundation International Award for Innovation and Architecture in Space. He proposed the idea of designing space colonies and cities on the Moon and Mars to be a station for human expansion beyond the Earth's scope to discover space. The design ideas relied on combining the heritage of the past with the technology of the present. His design for a colony on the moon was inspired by traditional Arab oases and how ancient desert urban communities succeeded in surviving despite difficult climatic conditions. Beginnings are always similar to a new beginning for the human race in a new environment, and the moon oasis was redesigned using parametric design and 3D printing technology using robots, preparing the internal ecological and environmental

balance for the sustainability of the colony, and proposing the idea of a circular economy, in addition to complete self-sufficiency in the colony's energy and internal resources, as shown in Figure (16) (Al-Sayyari, 2022), Thus, to be within the entrepreneurial generational unit of young modern architects inventor.

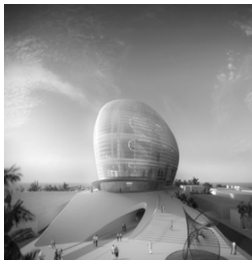


Fig. 14: Convention Center, Kuwait, 2018, architect Melike Altinisik



Fig. 15: The Fab Tree Hab, by architect Mitchell Joachim (Joachim, 2017).

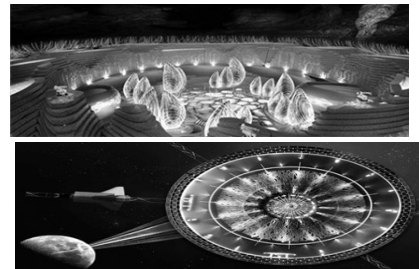


Fig. 16: Space Cities by architect Samer Al-Sayyari (Tretiack, 2021) <https://digitalfutures.international/space-habitats/>

5- Conclusions and Recommendations

- The roles of young architects varied in shaping the future of architecture, to come in the form of positions and approaches that define the entrepreneurial generational units, both conservative and modern. Thus, conservatives extrapolate the future from the past within a traditional approach, in addition to extrapolating the future into the actual present within a Fabian approach, while the modern ones extrapolate the future from the present extending within an Adoptive, Imitative approach, along with both creating and colonizing the future through foresight through strategic planning within an innovative approach, and creating the invisible future through foresight imaginative projection within an inventive approach.



- A new generation of young architects in the twenty-first century is trying to confront many of the challenges that have emerged in consumer and capitalist civilization, in addition to environmental and technological challenges, which requires them to develop their work continuously to meet the problems of the changing world, in light of the givens of the present and in connection with the roots of the past to draw a better picture for the future.
- Environmental challenges constitute one of the most prominent aspects taken into consideration by young architects in the twenty-first century, which have been dealt with according to varying positions and approaches that reflect their multiple generational units in line with the economic and social requirements of this century, which require excellence and entrepreneurship within collective and individual practices, to include conservative young architects (traditional and cautious) and modern young architects (innovative and inventive), who seek to preserve and improve the environment within sustainable practices to form an image of a better future.
- The necessity of young architects today engaging in many development courses, to advance their skills and experience in a way that keeps pace with the rapid development of technology and the increasing environmental, social and economic challenges, within a trend that advances lifelong learning. They must also not be satisfied with the requirements of the present, meet the needs, and raise the ceiling of ambition to create Advanced and sophisticated architecture, which serves to form an imprint for their future generation.



6- References:

- Abu Al-Azm, Al-Ghani Al-Zahir Dictionary, (2013), First Edition, Rabat: Al-Ghani Publishing Foundation, Part 1-4, 1. A-B 2. T-R 3. Z-Q 4. K, (in Arabic language) .
- Ace Victor and others, 2018, Transforming the Future and Forecasting in the 21st Century, United Nations, UNESCO Publications, p. 31.
- Adedapo Adewunmi & others, (2017), Development of Design Expertise by Architecture Students Journal of Learning Design, Oluwatayo, Ezema and Opoko Vol. 10 No. 2 Oluwatayo Covenant University, Nigeria, .
- Ahmed Mukhtar Omar, (2008), With the Assistance of the Publisher's Work Team, Contemporary Arabic Language Dictionary, World of Books, first edition (in Arabic language) Vol. 3, .
- Al Chalabi ,M. Ridha, (2016), Encyclopedia of Iraqi Architecture, Part 2, pp.323.
- Al-Fayrouzabadi,, (2015) The Ocean Dictionary, Al-Resala Foundation for Printing, Publishing and Distribution, Beirut - Lebanon, 8th edition, (in Arabic language).
- Al-Hindawi Ahmed, Al-Hamouri Saleh, Al-Maaita Rola, (2017), Anticipating the Future and Creating it Before Strategic Planning, Smart Readiness, Al-Qandeel Printing, (in Arabic language).
- Al-Naimi Qasim, (2012), The Future and the Economy in Future Studies, <https://www.balagh.com/mosoa/article48>.
- Al-Omar, Maan Khalil, (2022), Sociology of Youth, Al-Badiil Publishing and Distribution, 1st edition, .
- Al-Qaraghoul, Anwar Subhi, (2009), The Creative Addition to Contemporary Architectural Production, PhD Thesis, University of Technology, Department of Architecture, Baghdad, Iraq (in Arabic language).
- Alrawi Rakan Abdel Aziz, (2021), The Future Between Prediction and Foresight, Al-Bayan Magazine, <https://www.albayan.ae/opinions/articles/2021-01-13-1.4064549>
- Al-Sayyari Samer, (2022), Modern Design - Space Architecture, A Lecture in Arabic on the ZOOM website, ARCHINET.
- Anna-heringer, Official website: <https://www.anna-heringer.com/projects/reti-school-bangladesh/>
- Bartels, Inken, and others, (2015), Youth, Revolt, Recognition the Young Generation during and after the "Arab Spring" Edited by Isabel Schäfer, MIB-Edited Volume, Berlin.
- Bastawisi, Ramadan, Mohamed Ghanem, (2007), The Aesthetics of the Arts and the Philosophy of the History of Art according to Heikal, General Authority for Cultural Palaces, .
- Belmuden, Fouad, (2013), Future Studies: Legal, Cognitive and Methodological Foundations for Anticipating the Future, Arab Cultural Center, ISBN9953686386, 9789953686387 (in Arabic language).



- Brigid Boyle & others ,(2016), The Young in Architecture or After the Star , Dosya Journal.
- Carabelli G. alyon D., (2016), Young People's Orientations to the Future: Navigating the Present and Imagining the Future, Journal of Youth Studies, DOI:10.1080/13676261.2016.1145641, p.p.1-16.
- Chen C and Dai M, ,(2020), As in the Western Architecture, Trapped in Western Architecture - Thinking about the Present Situation of Young Architects School of Architecture, State Key Laboratory of Subtropical Building Science, South China University of Technology, Guangzhou, , IOP Conf. Series: Earth and Environmental Science 455 012056,p.2 China
- Erikson, E. H,(1977), Life History and the Historical Moment (First ed.). New York: Norton. ISBN 0-393-01103-8. OCLC 1055523.
- Fawcett D. , (2020), Conservatism: The Fight for A Tradition, Princeton University Press, ISBN 978-0-691-17410-5 Oct 20.
- Gamal, Hamed, (2003), Forecasting Methods, Development Series, Issue Fourteen - February - Second Year .
- Goudarzi S., (2007), You Can't Travel Back in Time, Scientists Say.: <https://web.archive.org/web/20211222085312/https://www.livescience.com/1339-travel-time-scientists.html>
- Hendry, Leo B., (2015) , Young people, technology and change: understanding the system, Jóvenes, tecnología y cambio, Comprendiendo el Sistema.
- Ibrahim Anis, Abdel Halim Montaser, Attia Al-Sawalhi, Muhammad Khalafallah Ahmed, (2004), Al-Mu'jam Al-Wasit - Arabic Language Academy in Cairo, 4th edition, (in Arabic language).
- Joachim,M., (2017), Official website, <https://www.archinode.com/fab-tree-hab>
- Kimberly M. K., (2008), Fostering Youth Engagment: A Mode of Youth Voice, Empowerment and Participation.
- Kwon, Eileen; Smith, Brian Twenty Over Eighty,(2016), Conversations in a Lifetime in Architecture and Design. New York: Princeton Architectural Press.
- Lieftink B., Volker L., Kraaijeveld J., Lauche K., Armand Smits A., Tjoa L.L., Wamelink H., (2018),future roles for architects an academic design guide .
- Mannheim, karl, (1964), Wissenssoziologie. Auswahl aus dem Werk, Publisher : Luchterhand, ISBN-10 : 8474757878.
- Mariam Webster Dictionary, Official website: <https://www.merriam-webster.com/dictionary/young>
- McKnigh, Jenna, (2016), <https://www.dezeen.com/2016/03/02/buro-koray-duman-islamic-cultural-centre-new-york-city-glass-tower/> .
- Melike Altinisik, (2018), Official websitr,<https://www.melikealtinisik.com/2-index/112-kfas-headquarters-convention-center/>.



- Meyer A, Fourie I. (2020), Information Behavior of Architecture Students in Creative Design Projects, Aslib Journal of Information Management, Published by Emerald, Print ISSN: 2050-3806.
- Newgeneration,(2020), (<https://www.archdaily.com/942138/optimistic-realism-and-shared-autonomy-5-young-practices-with-new-visions>).
- Phineas arper, phil pawlett Jackson, (2015) , Why Young Architecture is A Detriment to Profession Arch Daily, <https://www.archdaily.com/606167/why-young-architecture-is-a-detriment-to-the-profession>.
- Polyzoides, S. ,(2007),If I Were A Young Architect. Reviews and Trigger Articles Arch Net J.
- Prachi Juneja,(2015), <https://www.managementstudyguide.com/youth-entrepreneurship.htm>.
- Proskuryakov V., Bohdanova Y. , (2020) Architecture of the Future in the Eastern Europe: Reality and Illusions.
- Razij, Fahima Karim, (2017), Empowering Youth - Opportunities and Challenges, Social Study, University of Baghdad, College of Arts, (in Arabic language).
- Rossel P. ,(2011), Early Detection, Warnings, Weak Signals and Seeds of Change: A Turbulent Domain of Futures Studies, Futures44, doi:10.1016/j.futures.2011.10.005
- Salder Simon , (2005),Archigram Architecture Without Architecture, Massachusetts, Institute of Technology.
- Sharara, Azza, Mahmoud Shamal and Others, (2006), Arab Youth and Visions of the Future, Center for Unity Studies, Arab Future Book Series 48. (in Arabic language)
- Skoshi and Majdal, (2019), <https://www.javatpoint.com/types-of-entrepreneurs>, p38.
- Spiridonidis C., Voyatzaki M. ,(2010), Educating Architects towards Innovative Architecture, EAAE Transactions on Architectural education no 50 ISBN 978-2-930301-48-8m
- Steel James, (2008), Architecture for the People: The Complete Works of Hassan Fathi, translated by Omar Raouf (in Arabic language)
- Sterk,T. d'Estrée,(2009), Introduction: Thoughts for Gen X-Speculating about the Rise of Continuous Measurement in Architecture † Building a Better Tomorrow , Proceedings of The 29TH Annual Conference of The Association for Computer Aided Design in Architecture(ACADIA).
- Tamy, (2019), Introduction to Professional Youth Work, Tamy for Human Resources Development,
- United Nations, (2018), Section 21, Technology for Sustainable Development: Creating Decent Work Opportunities and Empowering Youth in Arab Countries, Economic and Social Council, Economic and Social Commission for Western Asia, ESCWA. (in Arabic language) .
- United Nations,(2021), Our Future Agenda A Vision and Plan for Next and Future Generations.
- Wagnera O. ,(1990), Modern Architecture, Guidebook for his Students to this Field of Art, 2nd edition.



- Williams Sue,(2018), Sydney's Young Architects Forging A Brave New World of Design, Domain Magazine Software Addition.
- Woodman D., (2011), Young People and the Future: Multiple Temporal Orientations Shaped in Interaction with Significant Others, SAGE Publications and YOUNG Editorial Group, DOI: 10.1177/110330881001900201.
- Oxford Learners Dictionaries, Official website, <https://www.oxfordlearnersdictionaries.com> .
- Yadri, Badis, (2018), Reality, Time and Fundamental Physics, Institute of Physics, University of Algiers (in Arabic language) .
- Yamini Kathuria, (2020), What Role Do Young Architects Play in Changing Today's Design Scenario, Rethinking the Future Journal, <https://www.re-thinkingthefuture.com/fresh-perspectives/a2038-what-role-do-young-architects-play-in-changing-todays-design-scenario>

