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The Philosophy of Architecture and the Architects of Tomorrow: A Framework for the 2034 World Cup

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Abstract

Interest in the academic curriculum should not contradict with the preparation of students for the labor market, countries go through periods characterized by huge development leaps that can not be repeated for generations, so students must be involved in the follow-up of large projects to gain experiences from them, we sought in this paper to note the importance of good preparation for architecture and planning students by involving them in strategic and development work and large events organized by their countries, which are accompanied by huge construction works for infrastructure, services, public utilities, etc. The paper began by identifying the problem, which is the lack of interest in training architecture students to stand on the large works that are held in their countries, by following the approach of the philosophy of architecture, which allows them to launch towards broad scientific and practical horizons, and the goal is to obtain experiences that are difficult to obtain practically for long periods of time, and explain that this requires good knowledge of scientific requirements through regular study with scientific foundations such as planning, (and urban design) sustainable urban, the concept of sustainability, and auxiliary tools such as artificial intelligence and its role in the advancement of architecture, then clarifying the relationship between philosophy and architecture through.

Keywords: Philosophy of Architecture, Artificial Intelligence, National Heritage - The 2034 World Cup.

Introduction

The Faculty of Architecture and Planning is the architect to become the designer of facilities and residential and service gatherings for humans, whether in urban or desert and countryside, which have become in our time to keep pace with urban cities, which requires the architect to be aware of the surrounding environment and population habits and life needs of members of society and at the same time keep pace with the rapid global developments in the field, which has become concerned with multiple problems such as climate change and the increase in the number of people and their increasing consumption of resources, without taking into account their preservation for future generations, And how to save energy with a focus on clean energy to create a clean and healthy environment etc... This matter appeared with the term sustainability, which needs to be scrutinized in its achievement, and it is not related to architecture, but includes if not all aspects of life, and to achieve the required uniqueness as architects, we must know the beginning of the scientific foundations through regular study in the college as well as follow up on scientific developments in a time when the world has become in a strong interdependence through the means of communication, media and the Internet of Things.

Research Problem (Paper Vision)

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Formal studies do not focus on monitoring major development events occurring in countries, nor on encouraging architecture students to follow them and gain practical experience.

Paper Methodology (Philosophical Approach)

Describing what should or should be, by adopting a scientific approach that encourages creativity and innovation (Philosophy of Architecture). Paper Objective: Encouraging architecture and planning students to participate in major events and strengthening their academic background with rarely repeated practical experiences that could enable them to participate in similar projects in the future in other countries around the world.

Some Scientific Foundations:

Planning:

A comprehensive term encompassing all aspects of human life, it is the pre-conception of an action or series of actions in the future.

The concept of planning is a conscious, ongoing organization used to examine the best available means to achieve specific goals and objectives and optimize the use of resources. Planning is also the development of a plan to achieve goals within a specific functional area of a geographic area within a specific timeframe. It is an activity with social, economic, and natural aspects, and it considers matters from their three time dimensions: past, present, and future. It is an activity aimed at solving the problems of the population, meeting their needs, and achieving their goals within the framework of available resources. (1)

Sustainable Urban Design:

The most important dimensions of sustainable urban design include: -

Preserving the natural environment, including energy conservation and measures to control toxic materials and pollutants that affect water and air. - Preserving the built environment and extending its lifespan by improving its durability and maintenance, such as road and public facility maintenance, in addition to reusing debris or rubble. - Reshaping the built environment to improve the pressure on the natural environment, including land use decisions, in determining the foundations of sustainable urban design. (2)



A visualization of an urban design concept for future cities from Bangkok demonstrates the importance of sustainability elements to prevent pollution and purify the air to achieve a healthy and comfortable environment.

The Concept of Sustainability

It is a comprehensive term linked to the development required by human society. The concept of sustainability is a modern term in our societies, but its meaning is ancient. Our ancestors did not use the term to describe their way of life, their preservation of natural resources, or their use of them in building their homes from local, environmentally friendly materials. Therefore, they applied it spontaneously, calling for concern for the future of humanity and, consequently, the preservation of the environment, which ensures human continuity. This goal is to achieve environmental, social, and economic sustainability and meet the needs of current and future generations. With technological advancements and the information revolution, it has become necessary to seek advanced methods and creative ideas for dealing with natural resources. This requires the combined efforts of specialists, architects, and planners, in cooperation with decision-makers to focus on environmentally friendly technologies, especially in the fields of construction and urban planning. We find ourselves in dire need of sustainable development due to the failure to take advantage of available resources, especially since the available natural resources have not been properly utilized. Therefore, it is necessary to disseminate the concept of sustainability so that it becomes a behavior that encompasses all aspects of life. (3)

Artificial Intelligence and the Advancement of Architecture

Studies indicate that despite the current advances in artificial intelligence (automation), it has not been able to replace architects. Architects use construction data, designs, and previous building experiences, and technology is capable of handling and processing massive amounts of data in a fraction of a second, providing recommendations and improving the design process. Artificial intelligence enables architects to test multiple ideas simultaneously without the need for paper and pens. A number of industries have recently improved thanks to artificial intelligence technologies, which has raised the question of artificial intelligence and its relationship to architecture and its impact. The basic idea revolves around replacing architects' designs with highly intelligent robots capable of designing buildings and creating works of art. After artificial intelligence proves its effectiveness in the normal design process, architects can complete their work professionally and creatively. (4)



AI-powered design template... Source: PromeAI

Ways Artificial Intelligence Will Change Architecture: -

Thanks to AI's ability to study and analyze an unlimited amount of data, it helps architects test a range of ideas simultaneously and seamlessly, arriving at conceptual designs without consuming a lot of time and resources.

- Leveraging parametric architecture. Parametric architecture is a special skill for many architects. The parametric design system enables controlling specific coordinates to create different types of outputs, which allows for the creation of models and structures specific to this design, depending on the architect's various programming languages.

This tool allows architects to select design outputs, define constraints, enter data, and create an unlimited number of iterations of the desired building in just a few minutes.

A structural engineer may sometimes need years of planning to implement an architect's vision. However, artificial intelligence makes the work easier for both the engineer and the construction worker.

It facilitates the planning process by collecting and storing vast amounts of data, creating models, understanding the environment around the building, and calculating costs.

This facilitates the construction process and shortens design and construction time. It also contributes to the construction aspect by utilizing few human resources. Smart cities are expected to be everywhere. The way cities look will change in the future. What is certain is that planning them without utilizing artificial intelligence technologies is a complex process that requires years. The engineer's primary role lies in understanding the city's development and growth patterns, and understanding how they fit within the ecosystem. The emergence of smart cities powered by artificial intelligence technologies will change the way architects think, reconsidering their traditional methods.



Designs of future towers as seen by artificial intelligence Source: Scienceforthepublic.org

The high capacity of artificial intelligence to process data and produce accurate results, which helps in arriving at creative and scalable solutions, allows for the improvement of the architectural design process by automating repetitive tasks and freeing up architects for creative thinking. The use of artificial intelligence in architecture and construction has multiple benefits, including: Architects no longer need to be present at construction sites. With the Internet of Things and the ability to transfer and exchange data and knowledge online, massive data has been entered and linked to the global map, enabling architects to remotely collect information and images of a specific site. It helps architects make improved design and algorithmic decisions. The availability of interconnected, self-learning artificial intelligence systems provides sufficient computing power for designers around the world to leverage. With the vast amounts of data collected from previous work, designers can easily input data to create multiple ready-made designs using CAD. Furthermore, the variations can meet the standards of any project.

Artificial intelligence brings human interaction to design projects. Just as CAD did when it first emerged, new visualization methods have the potential to change what's possible in architecture. Some architects have begun to use augmented reality technology. This approach has the potential to transform the perception and engagement of architectural projects for architects and clients. Using augmented reality, architects can be taken on a journey through proposed designs, allowing them to move freely and experience the final design before it's built. This includes light, sound, and even smells. Artificial intelligence can revolutionize architectural practice, unlocking creativity through imagining and building new worlds in tandem with this remarkable technology, enhancing the well-being of communities.

(5) The Relationship Between Philosophy and Architecture

Philosophy is an advanced and distinct means of communication, helping to create descriptive images of specific concepts. The architect contributes to intellectual production by presenting ideas and concepts through the design process. This interplay between philosophy and architecture embodies the influence of philosophical ideas on our understanding of space, function, and aesthetics in architecture. Philosophy, in its interplay with technical sciences, represents a creative field that requires careful consideration and scientifically based design to achieve an architectural design that achieves the concept of the ideal building. A building, in essence, is not merely a rigid structure, but a vibrant life that embraces humanity and its civilization, reflecting the philosophies, culture, and personal experiences of architects. Philosophy has gained increasing importance in recent decades, with many academics and architects incorporating contemporary philosophical ideas into their work. Philosophy enhances the emerging foundations of technical engineering, contributes to the development of new design approaches, and offers profound insights into the relationship between humans and infrastructure through philosophical thought. This broadens architects' horizons and allows them to see their projects not as mere buildings, but as an application of values, beliefs, and cultural heritage. (6)

Some branches of philosophy contribute to architecture

Metaphysics:

Raises questions about reality and existence, which influences the perception of space and time in their designs .

Logic: guides architects in how to think to solve problems in their designs. Epistemology: addresses questions about knowledge and understanding, guiding architects in how to explore and interpret new concepts.

Ethical Philosophy:

Shelter, which goes beyond simple function to ethical aspects (social justice and housing) (quality of life and well-being) through achieving sustainability

Organic Philosophy:

Focuses on the integration of the building with the surrounding environment, resulting in a design that is in harmony with nature



An example of organic architecture designs April 8, 2021 Abraj Arch Source:

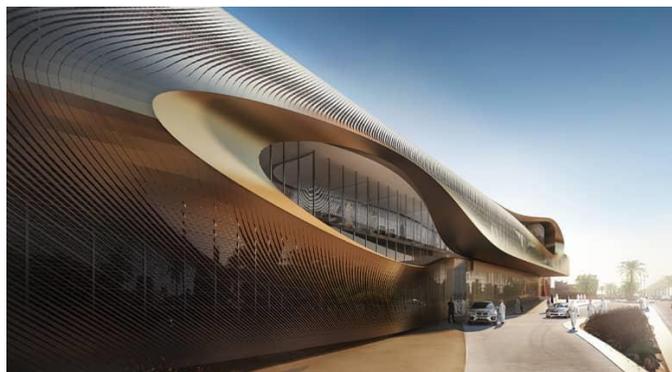
In general, organic architecture aims not to destroy the environment it enters, or, in other words, to complement it! In other words, it ultimately becomes an already existing part of nature.

Many architects have addressed this idea in more than one way, such as using materials found in the building site and even going beyond that to using environmentally friendly materials in furniture and decorations so that the building appears to be an integral part of its surrounding environment.

Deconstructive Philosophy

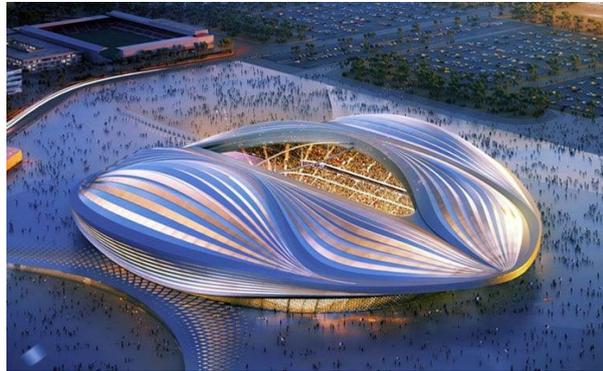
Deconstructionism, developed by the French philosopher Jacques Derrida, relies on a critical and analytical approach aimed at revealing how meanings and ideas are constructed within texts, culture, and institutions. Derrida believes that meanings are variable, intertwined, and often contradictory. Therefore, he believes that we must exclude some meanings for the sake of others.

The application to architecture, as in the works of Zaha Hadid, stems from the same principles, deconstructing traditional architectural forms and ideas, leading to designs that challenge established rules and move away from stereotypical and clear structures. Zaha Hadid's designs, with their bold and dynamic forms, reflect this approach by challenging traditional standards of space and form, which has opened new horizons for thinking about architecture and space.



Saudi Arabia Architectural Heritage Center - Zaha Hadid

CNN Arbic



Zaha Hadid's creative stadium design breaks the male dominance. Arch20.com

Hybrid philosophy:

Combines components and ideas from a variety of philosophical theories and different schools of thought, aiming to explore and integrate a wide range of ideas in order to achieve a deeper understanding or develop new solutions to philosophical issues.



A model of experimental architecture (hybrid philosophy) Cocobolo Centre, Panama. Source: miasarquitectes.com

In the field of architecture, experimental architecture is a model for this philosophy. This movement is characterized by its diversity and experimentation, challenging traditional architectural styles through the use of diverse forms and cultural references. It focuses on constructivism by applying abstract ideas to architectural design, while leveraging technological advancements and industrial materials. It is characterized by its analysis and deconstruction of traditional forms, leading to the creation of dazzling and unexpected designs. It also emphasizes the use of sustainability and environmentally sustainable designs, influencing the concepts of interactive and technical experimental architecture, including the use of technology and digital solutions to create designs. Architecture, at its core, is more than just the creation of buildings and spaces; it is an expression of human thought, the pursuit of deeper understanding, and its

Symbolism in the Philosophy of Architecture

A symbol, linguistically, is a sign or gesture, indicated by the lips, eyebrows, or eyes. In the Quran, God Almighty says, "Your sign is that you will not speak to people for three days except by gesture." A symbol is perceived by the observer through the conjuring of similar images in the mind through specific associations. Architecture is a language of communication between the self generating the architectural act and others. The language of communication is characterized by the possibility of reading and crystallizing an idea or intent.

There fore, the interaction of forms—interconnection, overlap, transcendence, deletion, and addition—gives expression to the idea or reason for the architectural form. We can say that the formality of architecture is not limited to the characteristics of form alone, in terms of the values of balance, harmony, and symmetry, but extends beyond this to the nature of the values that the form translates to the recipient to achieve the intentions of communication. The beauty of an architectural form is seen through the extent of its understanding and the scope for interpretation that the recipient creates in their relationship with it. Symbolism is one of the strategies in architectural language to represent ideas and emotions that represent human understanding of nature and the self according to specific laws and certain agreements, which include within it the creative dimension of interpretation and understanding. Symbolism is a pattern expressed through spatial, temporal, and material meanings... which depends on perception and the participation of most of the senses.



The Cornitha Hotel in Khartoum is a symbolic example of the place, shaped like a sail on the Nile.

Alrakoba.net

The nature of symbolic expression in architecture of an idea varies according to the nature of the culture, location, time, and direction, whether national, geographical, or religious. It expresses a moral state related to society or to the architect's inner conceptual thought.

Characteristics of Encoding

A/ Achieving the communication feature between the producer and the recipient, and communication with traditions and heritage at the objective level on the other hand.

B/ Formulating psychological self-symbols within a social objective framework to increase the interaction between architecture and humanity.

Examples of coding include

The Kenbaku Dome in Japan and the Hiroshima Peace Memorial Park .

In Japanese, it means: the Atomic Bomb Dome or the Hiroshima Peace Memorial. It is a Japanese landmark located in the city of Hiroshima. It was originally a palace for the prefectural industrial exhibition.



pinterest



Zoomroda.com

The Czech architect Jan Nešel designed this European-style landmark in 1915. Its most distinctive feature is its empty oval dome and its ruined facade. On August 6, 1945, the first atomic bomb exploded directly above it, at an altitude of 580 meters and 160 meters southeast of the building. The surrounding buildings were destroyed, but the building, due to the bomb exploding directly above it, remained standing. Only its facade and the metal structure of the dome were shattered, remaining a witness to the horrific event. Over time, the building came to be known as the Kenbaku Dome in 1995. A year later, in 1996, UNESCO listed it as a World Heritage Site. The reasons for its selection were that it had become a global landmark for humanity, symbolizing hope for lasting peace and the elimination of all atomic weapons on Earth. A memorial to the victims was erected on the same axis and in the same location.

Inclusion

It is the process of integrating new information with what is present in the cognitive structure, i.e. including the text interacting with it within the scope of the new text in a way that makes it appear as if it is part of it despite being an emergency to it, to give it a creative quality by dealing with heritage in the new text.

Embedding in Architecture

Relying on non-architectural sources in terms of the affiliation of the references included,

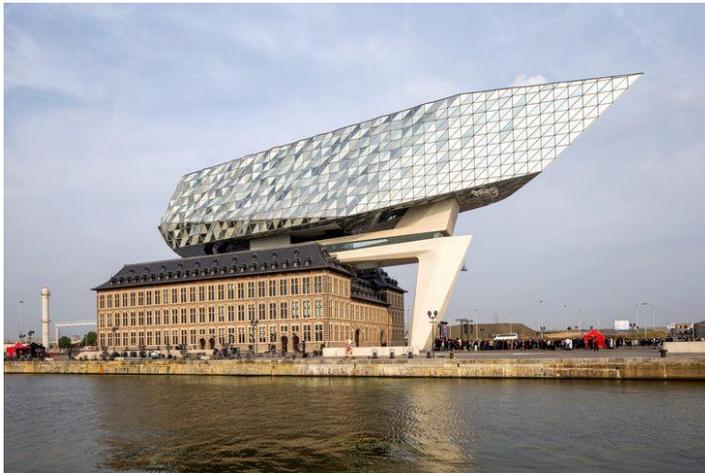
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architects seek to capitalize on the semantic and intellectual wealth of non-architectural references, especially those products that bear references to nature and heritage in form and meaning. Architectural sources linked to the context of the site itself, and more broadly, are exploited in an effort to confer a contemporary quality on the site's elements. However, these elements are characterized by their vitality and interactive permanence over time, despite the different functional patterns within which they are re-invoked.

An Applied Example of Inclusion

Antwerp Port Authority

The new headquarters of the Authority is a separate expansion of the old building that served as a fire station. The building consists of two parts that together form a landmark for the port and the city, and stands out as a global economic symbol, not just for the region.



Almadaper.net

Quote

It is the architectural designer taking a part of a religious or historical building to include in his design. It can be taken from other sciences and knowledge such as mathematics and shapes or from architectural movements. (7)

Example of architectural quotation



Ehow.com



4travel.jp

The ancient pyramids are quoted from it, and the Louvre Museum in France is quoted from it.

National Heritage

Heritage is the legacy we inherited from the past, which we enjoy today and pass on to future generations. Our cultural and natural heritage is an irreplaceable source of life and inspiration.

The heritage of the Kingdom of Saudi Arabia is diverse due to its location. It was the cradle of ancient kingdoms and civilizations that left their traces throughout its borders as evidence of their past existence. It is also a commercial hub, serving as a crossing point for trade routes between the continents of the world. In addition, during the Hajj season, after the unification of the Kingdom, this diverse cultural heritage blended with the diversity of regions, environments, and lifestyles. (8)

Some of the architectural heritage sites in the Kingdom

Masmak Palace, Al-Murabba Palace, King Abdulaziz Palace in Al-Badi'a, Beit Al-Subaie (treasury), Al-Saqqaf Palace, Medina Railway Station.



Masmak Palace

blog.wasalt.sa

What the philosophy of architecture offers us

The philosophy of architecture allows the researcher to embark on free thinking, which leads to innovation. However, this thinking must be creative and innovative, which achieves a future vision to solve problems in the present and avoid them in the future, within the limits of what is possible, through a scientific approach, for example (analytical or comparative), after standing on certain concepts such as planning, design and sustainability as related concepts. The application of sustainability standards must be based on scientific planning with a penetrating vision, followed by a cognitive study of the region and its geography, its problems, requirements and the needs of its residents, so that the matter is bound by the available reality. A survey study was conducted to collect and analyze information, and to review studies related to the subject and successful experiences in applying sustainability standards, until the philosophical theory that we propose comes, which is to leave the opportunity for architectural planning with creative ideas to start from where others ended, to fly far in deducing effective solutions to the current situation, and to work to anticipate future problems, while standing on a solid foundation of knowledge of the targeted standards and analytical information that gives it a complete vision, to innovate through plans that take into account possibilities. Available, to create innovative designs, applied for sustainability, to be an example for the world to stop at and adopt, all in harmony with the local environment, with design methods that are in harmony with nature, as the human soul is in harmony with nature, to achieve a healthy environment that makes residents and visitors feel comfortable, with aesthetic designs that target their visual and physical comfort.

Case Study as an Example of the Paper Objective

2034 World Cup in Saudi Arabia

As an example, after a general overview of the scientific foundations of architectural practice that must be adhered to and utilized (such as planning and design, sustainability, and the philosophy of architecture), and a review of some of the tools and resources that lead to creative scientific implementation, such as artificial intelligence, national heritage, and sustainability, we delve into the important matter and the great opportunity that has been made available to architecture students in the Kingdom if they are able to take advantage of it: their country's hosting of the 2034 World Cup.



King Khalid University Stadium is one of the stadiums hosting the 2034 World Cup.

Source: Saudipedia.com

Students of the College of Architecture and Planning (College of Innovation and Creativity) How? They are responsible for designing buildings, services, infrastructure and facilities required for the future. The above-mentioned tasks, along with the requirements associated with the event, whether permanent or temporary, are a great opportunity... And since they are currently in the study phase and will graduate, God willing, and the event still has quite a long time to start... they have the opportunity to prepare themselves to be part of the designers of the work required for the event.

This can be achieved by preparing themselves through a good mastery of their studies and by reading and making use of the philosophy of architecture, which I believe allows them to move towards creativity and innovation with steady steps. I suggest that the faculties of architecture and planning strive to create a qualifying program to prepare students to become an effective part of this matter.

There will certainly be internationally renowned companies that can carry out the required work, from which they can gain significant experience because they have it, and they will have the opportunity to emerge by proposing and presenting innovative works, because creativity imposes itself, through their in-depth understanding of their country more than others and benefiting from their rich national heritage to present impressive works that are compatible with the national environment. His Royal Highness Prince Mohammed bin Salman, the Crown Prince, has given them a strong foundation to launch and soar their work globally by issuing (the Saudi architectural map inspired by the national geographical and cultural characteristics of the Kingdom, enhancing the urban heritage, quality of life, and developing the urban landscape in Saudi cities) (9). This is what the world seeks through achieving sustainability, one of the most important features of which is compatibility with the local nature and not disturbing it.

Asir Region

For example, Asir region, as one of the regions of the Kingdom that hosts part of the event (the
posthumanism.co.uk

Sports City Stadium - King Khalid University), is rich in heritage landmarks that are deeply rooted in history and can inspire many creative designs that will dazzle visitors following the event, and will be an addition to the tourism future of the region and benefit from the divine gift of wonderful weather and breathtaking natural scenery. The implemented designs will remain for their owners and for future generations.



A Picture of the Fierce Architecture Deep in Asir's History and Unique Nature

Conde Nast Traveller:



A Picture of the Picturesque Nature of Asir

Urtrps.Com

Through the philosophy of architecture and the use of architecture and tools such as artificial intelligence, which the human mind can harness to innovate for the welfare of humanity because it is more powerful than it in terms of creation and innovation, it is possible to think of bold additions to their country's infrastructure that will move it to a more spacious future.

Contributing to temporary and essential activities for the event, such as providing accompanying services, such as providing sites for visitors' needs on the roads connecting the accommodation sites, the event venue, and the surrounding areas, and coordinating the nature, trees, and wildflowers with innovative designs for mountainous areas that are rare in the world. Herein lies the uniqueness of the place, which allows you to be creative because you are children of this environment.

How can they turn their cities into beautiful architectural paintings? For example, by paying attention to what are called visitor paths (the roads they travel on), by presenting their innovative designs through auxiliary services, coordinating pedestrian paths and gardens whenever available, and taking advantage of the diverse nature of the environment in presenting unique architectural works, and renovating the facades of buildings on the main streets with dazzling architectural innovations that turn them into extended artistic paintings.



A sample of the services that could accompany the event (café) INBAR Pavilion by SUP Atelier of THAD, winner of the A+ award in the People's Choice for Best Sustainable Company; photo by Chu Yingnan

This event is a participation of architecture and planning students with distinguished works that will make them an event, but more importantly, their creative designs will make them international architects. How? Individuals from different continents and countries of the world and the international media will participate in this event, and their works will be displayed to them. When they are impressed, they will take them with them to the outside world, so that they will be transferred with them to the international ranks. This means that this is an event that they create to make them.



A model of harmony between architectural design and nature. Fougeron Architecture. A+ Jury Award Winner for Residential Renovations and Extensions. Photography by Joe Fletcher.

Recommendations

Develop flexible curricula to keep pace with global scientific and practical developments, with a focus on the environment and the local community.

Prepare students for the future by gaining practical experience alongside theoretical study.

Focus on providing opportunities for university students to participate in strategic and development projects, enabling them to gain practical experience even if these projects, such as the construction of dams and skyscrapers, will not be replicated in their countries for generations. However, their acquired experience can contribute to similar achievements in other regions of the world and enhance human communication across the globe.

- A competition could be held for innovative works that could be nominated for implementation, based on local culture and national heritage. This would be a creative addition to the country's national efforts and prepare young people, especially architects, to become global names in their field.



From the design plan for Prince Mohammed bin Salman Stadium, one of the 2034 World Cup stadiums.

Source: Pinterest.com

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