E-ISSN: 2612-4793
Print-ISSN: 2612-4815

Journal of International Cooperation and Development
www.richtmann.org/journal

Vol 6 No 1
March 2023

Research Article

Received: 4 April 2022 / Accepted: 3 February 2023 / Published: 6 March 2023

Adoption of Virtual Assistants Application to Estate Surveying and Valuation Practice in Nigeria

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DOI: https://doi.org/10.36941/jicd-2023-0006

Abstract

The Estate Surveying and Valuation practice in Nigeria has come a long way and has been facing various kind of challenges one of which is its inability to keeping up with technological trends in facilitating the efficiency of its operations. The need to subscribe to the trends in technology has now become more important than ever before. One of such technologies is the application of Virtual Assistant to real estate services which has become household tool in developed economy but which has received little attention in developing countries such as Nigeria. It is in view of the aforementioned that this study is set to examine the application of virtual assistants in the estate surveying and valuation practice especially in the area of property marketing in the Abuja Metropolis area of Nigeria. Data for the study was obtained with the aid of questionnaire administered to sixty (60) randomly selected estate surveyors and valuers practicing Abuja Metropolis of Nigeria with a response rate of 100%. Descriptive statistical tools such as frequencies, percentages, and Relative Importance Index (RII) were used to analyse the data obtained. The study revealed that the greatest factor mitigating the application of virtual assistants to be lack of knowledge regarding its utilization and benefits. The study recommends creation of awareness about the inherent benefits in the application of virtual assistants to the estate surveying and valuation profession be vigorously embarked upon at professional workshops and seminars to be the most plausible measure to be taken towards ameliorating the inherent problems to the application of virtual assistants.

Keywords: *Virtual Assistant, Estate Surveying and Valuation, Abuja Metropolis, Nigeria*

1. Introduction

The Estate Surveying and Valuation profession has come a long way and as such, evolution and modernization in its practice is inevitable, just as change in life is always constant, the profession cannot be an exemption. Over the years, technology has often been employed at making life better by getting things done quickly and efficiently thereby making work and daily activities easier for workers and organizations for the provision of such services as health, banking, insurance as well as provision of services such real estate.

Artificial Intelligence (AI) is one of such technological innovation developed to aid service provision and it is a branch of scientific knowledge that entails programming and equipping mechanized hardware to process information and proffer solutions to tasking issues in a natural, human-like way. It can be categorized into weak AI, strong AI and artificial superintelligence. Weak AI, an example of which is iOS-based Siri only gives feedbacks and mimics human speech based on the data input it has. The more intricate, strong AI, broadly classified as True AI, is a computer which is regarded as having the same astute in terms of versatility as the human brain. This sort of AI will be able to perform all human related tasks ranging from responsive speech to critical thinking, analysis and planning of tasks and future events. The latter, and still ongoing aspect of AI, the artificial superintelligence is anticipated to be smarter than the human in all aspects of thinking and intellect, although this has caused apprehension amidst scientist, progress is being made on it, nonetheless.

The application of AI generally from its inception has delved into almost every area of human endeavor just like industrialization and computer technology before it, the concept at first sparked fear in the minds of the public as to the impact it might have on human relation and its apparent control on humans, but as clearly seen from experience, AI is here for the betterment of humanity. It has its application in robotics, speech processing, object recognition and the like. The bedrock of the technology is simply the mimicking of human attributes and the five senses possessed by humans to gives a more natural and relatable feedback which the basic computer system dealing mainly with the GIGO (Garbage In, Garbage Out) method does not possess.

The term Virtual Assistant without a clear context can be ambiguous because it triggers different interpretations based on one's field of study and it depends strongly on whether one is presenting it in conventional terms or in the light of Artificial Intelligence. In a broad sense, the terms range from having a person who act as an aide for activities like scheduling of meetings and managing preplanned tasks and involving the more pervasive digital, AI virtual assistants. The latter is what this project is focused on.

Virtual assistants are simply tools that may be utilized to aid business and organizational endeavors in this competitive age, they are not meant to replace people. AI programs like Apartment Ocean can enable the user to ask a programed online search

engine specific question and get feedbacks regarding how to continue their search of a desired product or information, similar to what a real estate agent would usually ask clients. It is in view of the aforementioned that this study is set to examine the application of virtual assistants in the estate surveying and valuation practice especially in the area of property marketing in the Abuja Metropolis area of Nigeria.

2. Literature Review

2.1 The Concepts of Virtual Assistants

Virtual assistants as the name suggests can imply two different things. One, a human assistant who takes care of less important activities and schedules events and provide a firsthand support in the day-to-day operations of a person, say, a manager or CEO. Then again, remote helpers can mean AI-fueled PC programs like Apartment Ocean can empower the client to pose a computerized bot explicit inquiry and get answers on the most proficient method to advance their pursuit in a discussion started by the program, which is one that realtors would typically ask customers. These projects at that point convert this initial experience into valuable information that can be utilized to advance future experience with customers. This, among different projects play out the errand or remote helpers. They decline the time you need to spend on commonplace undertakings so as to permit you to save your opportunity to accomplish all the more intriguing, key and ideally effective things. This is the setting wherein I allude to virtual assistants or in a sense, "menial helpers".

As a subdivision of AI, virtual assistants have its place in almost all spheres of all human endeavors. The growing need for a faster, easier, and more secure – in short, a better way of engaging in real estate practice has necessitated the adoption of virtual assistants. At the point when voice associates started to develop in 2011 with the presentation of Siri, nobody might have anticipated that this curiosity would turn into a driver for tech advancement. Presently almost eight years after the fact, it's assessed that each one-in-six Americans own a savvy speaker (Google Home, Amazon Echo) and eMarketer estimates that almost 100 million cell phone clients will utilize voice partners in 2020. (Ciligot, 2019).

2.2 The Real Estate Market

The land market incorporates the multi-aspects nature of property, including advancement, examination, promoting, selling, renting, and the executives of business, mechanical, private, and agrarian properties. This industry can vary contingent upon the public and nearby economies, despite the fact that it remains fairly steady since individuals consistently need homes and organizations consistently need office space. The ease and eventual overall satisfaction from a house or manager provider will in the

long run affect patronage and growth. It is the highest investment one will make in his life and as such care must be taken in securing the best and most appropriate property.
The Artificial Intelligence (AI) revolution is here. Albeit not in generic use, Artificial intelligence is as of now empowering self-driving vehicles, beginning phase discovery of malignant growth cells, keen ID of retail location areas, and voice-actuated home frameworks that self-set alerts and indoor regulators. The innovation may appear to be overwhelming to home assessors yet a more vital investigate its application and advantages will prompt the valuation for its current and likely preferences.

As cutting edge as it sounds, man-made consciousness is as of now here (Dalrymple). A large number of specialists and mortgage holders are now utilizing it, and a lot more are impacted by the undetectable counts AI makes in the background. Bots, in some structure or another, are in a real sense deciding everything from home costs to the shade of paint would-be purchasers find in posting photographs.

The capacity to gather, examine and gain from a gigantic inflow of information is promising to make operators more effective, handles more vital, and customers eventually enabled to encounter the purchasing and selling measure without any difficulty and less vulnerability. Remembering that this interest in these customized bots are one-off and once done, the innovation continues gaining from customer connection and experience truly discusses its manageability and since quite a while ago run pay off.

2.3 Application of Virtual Assistants in Estate Surveying and Valuation practice

Estate surveying and especially brokerage is a field which requires a wide range of information input to thrive, and this, timely and accurate. Virtual Assistants provides this in form of chatbots who have gathered this information from online sources and previous client interactions. The following are some areas on influence Virtual Assistants have had on the Estate surveying practice.

i. Improvement in home looks for customers: Ever since property postings got conceivable on the web, forthcoming mortgage holders have had the option to look for homes by choosing credits by questions like area, value, area and number of rooms. In any case, in any event, narrowing the property search to these boundaries can in any case go out searchers with many homes to consider, or more awful, sift through in any case reasonable properties that don't meet the inquiry models. This can be an exceptionally overwhelming and debilitating activity.

Presently, with the approach of AI, examining an individual's hunt designs and making a more precise image of what they truly need is an undertaking promptly did by the AI innovation. Zillow, for instance, can consolidate search information from an expected home purchaser with that of comparable purchasers to deliver a rundown of properties prospects effectively looked while interfacing them with different properties that adjust near their needs, nearly in a similar way Amazon prescribes books a client

may jump at the chance to peruse. This exact and more exact instrument empowers leaning to be done simpler and quicker.

A few firms have created AI applications that will fill in as conversational interfaces with clients to address straightforward and complex inquiries, for example, "does the house have a pool?" and "the number of vehicles fit in the carport?" If a client needs to know whether the property has a patio, such stages can add that additional layer of detail like the way that the terrace highlights four oak trees.

ii. Identify Strong Client Leads for Agents: AI innovation additionally offers a useful asset for helping operators uncover their optimal customers. Zillow's site, for example, can in a split second recognize many information focuses that recognize the genuine purchaser or merchant from the individuals who are "fantasizing" or "window shopping" houses. A few frameworks use Natural Language Processing (NLP) to disengage high worth, or human to human, touchpoints from low worth touchpoints as a method for distinguishing contacts who are more drawn in with the specialist.

This methods for accuracy recognizable proof helps forte operators, for example, a hyper-neighborhood master, slender the field of potential customers who coordinate their specialty or focal point of business.

AI has empowered projects like Zillow's Premium Broker Flex to decide a high level of customers who are promptly searching for a specialist and produce drives that are so precisely prequalified, operators don't pay for them until they bring about a settled negotiation, says Chen .later on, an operator may call upon a robot to set customer arrangements via telephone, in any language, utilizing the financier's CRM or run into each other at an open house with a bilingual robot, which goes about as an interpreter for Mandarin-talking guests.

iii. In specialist selecting

Artificial intelligence and AI give expedites an edge in the enlistment cycle by giving profound examination of a market and indicating where the current interest is most grounded, underserved and expected to develop. Therefore, representatives and group pioneers can move unquestionably into those regions with fresh recruits. PCs additionally offer the upside of eliminating enthusiastic predisposition from the operator talking with measure, consequently helping merchants enroll the correct specialists to become their specialty effective. As indicated by Rudina Seseri, author and overseeing accomplice of cutting-edge AI investment firm Glasswing Ventures, Boston, MA, meta-examination has represented how calculations beat people with regards to recruiting. Obviously, character and social fit are factors that require human judgment; however, an unprejudiced exhaustive investigation can eliminate the mystery while thinking about a specialist's exhibition history.

i. In the exchange cycle

While dotloop presently utilizes a modern calculation to run its widely inclusive start to finish stage, Zillow information researchers are utilizing AI to refine the

exchange cycle of things to come. "We can utilize AI to take a gander at the operator and group practices on dotloop that lead to the best results for customers," he says.

> *"We can gain from how the most elevated performing experts utilize the stage and, from that, refine the product so it bolsters these prescribed procedures."*

The objective is to support operators and groups give the most consistent and shock free insight for their customers and it may be upgraded by AI that conveys quicker shutting occasions, more astute versatile applications, strong consistence checks, itemized detailing and auto usable information that decreases manual information section and blunders. By the day's end, it will likewise help specialists and groups precisely evaluate how they're performing by giving shrewd, hearty reports.

ii. In the Prediction of Market Values

By consolidating client relationship, the board and commercial center information, AI innovation may likewise support operators and intermediaries better anticipate the future estimation of a home in a particular market. For example, the framework may blend data from an assortment of sources, including transportation, zone wrongdoing, schools and commercial center movement.

Since most purchasers consider house ownership to be a venture, having a more dependable figure of its future worth can make them significantly more sure about creation such a significant buy.

One startup is chipping away at AI that can correctly anticipate future lease, distinguish future market patterns and abnormalities, and catch exchange between asking cost and market cost by contrasting upwards of 10,000 property credits and exploring as far back as 50 years on each multi-family property in the U.S.

2.4 Barriers to the Application of AI Virtual Assistants

While human-bot interaction is progressing and becoming more natural, there is an emerging issue which lies not in necessity but in comfort and efficiency – which is the continual pursuit of all human inventions and desire. This is the issue of AI's personality. Do virtual assistants have a personality? If there is to be a continual and a more intimate interaction between humans and these virtual assistants and if this is to be maintained, is it not only appropriate that these programs be perceived as more that algorithms and set of programmed codes and more as consistent entities having a determinable behavioral pattern – a personality? This subject requires to take into account not only the technological aspect but to be able to create a pleasant interaction that generates engagement with the users, so that they actually want to interact with the device, making a special focus on the user experience (McKay, 2017).

The main challenge in AI personality is to develop a character that is able to simulate as realistic as possible, natural, human-like interlocutors: It is of necessity that they are natural and realistic, but moreover, they must convey personality, mood, and

expression (Mairesse and Walker, 2007). The importance of building an AI personality is a key aspect for generating trust in technologies such as Voice Activated Virtual Assistants (Perez and Saffon, 2018).

Knote, Janson, Sollner and Leimeister at the 52nd Hawaii International Conference on System Sciences|2019 introduced their paper named "Grouping Smart Personal Assistants: An Empirical Cluster Analysis". The point was to diminish intricacy, this paper presents an arrangement framework for SPAs. In light of an orderly writing audit, a group investigation uncovers five SPA prime examples: Adaptive Voice (Vision) Assistants, Chatbot Assistants, Embodied Virtual Assistants, Passive Pervasive Assistants, and Natural Conversation Assistants. As an establishment for a group examination, an orderly writing audit was led to distinguish SPAs produced for research and for business purposes. In detail, they previously played out an open information base hunt among AISeL, IEEE Xplore, ACM DL, EBSCO Business Source Premier, ScienceDirect, ProQuest and Google Scholar utilizing the catchphrases "shrewd associate" OR "conversational specialist" OR "menial helper" OR "help framework" OR "individual partner".

In September 2017, Takawale, Kulkarni, Mehendale, Masurekar and Agarwal combined to document a specialized brief on Virtual Assistant innovation and its chances and difficulties in various territories. They sort Virtual Assistant frameworks into three gatherings relying upon the level of drenching and intelligence. These three gatherings are vivid frameworks, non-vivid frameworks and cross breed VR frameworks. The Immersive frameworks supplant our perspective on this present reality with the PC created pictures that interface to the position and direction of the client's head. A non-vivid framework then again, leaves the client outwardly mindful of this present reality however ready to watch the virtual world through some presentation gadget, for example, designs workstation. A mixture VR framework allows the client to see this present reality with virtual pictures superimposed over this view.

Chowdhury of Coventry University in 2018 introduced his report named "Shirking Attitudes towards Virtual Assistants", introduced to the Faculty of Health and Life Sciences. The examination researches shirking mentalities towards Virtual Assistants and looks to satisfy two points.

1. To make a poll, involved the Theory of Planned Behavior conviction segments as its subscales, that can properly survey mentalities towards Virtual Assistants.

2. To utilize this poll to watch and decipher (assuming any) distinctions in evasion mentalities between age gathering and whether an individual possesses a Virtual Assistant, in light of contrasts in scores on each subscale.

Dekate, Kulkarni, Killedar in 2016 concocted a diary named "Investigation of Voice Controlled Personal Assistant Device". In it, they featured the essential working and elements of the unavoidable AI which is Virtual Assistants. In the cutting edge time of quick moving innovation, we can do things which we never figured we could do however, to accomplish and achieve these contemplations there is a requirement for a stage which can mechanize every one of our undertakings easily and comfort.

Accordingly, the investigation tried to build up a Personal Assistant having splendid forces of allowance and the capacity to interface with the environmental factors just by one of the materialistic types of human communication for example the human voice. The Hardware gadget catches the sound solicitation through mouthpiece and cycles the solicitation so the gadget can react to the individual utilizing in-assembled speaker module. Voice Controlled Personal Assistant System will utilize the Natural language handling and can be incorporated with computerized reasoning strategies to accomplish a savvy partner that can control IoT applications and even explain client inquiries utilizing web look. It very well may be intended to limit the human endeavors to associate with numerous different subsystems, which would somehow or another must be performed physically. By accomplishing this, the framework will make human life agreeable. All the more explicitly, this framework is intended to communicate with different subsystems cleverly and control these gadgets, this incorporates IoT gadgets or getting news from Internet, giving other data, getting customized information spared beforehand on the framework.

In 2017, the triplet Kshama, Sirbi and Patankar proposed a framework that can work with or without web access rather than the previously existing SIRI, Cortana and such. The most well-known utilization of iPhone is "SIRI" which encourages the end client to convey end client versatile with voice and it additionally reacts to the voice orders of the client. Same sort of use is additionally evolved by the Google that is "Google Voice Search" which is utilized for in android telephones. Be that as it may, this Application generally works with Internet Connections. In this investigation, the proposed System has ability to work with and without Internet Connectivity. It is named as Personal Assistant with Voice Recognition Intelligence, which takes the client contribution to type of voice or text and cycle it and returns the yield in different structures like activity to be performed or the query output is directed to the end client. Furthermore, this proposed framework can change the method of communications between end client and the cell phones. The framework is being planned so that all the administrations gave by the cell phones are available by the end client on the client's voice orders.

3. Study Area

The Federal Capital Territory, Abuja is the capital of Nigeria and currently assuming a rapidly growing commercial hub centre of the country. It the most planned City in the country. In the whole of Africa as a continent, Abuja is the only purpose-built city. It is bordered by Niger State to the West and Kaduna State in the northeast while Nasarawa State bordered the city to the East and South. It harbours a population of about 1,580,000 people.

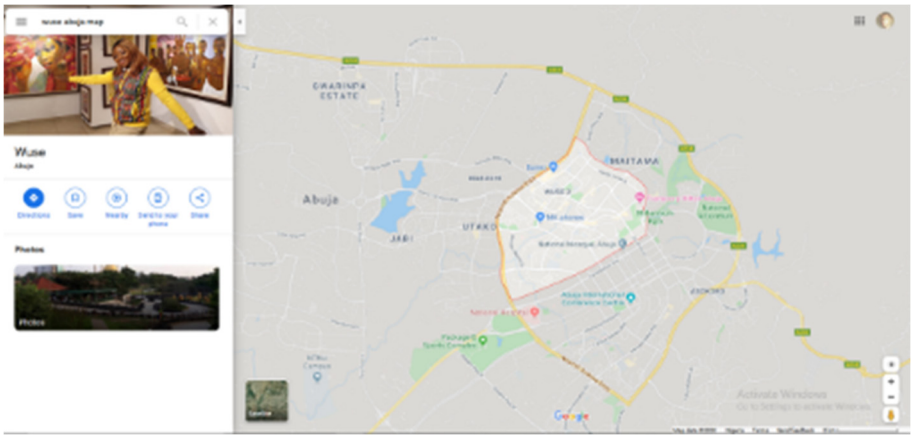

Figure 1: Map of Abuja Metropolis

Wuse District, is the northwestern part of the city, with the Maitama District to its north and the Central District to its south. The District is numbered Zones 1–6. Just as Garki District has Garki II, Wuse has Wuse II. This is distinct from Wuse Zone 2. Wuse II is a highbrow section in Wuse district which is adjoined to Maitama district, this area is characterized by its diverse economic activities like banking, retail and wholesale trading, good portion of residential land uses have been converted to institutional, recreational and commercial land uses. This study focused on areas surrounding Wuse market and Wuse II, because of the high rate of commercial activities in the district.

4. Research Methods

The study adopted the survey research design with data sourced through the use of structured questionnaires. The questionnaires were administered on Estate Surveyors and Valuers (ESVs) working in registered Estate Surveying and Valuation firms with offices in Abuja metropolis to gather data required for the study. Sixty (60) the Estate Surveyors and Valuers were sampled using random sampling method. The entire sixty (60) selected Estate Surveyors and Valuers for questionnaire administration fully filled and returned the questionnaires administered on them which give one hundred (100%) retrieval rate. The data collected were analyzed using descriptive statistics such as frequency, percentages and relative importance index (RII).

5. Results and Discussion

This section presents and discusses the results obtained from the analysis of data obtained for the study through the questionnaire administered on the sampled respondents. As noted above,

the questionnaire was distributed to 60 Estate Surveyors and Valuers all of which were retrieved thereby given 100% retrieval rate.

5.1 The Respondents' Profile and Bio-Data

The sampled respondents' profile and bio-data were analyzed and the results presented in table 1 below.

Table 1: The Respondents' Profile and Bio-Data

Parameter	Subdivision	Frequency count	Percentage Distribution	Percentage Cumulative
Gender	Male	48	80	80
	Female	12	20	100
	Total	60	100	100
Age	21-30 years	36	60	60
	31-40 years	6	10	70
	41-50 years	12	20	90
	51-60 years	0	0	90
	Others	6	10	100
	Total	60	100	100
Professional Qualification	Probationer	40	67	67
	ANIVS	6	10	77.0
	RSV	10	16	93.0
	FNIVS	4	7	100.0
	Total	60	100.0	100.0
Duration of practice	0-5 years	32	53.3	53.3
	6-10 years	12	20.0	73.3
	11-20 years	12	20.0	93.3
	21-30 years	2	3.3	96.6
	Above 30 years	2	3.3	100.0
	Total	60	100.0	100.0

Analysis in the table above shows total of 48 males which represents 80% of the respondents and 12 females which accounts for 20% of the respondents. this shows the population of males who answered the questionnaire is higher than that of the females. It shows that 36 of the respondents are aged between 21-30 years, accounting for 60%, 6 of the respondents are between 31-40 years (10%), 12 of the respondents are within the age of 41-50 years (12%) and the remainder of 10% are within the ages of 51 and 60, this implies that majority of the questionnaire was filled by Estate surveyors in their 20s. As regards their professional qualifications, 40 of the respondents are probationers, accounting for 67%; 6 are ANIVS (10%); 10 are RSV (16%); 4 are FNIVS (7%). Information gotten as regards their duration in practice showed that 53.3% of the Estate surveyors have spent between 0-5 years in practice; 20% have spent between 6-10 years; 20% have spent between 11-20 years; 3.3% have spent between 21-30 years, and the remaining 3.3% have spent above 30 years in practice. This goes to show that the questionnaire was answered majorly by young professionals.

Table 2: Awareness of virtual assistants

Parameter	Subdivision	Frequency count	Percentage Distribution	Percentage Cumulative
Are you aware of virtual assistants?	Yes	48	80.0	80.0
	No	12	20.0	100.0
	Total	60	100.0	100.0

Table 2 presents the awareness of the respondents as to the concept of virtual assistants. A good percentage, 80% affirmed that they are aware of the concept while 20% attested to not being aware of it. From this, we can deduce that there is a substantial awareness of virtual assistant among practicing Estate surveyors. All the respondents agreed that virtual assistants are computer programs as against human assistants.

5.2 Conversance with virtual assistants

As a preamble to answering the first research question – what the necessary framework for the utilization of virtual assistants is, the researcher set out to find out how acquainted estate surveyors in the study area are with virtual assistants. Figure 4.2 reveals the findings.

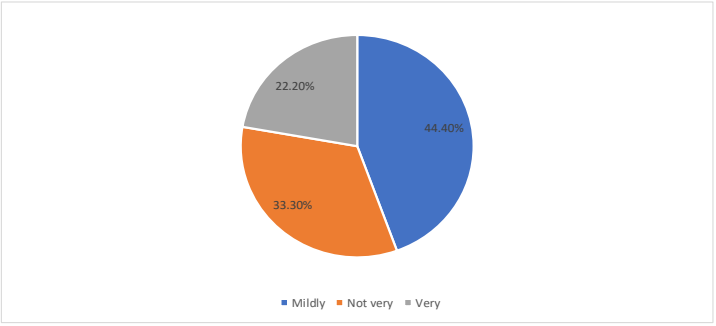

Figure 2: Conversance With Virtual Assistants

Figure 2 shows the representation of the familiarity of the Estate surveyors with virtual assistants. 22.2% of the respondents affirm that they are very conversant with the concept, 44.4% answered to being mildly conversant with it while 33.3% said they were not very conversant with the concept. From this, it is evident that although a lot of estate surveyors are aware of virtual assistants not many are conversant with it nor are able to utilize it. Further information also shows that the 44.4% who are familiar with it also make use of it in their firms and this, for just under 2 years, while the remaining 55.6% don't make use of it.

5.3 Mode of operation of virtual assistants

To achieve the aim of the study, the study assigned 5 possible opinions to the relevance of day-to-day tools in the utilization of virtual assistants. These tools are computer systems; speakers; printers; modem; Wi-Fi and finally, the presence of a trained personnel. Options given were (extremely unimportant; fairly unimportant; neutral; fairly important; and extremely important). The question was designed in this manner with the intention of finding out the necessary framework for the use of virtual assistants and to ascertain the less important or negligible tools that Estate surveyors can do without. The outcome of the analysis is as shown in Table 3 below. The findings revealed that most of the items lean towards fairly important and extremely important. The item "Wi-Fi" has the highest average of 4.20 indicating its relevance above others. Second to that is the computer system followed by the presence of a trained personnel, a speaker and finally a printer/ modem. The least scored items were the printer and modem indicating its irrelevance or disposability in the use of the internet. In the case of the modem, the low score can be explained by its replacement with the Wi-Fi which is generally more efficient.

Table 3: Necessary framework for virtual assistants

S/N	Items	EU 1	FU 2	N 3	FI 4	EI 5	Mean	rank
1	Trained Personnel	6	6	18	0	30	3.70	3rd
2	Computer system	0	12	6	0	36	4.11	2nd
3	Speaker	0	12	12	24	12	3.60	4th
4	Printer	6	18	6	0	30	3.50	5th
5	Modem	6	18	6	0	30	3.50	5th
6	Wi-Fi	0	6	12	6	36	4.20	1st

5.4 Challenges Involved in the Application of Virtual Assistants

In an attempt to ascertain the problems militating against the application of Virtual Assistants to the professional practice of estate surveying and valuation profession, respondents were supplied with varying questions in which options were given to them with the freedom to make multiple selections. The figure 3 below reveals the respondents' selections. Seventy percent (70%) of the respondents believed that inadequate computer/ internet facilities and infrastructure for computerized equipment are the main challenges facing the application of virtual assistants and other technologically related activities. 60% (36 respondents) said it is shortage of power while 50% (30) affirmed that this challenge is due to lack of trained personnel.

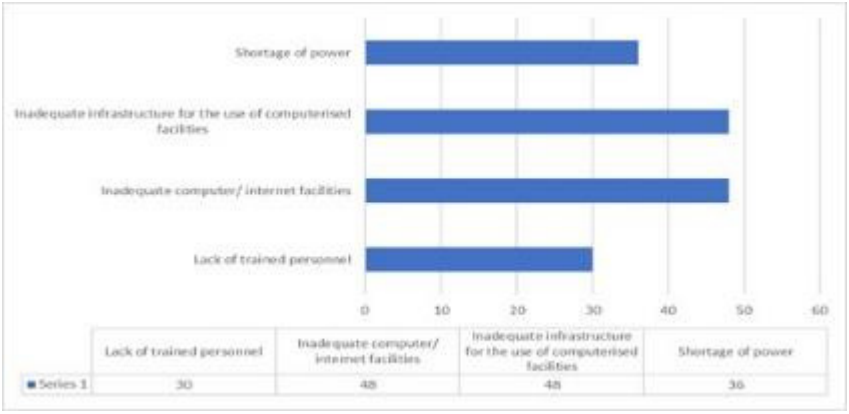

Figure 3: Challenges Involved in the Application of Virtual Assistants

5.5 Barriers to the Application of Computerized Software in Estate Surveying and Valuation Profession

As part of the search for the actual barriers, four options were given to the respondents namely, ignorance of professionals; lack of orientation; lack of facilities; and indifference to the benefits.

The respondents were at liberty to choose multiple options. The findings are as illustrated in Figure 4 below. A whopping 80% of the respondents affirmed that professionals are simply unaware of this tool. Both "lack of facilities" and "indifference to the benefits" got the vote of 60% of the respondents while 50% believed the problem to be lack of orientation. Although there was a provision for open-ended input, the respondents restricted their options to the ones outlined.

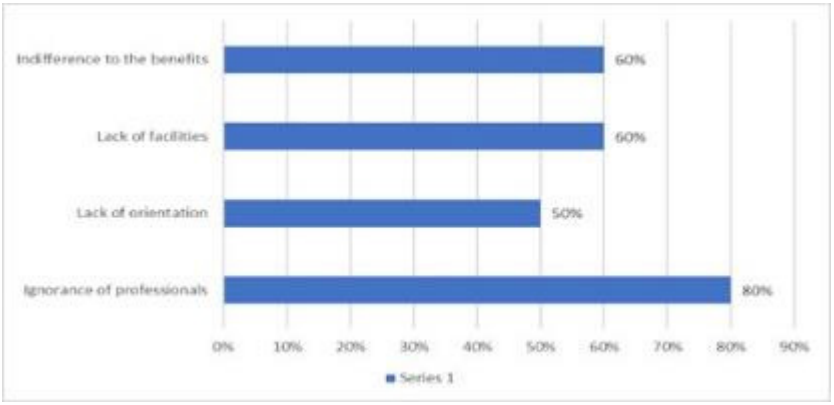

Figure 4: Challenges involved in the utilization of virtual assistants

5.6 Measures to be taken

After highlighting the underlying issues, the researcher set out to gather possible steps that can be taken to actualize the large-scale utilization of virtual assistants or at least encourage its use. As a way of doing this, the opinion of professionals was sourced to determine what should be done. Although there was provision for more measures- to the discretion of the respondent, the Estate surveyors restricted their options to the ones already given. The result of the findings is as shown in Figure 5. below. From the information shown below, it is evident that the respondents see awareness and professional seminars and workshops as the most plausible step to be taken. The reasons are not far-fetched. This is cost-effective as opposed to online advertisement and estate surveyors are more likely to lend an ear or subscribe to this new technology when the idea comes from fellow professionals and when received in a controlled, corporate atmosphere.

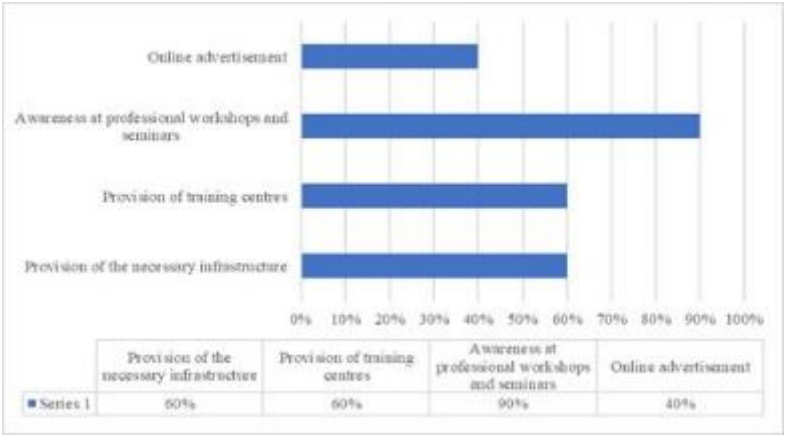

Figure 5: Measures to be taken

In the figure above the 90% of the respondents believed awareness at professional meetings is the most likely measure to be taken while the least subscribed is online advertisement, most probably due to its costly nature and lack of trust that comes with generic advertisement especially in today's atmosphere of online scam and fraud.

6. Conclusion and Recommendation

The study examined the application of virtual assistants in estate surveying and valuation practice in Nigeria and it was discovered that majority of the Estate Surveyors and Valuers practicing in Abuja metropolis were aware of the concept of virtual assistants. Also, a fair number of them make use of it in their day-to-day activities.

However, the study was able to establish that the main barrier its usage with lack of awareness to its benefits not indifference to it.

This study recommends that for Estate surveyors to remain efficient and adapt to the ever changing professional and business environment, they must adopt the use of technology and more specifically virtual assistants especially in the area of property marketing. It is paramount that this should be reiterated in professional conferences and periodic workshops for Estate Surveyors and Valuers. The possession and utilization avails important market information and trends that Estate Surveyors can use to make valid predictions regarding customers and property trends. In conclusion, the study has identified the positive outcomes that advanced economies have realized from the use of Artificial Intelligence Virtual Assistants and why we should adopt it. The speed, efficiency and reliability of an online chatbot that saves, and processes relevant information is a prospect to subscribe to, especially if estate surveyor want to stay ahead of the curve.

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