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# ARCHITECTURE SOFTWARE & ARCHITECTURE PROFESSION; COMPARATIVE ANALYSIS OF ITS USE BY A NON - PROFESSIONAL

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***Abstract***
*Over time Professional courses of which Architecture is one has had to witness infilteration by quacks and non professionals as a result of the attendant need for survival. It is to this extent that this paper wants to X-ray and analyse what Architectural Softwares are, the Profession of Architecture under which the Softwares are used, comparative analysis and the limits to which a non Professional cannot exceed even as he makes use of the Architectural Softwares in the Building Industry.*

***Keywords:*** *Architecture, Softwares, Profession & Professional.*

## Introduction

Architecture over the years has been relegated as a result of the availability of Architecture Softwares. These softwares which ordinarily were being used by Architects to enhance thier graphics is now an almost powerful tool in the hands of Non Architects who are so much interested in the Architects' works and revenue /renumeration that comes from offering the Architect's services to his clients. In most cases other related professionals like the mechanical; Civil, Electrical Engineers & even non professionals in other fields had sought to learn the skills in Architecture by understanding the different Architectural Softwares available in the Market today.

However there is a difference between an Architect who had acquired a University degree in Architecture and is using Architectural Softwares to enhance his works





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and that who is not an Architect but had learnt how to use Architectural Softwares in designing Buildings for Clients. One thing is certain, for the Architect, the time spent in the University to acquire the Architecture degree cannot be equated with one who had come across a particular Architectural Software, learnt it and is using it well for some Clients in the Building Industry.

This Paper aims at highlighting the role the Architectural Softwares plays as it relates to Architecture Profession for an Architect and the limitations it presents for a non Architect as it relates to their using it in producing some Architectural drawings for Clients in the building Industry.

**STATEMENT OF PROBLEM :**

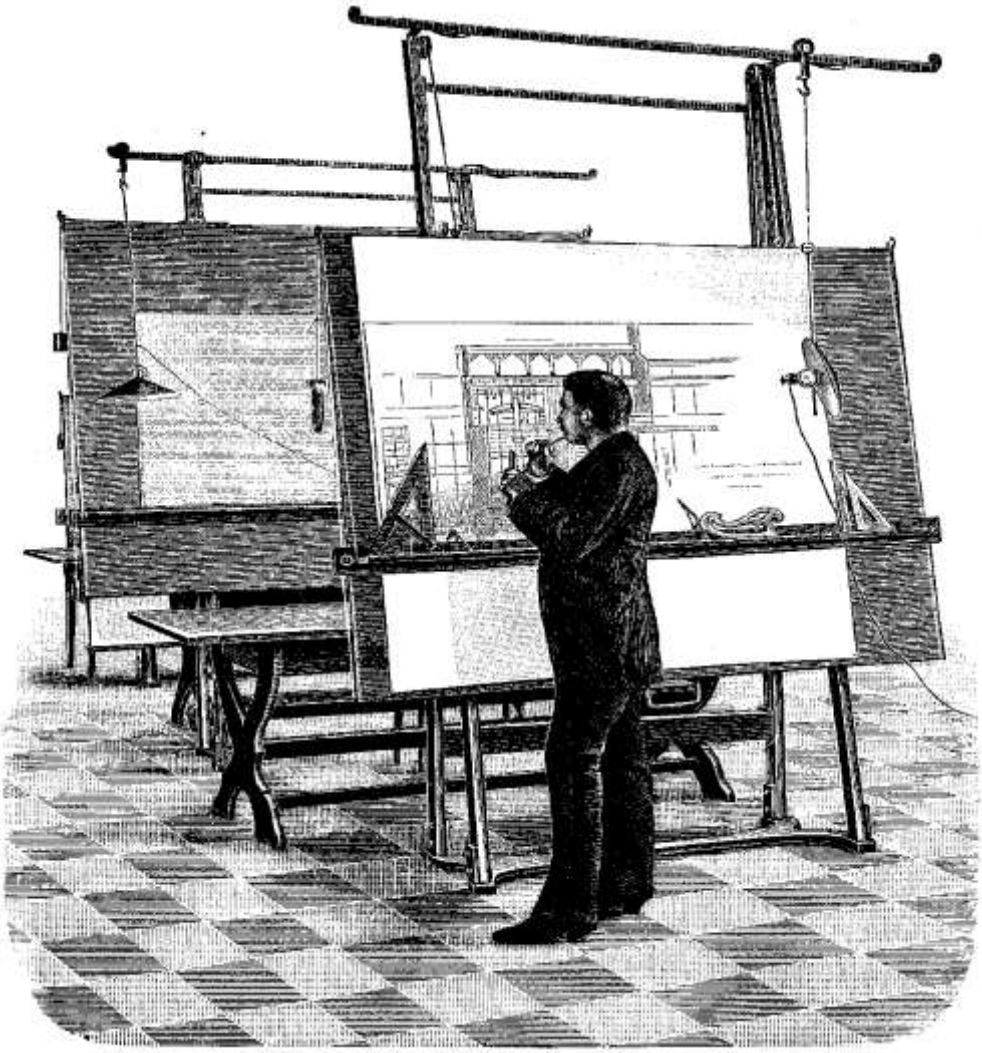
The desire to find something doing in a country that has not been able to provide adequate employment for its teeming youths and the unemployed has led so many into trying to do works that are not specifically thiers but because there seem to be easy access into doing such works without proper checks of who does what, has made quacks and even non professionals to infilterate practice of professional disciplines where they feel they can make easy money yet they are not qualified professionally, by so doing the lives of many are put in danger and the profession of Architecture is not excluded and it's the most affected.

**OBJECTIVES:**

The objectives of this paper shall include:-

1. To define what Architecture Profession is, Architectural Softwares and those who are eligible to use these sofwares in the Building Industry.
2. To highlight the danger in its use by non professionals and quacks.
3. To give an explicit distinction between the two categories of Architectural Software users and the Incomparability and Incompactibility of both categories irrespective of different levels of mastery of the software.

**ARCHITECTURE PROFESSION:**



**ARCHTECTURE:**

In most developed countries, only those qualified with an appropriate license, certification or registration with a relevant body (often governmental) may legally practice architecture. Such licensure usually requires a University degree, successful completion of exams, as well as a training period. Representation of oneself as an architect through the use of terms and titles is restricted to licensed individuals by law, although in general, derivatives such as architectural designer are often not legally protected.

**ARCHITECT:**

An Architect is a person who plans, designs and reviews the construction of buildings. To practice architecture means to provide services in connection



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with the design of buildings and the space within the site surrounding the buildings that have human occupancy or used as their principal purpose.
Architects spend much of their time in offices, where they develop plans, meet with clients, and consult with engineers and other architects. They also visit construction sites to prepare initial drawings and review the progress of projects to ensure that clients' objectives are met.

**Important Qualities for Architects**

***Analytical skills*.** Architects must understand the content of designs and the context in which they were created. For example, architects must understand the locations of mechanical systems and how those systems affect building operations.

***Communication skills*.** Architects share their ideas, both in oral presentations and in writing, with clients, other architects, and workers who help prepare drawings. Many also give presentations to explain their ideas and designs.

***Creativity*.** Architects design the overall look of houses, buildings, and other structures. Therefore, the final product should be attractive and functional.

***Organizational skills*.** Architects often manage contracts. Therefore, they must keep records related to the details of a project, including total cost, materials used, and progress.

***Technical skills*.** Architects need to use CAD technology to create plans as part of building information modeling (BIM).

***Visualization skills*.** Architects must be able to envision how the parts of a structure relate to each other. They also must be able to visualize how the overall building will look once completed.

**Professional requirements:**

Although there are variations from place to place, most of the world's architects are required to register with the appropriate jurisdiction. To do so, architects are typically required to meet three common requirements: **education**, **experience**, **and examination**.

Educational requirements generally consist of a university degree in architecture. The experience requirement for degree candidates is usually satisfied by a practicum or internship (usually two to three years, depending

on jurisdiction). Finally, a Registration Examination or a series of exams is required prior to licensure.

Professionals engaged in the design and supervision of construction projects prior to the late 19th century were not necessarily trained in a separate architecture program in an academic setting. Instead, they often trained under established architects. Prior to modern times, there was no distinction between architects, engineers and often artists, and the title used varied depending on geographical location. They often carried the title of master builder or surveyor after serving a number of years as an apprentice (such as Sir Christopher Wren). The formal study of architecture in academic institutions played a pivotal role in the development of the profession as a whole, serving as a focal point for advances in architectural technology and theory.

**ARCHITECTURE SOFTWARE:**

Architecture software is used to make 2D and 3D structural, home and remodeling designs. Architects, interior designers and students use these software's for designing and visualizing the structures to be built. They are used to create architectural drawings, documentation and making design iterations which otherwise is a tedious process.

Architecture software's are used by seasoned architects, proficient interior designers, beginners and students for class projects and by civil engineers. In this age of automation, professionals are adopting software's and tools that reduce their efforts and the time consumed in making detailed structural plans.

The wide range of 2D and 3D plans and automated features makes the designing easier. Professionals can choose from the basic software's for learners to advanced software's for the professionals.

**Features of an architectural software**

It's a tough task to choose the right architecture software to suit your needs. Often selecting the industry's top software will not be the best choice. Firstly determine the priorities such as the operating system you're using (Windows or Mac), the cost, functionalities and interoperability. The functionalities vary – the needs of an architecture student are different from those of an architect, interior designer or a civil engineer.Features of an architectural

software`listed underneath are the features your architecture software should possess:

1. **Technical support** – Architecture software's come with many features and functionalities. Features needed by a beginner are different from those required by a pro, hence ensure that the software you select supports your level of learning. Is it accompanied by a manual or a technical support team you can reach out to immediately if stuck at any point?
2. **User friendly** - In case of sustainable designs, the architecture software needs to be such that the changes made with respect to one parameter have to be implemented throughout the project. Such a software leads to consistent and efficient designing. Is it easy to use, can it be operated without a manual? The key to good designs are easy to understand features, consistent and fault-free designs. Before purchase check if the software is compatible with your operating system.
3. **Supporting building information** – The software supporting building information works wonders for your business. Supplementary information such as 3D designing, complete documentation, list of all materials needed and cost approximation should be provided by the architecture software. This is particularly helpful for professionals working on industrial and residential projects.
4. **Sustaining Workflows** – In the architectural profession it is essential to analyze every proposed concept, set timelines and meet goals during the entire project cycle. Look for a software that supports workflows and keeps each progress in check.
5. **Flexibility** – If your workstation has multiple people working on the same system, look for software that supports the needs of both beginners and experienced professionals. Simple user interface, ability to draw from scratch and including components such as roof, windows and other objects makes the designing easier.

**Importance of architecture software in making your business grow:**

Noted underneath are the benefits afforded by architecture software's for corporate firms and startups.

- **Saves time by breaking down barriers** – These intelligence based software's aid in building and managing construction projects at a faster pace and are cost effective. The comprehensive solutions including design, documentation, collaboration and conceptualization to enhance decision making and improved business.
- **Improves efficiency** – A lot of time which would otherwise have gone in conceptualization, designing and meeting goals is saved by using architecture software's. Sustainable practices, accurate analyses and collaborative workflows shared and conducted on cloud allows businesses to climb the ladder of success quickly.

**Buyers Guide: -**

**In order to shortlist your architecture software you have to go through some of the key things to look into: -**

1. How often its software upgrades.
2. Before buying software ask for free trial or demo for 7 to 10 days if the software provides.
3. Also look at the industry alignments if the software provides all those.
4. Check the compatibility and user friendliness of the software before buying it.

**Some of the issues encountered with the architecture software: -**

1. **Compatibility** – Some software's are compatible with Windows while others with Mac. Remember to check the software's compatibility with your operating system.
2. **Installation** – When the software is not installed properly, it is unable to run the desired functions. Ask the software company to install it on your system.

Inability of the support staff to assist you virtually in times of technical issues can become frustrating.

**Notable Features:**

1. **Documentation** – Enhanced PDF's, Smart dimensioning, Revision clouds, Refined interface, Ribbon galleries, Help windows, command preview and intelligent command line.

2. **Design** – Online maps, Realty computing, Surface curve computing, context sensitive press-pull surface, surface analysis and in-canvas viewport control.
3. **Connectivity** – A 360 connectivity, inventor file support, AutoCAD 360 app and DWG technology.
4. **Customization** - Sysvar monitor and Expendable UI.

**ARCHITECTURE SOFTWARE & ARCHITECTURE PROFESSION; COMPARATIVE ANALYSIS AND USE OF THE SOFTWARES BY A NON PROFESSIONAL.**

As an Architect who has been very conversant with most of these Architectural softwares and also has been tutoring people on these for many years now, one is in a better position to discuss on the convenience provided by these softwares for a professional Architect, and also the joy a non professional seem to have as a result of being able to use the Architectural Softwares.

**For the professional Architect, he enjoys**

i. **The 3D Views: -** These are the best way to virtually represent a structure. Although one can manually create a 3D model, it wouldn't look as realistic as 3D model generated by AutoCAD Software.

ii. **The Revisions:** - When one creates any drawing on paper or software, there is bound to be some amount of revisions or modifications. In manual drafting, you need to erase and redraw to make any modifications to your drawing. Computer Aided Design of Architectural Softwares simplifies the revision process to a large extent with its various editing tools. With few clicks of mouse, you can undo, redo or delete your actions.

**iii.** **Speed and Time: -** Architectural AutoCAD Software is significantly faster than the traditional method of manual drafting. It speeds up the task of preparing bill of materials, reports, scaling etc. The tedious task of drawing each line on paper can be done in few mouse clicks. As Computer Aided Design Architectural Software eliminates repetitive iterations, a substantial amount of time is saved.

**iv.** **Accuracy: -** In manual drafting, all objects drawn must be of correct size and allignment. Each object need to be manually verified and

dimensioned as the slightest error can be catastrophic to the entire project. With Architectural AutoCAD Software, there are numerous techniques available to obtain exact dimensions thus leading to improved accuracy in the project.

v. **Data Storing and Accessibility:**- One of the advantages of Architectural Computer Aided Design drafting is that the drawings need not be filed and stored in folder unlike in manual drafting. Architectural Computer Aided Design Drafting can be easily saved on the computer server and can be accessed from anywhere with internet connection.

**While the Non – Professional enjoys**

i. **The Knowledge Acquired** through the Architectural Softwares and not through School on how to use the Softwares to solve the client's problems more especially drawing his plans etc.

ii. **The Renumeration** which can be shortlived because he cannot comfortably show up in places where Professional Architects are needed. In order words he is always a middle man (someone who the Job could be sublet to in any contract agreement.

iii. **Being able to do another Professional's Work,** which he cannot be confident to defend amongst the Professionals in such fields.

Architecture Softwares on its own is not Architecture Profession and Architecture Profession on its own is not Architecture Software. However while Architecture Profession can be enhanced by using Architecture Softwares, Architecture Softwares cannot be enhanced by Architecture Profession.

Whatever a non professional does with Architecture Software, be it the production of Building Plans or the 3D (3 Dimensional) aspect, the Architect will always view it as not being Authentic, considering that there are many theories that are learnt in school concerning the course Architecture, which the non professional does not know and it is not incorporated in the Softwares, which he has learnt.

It is also important to mention that the non – professional who has learnt Architecture Softwares and using it well is also as good as a quack, why

because he is not a professional, he did not undergo any academic training that can qualify him to get a certificate in that area of specialization.

A non – professional who has learnt Architectural Softwares that is always used by the Architect can hardly open his own office and stay as a consultant of what he had no complete authority and competence in its handling. He still has to be under a professional to function well.

Architecture is both Science and Art and every Architect must have to undergo a compulsory Six Year Programme in the University to acquire his Masters Degree. There are so many theoritical aspects of the course Architecture that the student Architect learns within this period that gives him the needed background and the compulsory requirements to practice as an Architect, which are not incorporated in the Architectural Softwares which a non –professional can easily learn within a period of one or two months. In that case one can hardly compare a professional Architect and a non – professional who has had to learn the Architecture Software for use to draw the plan of which most times are not functional. No matter how beautiful the 3D aspect of the work looks and it is not functional, which is one of the things a professional trained Architect can easily detect in the work of a non – professional then it is not possible to stand the test of time.

Understanding the Architectural Softwares and making use of it, can never make a non-professional an Architect. It's just like a Patent Chemist and a Pharmacist. There is a wide gap between them.

**CONCLUSION:**

Professionally, an architect's decisions affect public safety, and thus an architect must undergo specialized training consisting of advanced education and a *practicum* (or *internship*) for practical experience to earn a license to practice architecture. Practical, technical, and academic requirements for becoming an architect vary by jurisdiction. This is not so with the non – professional, he is only after the money he will make with the knowledge of the Architectural Softwares he has learnt and as such he can better be reffered to as a quack in Architecture Profession. It is also necessary for us to know that Architecture Software is not Architecture Profession neither is Architecture Profession Architecture Softwares. While Architecture Software is used by the Architect to enhance his graphics, in Architecture Profession, Understanding the Architecture Software as a non – Professional does not

make you an Architect. If you want to be an Architect, you must acquire the knowledge through an academic training in our Tertiary Institutions.

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