



The Combination of Art and Technology Prepares for a Better Future

¹Ar. Rajshree Nigam, ²Ar. Sachin Paliwal

¹M Arch Student, ²Professor

¹Architecture Department

¹IPS Academy, Indore, India

ABSTRACT

As years pass by technologies are enhancing, and so do humans. They progressively involve themselves in these new techs to make or give a faster and better outcome. And as an architect, the obstacles are to satisfy these evolving generations by presenting them with what they want and their expectations towards designing. Everyone wants something magnificent but also in a shorter course period. So, this paper is to enlighten the points towards the combination of art and technology that has enhanced the designing and construction techniques. It's about involving technology to improve the precision and strength of materials. The outcome of this study will help Architects to furbish their designing tool with the help of technology that can extensively save time and money.

Keywords: Art; Technology; Designing techniques; Construction technique

Introduction

As Bob Dylan stated lyrically, *The Times They Are a-Changin'*. Change is the reality of life. There is a constant need to change as generations are changing. Consequently, Technology has categorised and transformed the Worldwide Village. Barely 20 years back, a search for information through the internet was not in existence, likewise social networks on phones. Nowadays there have been expansions in technology not restricted to science, commerce, healthcare, entertainment, defence, and education. Like that in architecture, there has been solid evidence to allude that the technological revolution in the field is frequently accelerating. The continuous innovation in technology, and swiftly changing tools are motivating the fabrication of a fundamentally novel architecture for the Twenty-first century.

Technology has accelerated the production of novel kinds of creations that have not been created before. Therefore, it could be articulated that it has facilitated creativity. Technology also bestows multimedia and virtual reality. This can offer new dimensions to artworks. Design and Art have a long past of employing a

variety of devices and materials to create an artistic work, artefact, or to accomplish a particular design goal. Thus, technology and association have all the time been embedded in the art to some degree.

The challenges that influence architecture as an upshot of the continual progression of technology have forced it to expedient to swap traditional design systems with new ones that associate with the trendiness of the present world. New technology empowers Architecture to cater for and support the growing demand for products and services through enhanced capacity.

Technology has changed the world in merely a few periods. For Interior designers, builders and architects, technology has grabbed a front place in the experience of building a structure and designing. From beginning to end, technology shapes the approach in which the architect designs buildings and the way clients perceive the process of design. Technology can enhance building proficiency and durability, and making it effortless for Architects and Designers to Conceptualize and visualize design of building more accurately and smartly. The level of new technology is growing exponentially.

Technology and Future eternally go hand in hand and bestow ever shining outcomes. The futuristic trends in technology and the desire to acquire the best facilities and techno-equipped environments, architects are following same trends. There are many new technologies that is making the architects job easier and at the same time challenging.

In the architecture, an architect concentrates on the conceptual phase. In this phase, the architect explores and generates new ideas established on evaluating the problem (Heidari, Parvin & Polatoğl, Çiğdem (2019). Now a days attempts were done to integrate new digital tools in the early stage of design.

In this paper researcher will review various futuristic technology in architecture and how the Combination of Art and Technology Prepares for a Better Future

REALISTIC 3D RENDERINGS

Nowadays, 2D presentation do not satisfy clients any more, beyond this they need visualization (Kubanova, Alisa (2016). There are many Clients having dilemma in imaging 3D space, and as an architect it is mandatory to visualize the 3d space to them. If clients will not able to visualize the space, they can't take the decision and it will inversely effect on the work and the time of the Architect (Zhang Yu, Huang Geng (2019).

As affirmed by Gao Zhimin , Huang Jiayi (2018) development of 3D rendering in the architecture field generates interactivity, fascination and provides Realistic Renderings . 3D rendering is 3-Dimensional picture having components of Architecture and illustration to create realistic views of how final project will appear as shown in the figure1. 3d rendering is so realistic, serve as extremely versatile and lucrative planning and marketing tools.



Figure:1 3D RENDERINGS

3d photorealistic rendering generates compelling imaginings through the utilisation of specific software. It eases to visualize the creative design and accomplish desired modifications before the structure begins. 3d photorealistic renderings can be done with help of various software like:

- Revit
- 3D MAX
- Auto CAD
- SketchUp
- Maya
- Lumion
- Unity
- Unreal
- Cinema 4D

3D PRINTER

In the 1980s 3D printers were invented initially it was known as 'rapid prototyping.' It permitted businesses to design prototypes very accurately and swiftly than any other procedures. In the future of industrial production, 3D printer is a promising instrument because of its accuracy, flexibility, and speed. Therefore, it plays a significant role in nearly all the industry like art, medicine, design and architecture. Applications of 3D printers are far more diverse today. In the perspective of Architecture, yet it is in its infancy nevertheless it's exposing as vital tool and real promise in the field of architecture.

3D Printing is an advanced technology in manufacturing 3D models through 3D printers by layering sequential layers of specific material as shown in figure 2. The 3D Printers collect commands from CAD software to generate models or 3D scanners help them to replicate it.



Figure 2: 3D PRINTING

The process of 3D printing which was founded by Dr Behrokh Khoshnevis, also termed as Contour Crafting it requires appreciably less labour compared to traditional methods of building. By using 3d printing or Contour Crafting, safety of the labour is increased as well as reduced the labour cost Mathur, Rajshree (2016). This 3D printing technology empowered architects to design scale models speedily and economically, in every phase of the Architectural design. 3d printers offer architects enhanced visualization, and stability, wind, & sound etc. optimization tests (Beyhan, Figen & Selçuk, S.. Arslan(2018)

DIGITAL SKETCH BOOK

The great tool in architecture is Sketchbooks as it makes an architect's for apprehending loose ideas & help to remember it. These sketchbooks were graphite-covered and clunky, and it takes large amounts of area on shelves. In the present scenario traditional way of sketching using paper and pencil is an indispensable mode for architects as shown in the figure 3. Nowadays sketchbooks are digital, and drawings can be saved easily, recalled and displayed deprived of a smudge of graphite. Digital sketchbook both extends and imitates the potentials of the sketch into a new-fangled form (Dzurilla1, Dalibor ,& Achten, Henri (2021).



Figure 3: DIGITAL SKETCH BOOK

There are various benefits of using a sketchbook, as its proficiency to share, store & post digital sketches. It can incorporate images and export to other devices and formats and definitely undo is like a blessing (Şener, Bahar (2014).

VIRTUAL REALITY

In the past, architect depends on 2D renderings and 3D models to visualize the product to client before it was built. These help to get the job done, but there are various limitations. 2D drawings and 3D models was not able to satiate the clients as it leaves them wondering that how their finished space or product will look like. Now a days clients want to interact and explore the design proposed by the architect freely (Falahi, Al, Ahmad (2022). Virtual reality as it has the capability to resolve the problems in architecture of low productivity.

Virtual reality is a relatively latest technology that has been utilised in a various field, like education, gaming, and design. Modern Virtual reality having head mounted display (HMD) as shown in the figure 4 which have stereoscopic tracking devices that simulate perception of depth and offers the presence feeling. As the client feels like getting inside door, explore the way to entry, open closets, walk down to hallways, , experience as looking out of the windows and feels like moving around in the space



Figure 4: VIRTUAL REALITY

Clients can take a virtual tour of particular area without going and seeing it in person. In future it looks like inevitable that Virtual reality will replace the 2D renderings and 3D models and become vital in the construction process.

CONCLUSION

The architecture world is always growing, and advancements are made with time. The new technology in architecture has made various things possible which was unheard previously. That made modern design buildings more practical, and flexible. It also allowed for trying different ideas.

This novel technology is continuously improving the life of architects. Technology is making architects work faster by saving time and money. Making visualization and communication easy.

The technology in Architecture, like technology in another field, is always developing. Many of new trends are just arriving into play, and definitely the Combination of Art and Technology Prepares for a Better Future and it will improve in the forthcoming years. It is a high time to get used to the forthcoming technologies and the perfect way to flourish in a future

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