

Estate Surveyors and Valuers: Issues and Challenges in the Application of Technological Innovations and ICT in Practice

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Abstract. Conducting real estate business before the pandemic was more or less through traditional that require physical presence of actors. This seems to be not yielding the desired result and comes with attendant challenges, hence a call for shift from traditional to ICT based and other innovations. This study dealt with the estate surveyors and valuers response to use of modern technology. It also identified the practitioners' level of advancement in the use of modern technology, the use of various social media in the business of real estate, attendance of online/virtual training and seminars during the lockdown. The study adopted descriptive method of data analysis using simple tables and percentages. The findings indicated that while many practitioners were aware of use and existence of certain software in valuation, greater number have not in any way used same in the valuation exercise, many are also aware of the use of drone and its application to real estate but have not had access to the same. It was also found out that Whatsapp and Facebook were commonly used for marketing, the majority of the respondents were said to attend virtual/online seminar/training via Zoom, Whatsapp, Facebook and Google meet/Google classroom.

Keywords: Economy, Estate Surveyors and Valuers, ICT, Real estate, Technological innovations

Introduction

The advent of information and communication technology (ICT) affected the ways things are done both locally and globally, not only that it has contributed to provision of job (job creation) for the populace, it has also enhanced the job (employment) by providing avenues whereby all the nations of the earth continues to benefit. Kotlarsky and Oshri (2005) noted that technology is in forefront of the contemporary time creating new jobs, innovations, and networking and all these aids individuals' connections globally. The ease of doing certain job is one of the million contributions of technology in the real estate industry. ICT as well as other technological advancement has no doubt affected/enhanced practices in the sector. It has enhanced competitive advantages hence; Kakabadse and Kouzmin (2005) observed that the use of ICT to gain competitive advantage has also become a key strategic goal amongst organizations in the fast globalizing environment. Stakeholders in the real estate sector no doubt are doing their possible best to key into the window of opportunities offered by the ICT and advancement of technology; also they are not relenting on finding ways to ameliorating the challenges posed by the introduction of ICT.

The coming of COVID-19 pandemic heralded the increase quest for the use as well embracing ICT and other improved technologies as well others connected with internet (online) interfaces. Before there has been clamour by Estate Surveyors and Valuers (ESVs) in Nigeria on the need to fully embrace the improved technologies and opportunities available as such is considered remarkable in real estate practice, but it appears that the previous calls has not been taken as most practitioners appears to be comfortable with older ways of practice especially the most senior practitioners. Most notable amongst these improved ways to be integrated into

practice includes; use of spread sheet packages in valuation though not all that new, the introduction of GIS, the need to fully allow advertisement via social networks, etc.

As it stands now, the quest to fully integrate innovation in ICT and as well as go the way of virtual meetings has gained more acceptability courtesy of the lockdown occasioned by the pandemic which resulted to closure of physical business meetings as well as other gatherings that may be of economic benefit to the populace and practitioners alike. Today virtual meetings are encouraged instead and these were made possible courtesy of platforms like Zoom, Skype, Google class, Microsoft teams, facebook messenger room, whatsapp etc. Today on these platforms; discussions, seminars, business meetings etc holds and right there members are encouraged to fully embrace such changes even though there are challenges using such.

While we appreciate the opportunities offered by these innovations and platforms, most Estate Surveyors have not fully adopted the modern technology and innovations in ICT in the conduct of real estate business. Before the pandemic the practice features more or less traditional means which specifically focused on face to face transaction and physical presence of actors; this traditional method the researcher believes is not yielding the desired result and comes with attendant challenges thereby calling for a total shift from traditional to ICT based/technological innovation. It based on this that this study is dedicated to assessing the Estate Surveyors and Valuers responds as well as adaptability to the new ways of doing business i.e. going virtual as means of enhancing practice, to identify the platforms (Social networks) they are familiar with, the ones they prefer using and reasons for seeming preference, their view on spreadsheet packages in valuation and as well know how ready (prepared) they are in adopting/embracing the imminent change posed by the pandemic.

This study aims at assessing Estate Surveyors and Valuers (ESV) perspectives on technological innovations and ICT in real estate practice as means of adapting to changes brought about pandemic and lockdown of the economy with a view to encouraging its full acceptability and integration into practice. The study objectives are; identify those innovations currently being applied in practice, identify the various platforms ESVs are familiar with and their reasons for seeming preference and to know their acceptability of these innovations.

Literature Review

Real Estate and Meaning

Udechukwu and Olusola (2016) defined real estate as the earth's surface extending downward to the centre of the earth and upward to infinity, including those things permanently attached by nature or by people. Real estate is typical land together with bundles of interest contained therein (Babatunde, 2012). According to Institute of Real Estate Management (IREM, 2011), Real estate is solely the land and its ports-landscapes, timber, water-ways, roads, fences, structures, utilities and all other permanently attached improvements and structures.

Real estate is one of the largest components of wealth in many economies. It plays a critical role in moulding the economic condition of individuals, families and firms; it can substantially influence a family's ability to finance its education, health care and other important needs (Ling & Archer, 2010). In Nigeria, the role of real estate in national economic development is in no way different from what is obtainable in other nations; it is often described as the highest employer of labour compared with other sectors of the economy (Olajide, 2018). Real estate is a distinct subject, and because of its peculiar nature, it has spawned complex legal theories and very distinctive fact situations and has remained a captivating topic for centuries, it is land and improvement made to the land and rights to use them (Jacobus, 2006).

Real estate accounts for substantial share of gross national product, the social impact that real estate has upon the economy of an area is immense, it has direct impact on the economy,

community and society (Geschwender, 2015). Real estate as an investment has typically been a steady and appreciating means of increasing ones initial investment over time, it is a tangible investment that has the ability to change and adopt to future trend (IREM, 2011).

Nearly three fourth (3/4) of the American's nation's wealth is directly related to real estate and residential real estate contributes to the largest number of units, in addition, commercial and industrial buildings, factories and agricultural land contributes to this figure (Geschwender, 2015). Private real estate are landed property both in rural and urban centres which are purely owned by private individuals and organisations without any links with government and are primarily geared towards profit making and maximisation (Egolum, 2002). Real estate professional practices anchor more on building, infrastructure, facilities development and implementation success (Nwachukwu, 2016). There cannot be management of infrastructure, property and facility without development, which take its root in real estate development. Property, facility and infrastructure management may not really function well unless there is meaningful or clear success on real estate construction projects. These all have links with human resources, so human resources management practices is an aspect that cannot be treated with kid gloves but rather needs desired attention and professional touch.

Information and Communication Technology (ICT)

Information and Communication Technology (ICT) is used to refer to infrastructure and product development that facilitate the collecting, storing and analysis of information that may be transmitted electronically. It includes equipment like telephones, communication lines used to enhance communication between employers and employees, businesses and customers, business and business across physical boundaries. Kotlarsky and Oshri (2005) observed that technology is now in the forefront of the modern world, creating new jobs, innovations, and networking to allow individuals connect globally. According to Oyetunji, Ojo, and Oyetunji-Olakanmi (2018), information and communication technologies (ICT) have proven to be modern society's versatile tool for creating, disseminating, accessing and using information efficiently, which makes the adoption of ICT in modern real estate services imperative. In spite of its worldwide adoption and its ability to aid transaction in the real estate sectors, its adoption also depends on the orientations of the individuals in an organization who might not be fully aware of the potential cost reduction and productivity and income boosting potentials of ICT in their operations, these factors affect negatively the motivation and ability of firms to invest, use and innovate with ICT (Costello, 2009). It is worthy to state that in spite of its huge advantages, there are still perceived constraint hence according to Oyetunji, Ojo, and Oyetunji-Olakanmi (2018) the constraints that are more likely to be strong in the Nigerian real estate market are poor skill set, traditional poor services due to poor levels of clients' knowledge and demand for high quality service, lack of familiarity with the capabilities ICT for real estate business, and lack of knowledge of the costs of acquiring and managing ICT systems to deliver its potential benefits.

Social Medias

Social Media has been defined as web-based applications which provide functionality for sharing, relationships, group, conversation and profiles (Kietzmann et al., 2011). It has been referred to as "social media sites" (Diga & Kelleher, 2009), or a set of information technologies which facilitate interactions and networking (Kapoor et al., 2018; Oestreicher-Singer & Zalmanson, 2013). Social media, such as Facebook, Twitter, and LinkedIn, provide people with pervasive network connectivity (Asur & Huberman, 2010).

Social media changed the way in which people interact with one another, how companies do business, and how they spend their ad budgets. As social media platforms gained tremendous momentum in the past decade, Facebook Inc. (FB) propelled itself to the top of the

heap, racing past rivals Twitter Inc. (TWTR) and LinkedIn Corporation in terms of users and revenue (Thom, 2020).

Social Medias Examples

Facebook: Facebook is an American online social media and social networking service based in Menlo Park, California and a flagship service of the namesake company Facebook, Inc. The Facebook Messenger, a messaging app was originally developed as Facebook Chat in 2008. Facebook is easily the largest social networking site across the globe and one of the most widely used. It was the first that surpassed the landmark of 1 billion user accounts. Apart from the ability to network with friends and relatives, you can also access different Facebook apps to sell online and you can even market or promote your business, brand and products by using paid Facebook ads.

WhatsApp Messenger: WhatsApp Messenger, or simply WhatsApp, is an American freeware, cross-platform, messaging and Voice over IP (VoIP) service owned by Facebook, Inc. It allows users to send text messages and voice messages, make voice and video calls, and share images, documents, user locations, and other media. WhatsApp's client application runs on mobile devices and also accessible from desktop computers, as long as the user's mobile device remains connected to the Internet while they use the desktop app. The service requires users to provide a standard cellular mobile number for registering with the service.

Instagram: Instagram was launched as a unique social networking platform that was completely based on sharing photos and videos. This photo sharing social networking app thus enables you to capture the best moments of your life, with your phone's camera or any other camera, and convert them into works of art. This is possible because Instagram allows you to apply multiple filters to your photos and you can easily post them to other popular social networking sites, such as Facebook and Twitter. It is now part of the Facebook empire.

Twitter: This social networking site enables you to post short text messages (called tweets), containing a limited number of characters (up to 280), to convey your message to the world. With the growing craze for online shopping, Twitter also makes it possible to promote your businesses and even shop directly through tweets.

Telegram: This instant messaging network is similar to WhatsApp and is available across platforms in more than eight languages. However, Telegram has always focused more on the privacy and security of the messages you send over the internet by using its platform. So, it empowers you to send messages that are encrypted and self-destructive. This encryption feature has only just been made available for WhatsApp, whereas Telegram has always provided it.

LinkedIn: LinkedIn is easily one of the most popular professional social networking sites or apps and is available in over 20 languages. It is used across the globe by all types of professionals and serves as an ideal platform to connect with different businesses, locate and hire ideal candidates, and more. It boasts over 400 million members.

Skype: Skype, owned by Microsoft, is one of the most popular communication-based social networking platforms. It allows you to connect with people through voice calls, video calls (using a webcam) and text messaging. You can even conduct group conference calls. And, the best part is that Skype-to-Skype calls are free and can be used to communicate with anyone, located in any part of the world, over the internet.

Zoom Video Communications: Zoom Video Communications, Inc. is an American communications Technology Company headquartered in San Jose, California. It provides videotelephony and online chat services through a cloud-based peer-to-peer software platform and is used for teleconferencing, telecommuting, distance education, and social relations.

Google Classroom: Google Classroom is a free web service developed by Google for schools that aims to simplify creating, distributing, and grading assignments. The primary purpose of Google Classroom is to streamline the process of sharing files between teachers and

students. It is estimated between 40 to 100million users use Google Classroom. Google Classroom integrates Docs, Sheets, Slides, Gmail and Calendar into a cohesive platform to manage student and teacher communication. Students can be invited to join a class through a private code, or automatically imported from a school domain. Teachers can create, distribute and mark assignments all within the Google ecosystem. Each class creates a separate folder in the respective user's Drive, where the student can submit work to be graded by a teacher. Assignments and due dates are added to Google calendar, each assignment can belong to a category (or topic). Teachers can monitor the progress for each student by reviewing revision history of a document, and after being graded, teachers can return work along with comments.

YouTube: YouTube is an American online video-sharing platform, it allows users to upload, view, rate, share, add to playlists, report, comment on videos and subscribe to other users. It offers a wide variety of user-generated and corporate media videos. Available content includes video clips, TV show clips, music videos, short and documentary films, audio recordings, movie trailers, live streams and other content such as video blogging, short original videos, and educational videos. Most content on YouTube is uploaded by individuals.

Microsoft Teams: Microsoft Teams is a proprietary business communication platform developed by Microsoft as part of the Microsoft 365 family of products. Teams primarily compete with the similar service slack, offering workspace chat and videoconferencing, file storage, and application integration. Teams is replacing other Microsoft-operated business messaging and collaboration platforms, including Skype for business and Microsoft classroom.

Coursera: Coursera is an American massive open online course (MOOC) provider founded in 2012 by Stanford University's computer science professors Andrew Ng and Daphne that offers massive open online (MOOC), specializations, degrees, professional and mastertrack courses. Coursera works with universities and other organizations to offer online courses, certifications, and degrees in a variety of subjects.

Review of Empirical Studies/Related Literatures – ICT and Real Sstate

Oyetunji, Ojo, and Oyetunji-Olakanmi (2018) in the research of factors influencing the deployment of ICT in Nigerian real estate practice opined that real estate is an intensive business that largely depends on information. They further stated that information technology has become a major form of communication in the real estate industry, a tool for marketing and information dispersion. The study which investigated the factors influencing the use of ICTs in Nigerian real estate practices was done in Lagos state. Findings revealed that technological infrastructure, service delivery efficiency enhancement, and productivity branding influenced the deployment of ICTs in Lagos' real estate industry. The study recommended that practitioners and real estate firms need to adopt emerging concepts and technological advancement in their quest for survival both locally and internationally adding that it will enhance their competitiveness and ensure that better value is provided. In another study, Oyetunji, Ojo, and Oyetunji (2018) noted that real estate information is usually not well disseminated or accessible, which makes real estate markets imperfect worldwide. They further stated that information and communication technologies (ICT) have proven to be modern society's versatile tool for creating, disseminating, accessing and using information efficiently, which makes the adoption of ICT in modern real estate services imperative. The study investigated the types of ICT software being used and the barriers to the deployment of ICT in Nigerian real estate practice, focusing on real estate service firms, practitioners and clients in the Lagos Metropolis. The findings of the study indicated that topmost used software are all general purpose tools - email, Microsoft word, Microsoft excel, Microsoft PowerPoint and adobe document reader, while the use of specialized software designed specifically for real estate services was scanty. Moreso, the most important barrier to the deployment of ICT in the

real estate practice is the rapid changes in ICT technologies which challenge real estate service practitioners to devote more resources to update their ICT knowledge and skills. Again the study recommended that the practitioners need to improve their learning and use of specialized software required for modern real estate practice in order to put the profession in Nigeria up to speed with global best practices.

In a study by Adeyemo, Kemiki, Adama, and Ayoola (2015) on the factors influencing the use of information and communication technology in real estate practice in Minna. They explored motivating factors influencing the use of ICT in Minna. The findings indicated that increased productivity of staff, enhanced quality of customer services, knowledge sharing factor, information accessibility, improved decision making and time saving are the most influencing motivating factors while competitors' pressure, availability of ICT infrastructure, management and business size, reduced overall cost are less influencing motivating factors. Also, internal motivating factors strengthened the use of ICT in their domain and there is negative correlation between the internal and external motivating factors. The study recommended the use of ICT to all estate firms and estate surveyors and valuers and conduct of comprehensive indigenous research and development (R&D) in ICT driven real estate practice in Minna by liaison with various educational institutions offering estate management in their domain in order to be abreast of global best practices.

Wainaina (2014) carried out a study; the application of information technology in real estate firms in Kenya noted that Information Technology is viewed as an organizational core competency that is necessary for organizations to survive and prosper in rapidly-changing, competitive, business environments adding that the real estate sector is grappling with a number of challenges such as shortage of skilled manpower, etc. according to the study, technology holds the key to not only address some of these issues, but also a promise for the sector to react to the changing market conditions more effectively and efficiently. The study examined variations in firms' responses, and how increasing use of Information, Communication and Technology (ICT) impact on firms' operational and activities that include productivity, staffing structure and requirements, adoption of working practices, quality of customer service, and sales. The findings provided evidence that Information Technology has a significant, positive impact on the way real estate firms carry out their activities.

Ibisola, Oni, and Peter (2015) in their study, the relevance and application of ICT in Estate Surveying and Valuation in Ogun State stated that Estate Surveying and Valuation is one of the professions in the built environment that requires the use and application of Information and Communication Technology (ICT) in the various areas of its practice. The result of the analysis of the study showed that Estate Surveyors and Valuers are aware of the existence of the various ICT applications and devices but have not been using them effectively to promote their practice. They however, ascribed their inability to use it to poor level of training. The study concluded that there is need for improvement in the curriculum of various educational and professional institutions involved in the training of Estate Management Students across the country adding that regular training on the use of ICT applications and devices was also suggested as a means of improving the ICT knowledge of the Estate Surveyors and Valuers.

Chiedu (2010) on the research assessment of the application of information and communication technology in real estate practice (a case study of Lagos metropolis) considered critical issues and trends in information and communication technology which impacts profoundly in real estate practice, and how the resources of ICT can be effectively harnessed to improve the profession. The result of the study revealed that ICT application has helped in expanding and facilitating the development of contemporary practice of real estate in Nigeria. Also, there is a significant relationship between the application of ICT and real estate practices in the study area and also showed that the trends in ICT application have enhanced the growth

and development of real estate practice. Moreso, the study revealed low adherence in the application of ICT within real estate sector in Nigeria, a significant relationship between low adherence of ICT within real estate sector in Nigeria exist. It further stated that ICT resources can be effectively harnessed to improve real estate practice by mainstreaming a robust ICT programme in Estate Management curriculum in higher institution/in real estate practice

Kirkwood (2003), in the work; urban real estate information systems: the suppression of radical innovation stated that Information and communications technologies are continuing to bring about significant changes in society adding that those changes may be viewed as the direct consequence of technological advances, which in turn rely on scientific discovery. The paper adopted a different model predicated on the view that the rate of technological uptake depends upon recognising social and business needs and overcoming the barriers to innovation – particularly the forces that suppress radical potential. For applications into in real estate, the study noted that the principal application areas for ICT within real estate are property management, property maintenance, commercial and residential agency, valuation and appraisal and property portfolio management. In case of property management, it noted that Property management systems are essentially property databases linked to accounting procedures, with real estate professionals being responsible for the maintenance of the former and accounts staff taking control of the latter. The paper noted that in the specific case of real estate information systems, the examples contained illustrate that innovation is dependent on political, social and cultural drivers in general and the demands of real estate clients in particular. Accepting the model of ICT innovation in real estate implies a significant alteration in the strategies, tactics and educational methods employed to foster progress in this field which implies a shift in focus away from emphasizing the ‘self-evident’ benefits of the technology towards the more challenging task of understanding the complex interaction of political aims, social needs, professional concerns and client requirements that determine the amount of technology that is acceptable at any given time.

Olukolajo and Ojo, (2015), in the study, assessment of use of social media in real estate transactions in Lagos property market, investigated the embrace of social media for property transactions among Estate Surveyor and Valuers in Lagos property market, Nigeria. Findings of the study indicated that the use of signboard and billboard, social media platforms and property bulletin rank high among promotion tools employed. Facebook, YouTube, and Twitter, are the most used social media among the surveyed professionals. The study recommends that both the Nigerian Institution of Estate Surveyors and Valuers (NIESV) and Estate Surveyors Registration Board of Nigeria (ESVARBON) should review various practice code to accommodate the current realities in order to upgrade the real estate practice in the country.

Nwanekezie and Okeahialam (2019) in a study of social media usage among Estate Surveyors and Valuers in Real estate agency in Uyo, Nigeria noted that the use of social media in our present society is phenomenal. The study examined its usage among Estate Surveyors and Valuers (Real Property Practitioners) in Uyo, Akwa Ibom State, Nigeria. The findings indicated that all firms and their clients have made use of social media and that facebook, whatsapp, and twitter and they are the most used social media by estate firms. The study also found that some of the challenges encountered by Estate Surveyors and Valuers in their use of the social media platforms include network issues, the high cost of data, unawareness of the platform and non-availability of power, etc.

The studies reviewed has no highlighted both flaws and advantaged of the use of technology in real estate practice and quite a number recommendations all pointing to need for practitioners to continue to explore the benefits provided by ICT. It makes sense that there is need to investigate use of same especially in the era of pandemic as the modern technology in ICT is the only way to go and much impact and breakthrough during the lockdown.

Methodology

This study is focused on embracing technological innovations and ICT in real estate practice as means of adapting to changes brought about pandemic and lockdown of the economy. The work employed survey approach. The population of the study was drawn from register of ESVs practicing in Anambra State, which makes of 53 respondents mostly Associates and Probationers (Estate Surveyors and Valuers), these were chosen as target population because they form bulk of the population of ESVs in the study area. They are most active and internet friendly every standards in terms of comparism with older Estate Surveyors. The source was especially from primary through the use of questionnaires designed using Google forms. The questionnaires were distributed or sent to respondents personally to their respective emails and via whatsapp. Descriptive method of data analysis were used in analysis hence, Descriptive statistical tools includes the tools for presentations such as tables, charts, graphs and the tools for analysing data such as measures of central tendencies, dispersion, skewness, kurtosis, mean item score (MIS) etc. For this study the data obtained were analysed using simple table and percentages.

Results and Discussion

Table 1. Estate Surveyors readiness to adapt to changes in relation to use of internet or ICT in practice

S/N	Response	No of respondents	Percentage (%)
1	Yes	36	67.92
2	No	17	32.08
Total		53	100

Table 1 above shows the respondents readiness to adapt to changes in relation to use of internet or ICT in practice, out of the total number of 53 respondents who participated in the survey, 36 respondents representing 67.92% said yes indicating that ESVs in the study area are ready while 17 representing 32.08% said No.

Table 2. Knowledge of spread sheet for valuations

S/N	Response	No of respondents	Percentage (%)
1	Yes	49	92.45
2	No	4	7.55
Total		53	100

Table 2 above shows respondents knowledge of spread sheet for valuations, out of the total number of 53 respondents who participated in the survey, 49 respondents representing 92.45% said yes indicating that ESVs in the study area knows about the existence of spread sheet for valuations, while 4 representing 7.55% said No, meaning that they are not aware. The implication is that majority of ESVS are aware of spread sheet for valuation but at present majority are not using maybe because of not familiar with it or exposed to its usage in course or formal education, training and/or practice.

Table 3. Use of spread sheet for valuation

S/N	Have you used spread in valuation	No of respondents	Percentage (%)
1	Yes	4	7.55
2	No	49	92.45
Total		53	100

Table 3 above shows the response of respondents in respect to use of spread sheet for valuation. Out of the total number of 53 respondents who participated in the survey, 4 respondents representing 7.55% indicated that they have used spread in valuation, while 49 representing 92.45% said No, meaning that they have not in any way used same for valuation. It is important to state here that majority of the respondents have not in any way used spread sheet in valuation in spite of being aware of its existence.

Table 4. Knowledge of drone

S/N	Knowledge of drone	No of respondents	Percentage (%)
1	Yes	48	90.57
2	No	3	9.43
Total		53	100

Table 4 above shows the respondents knowledge of existence of drone. Out of the total number of 53 respondents who participated in the survey, 48 respondents representing 90.57% said yes indicating that respondents in the study area are aware of existence of drone while 17 representing 9.43% said No, i.e. they have not heard of drones. The implication of the above data presented in Table 4 is that majority are aware of existence of drone as an innovation that will enhance real estate practice.

Table 5. Knowledge of application of drone technology

S/N	Application of drone technology	No of respondents	Percentage (%)
1	Taking survey of real estate project for purpose of valuation.	31	58.49
2	Ariel view of estate or survey area, taking pictures of the property.	27	50.94
3	Taking pictures of the property.	17	32.07

Table 5 above shows the respondents knowledge on application of drone technology, out of the total number of 53 respondents who participated in the survey, 31 respondents representing 58.49% said taking survey of real estate project for purpose of valuation is a way to apply drone in valuation, 27 out of 53 representing 50.94% said Ariel view of estate or survey area, taking pictures of the property is a way to apply drone and 17 of 53 respondents representing 32.07 said drone can be applied for taking pictures of the subject property.

Table 6. Social media used in practices and marketing or familiar with before the pandemic

S/N	Social media	No of respondents	Percentage (%)
1	Facebook	22	41.51
2	Whatsapp	30	56.60
3	Telegram	16	31.89
4	LinkedIn	9	16.98
5	Twitter	4	7.55
6	Instagram	8	15.09
7	Others	4	7.55

Table 6 above shows the respondents views in respect to use social media used in practices and marketing or familiar with before the pandemic, 22 out of 53 respondents representing 41.51% use facebook, while 30, 16, 9, 4, 8 and 4 out of 53 respondents

representing 56.60%, 31.89%, 16.98%, 7.55%, 15.09% and 7.55% in that order uses whatsapp, telegram, linkedln, twitter, instagram and others respectively.

Table 7. View in relation to the reliability of response on the use of the medias

S/N	Views	No of respondents	Percentage (%)
1	Very reliable	40	75.47
2	Indifferent	9	16.98
3	Not reliable	4	7.55
Total		53	100

Table 7 above shows the response of Estate Surveyors and Valuers with regards to their view in concerning how reliable the Medias they use in practice. Out of the total number of 53 respondents who participated in the survey, 40 respondents representing 75.47% wee of the view that the particular media they used was very reliable, 9 respondents representing 16.98% were indifferent in their view while 4 respondents representing 7.55% were of the opinion that the media they used was not reliable. From Table 6 one can see that Whatsapp platform is seen to attract more usage from the response and appears more reliable from to the according to the number of respondents that when for that medium.

Table 8. Attendance of online training during lock down as a result of the pandemic

S/N	Response	No of respondents	Percentage (%)
1	Yes	36	67.92
2	No	17	32.08
Total		53	100

Table 8 above shows the response of Estate Surveyors and Valuers on attendance of online training and capacity workshop during the lockdown. Out of the total number of 53 respondents who participated in the survey, 36 respondents representing 67.92% said yes indicating that they attended seminar/capacity building workshop online during the lockdown while 17 respondents representing 32.08% said no meaning that they did attend any online seminar/workshop during the lockdown.

Table 9. Type of media/platform attended seminar/training during the pandemic

S/N	Social media	No of respondents	Percentage (%)
1	Facebook (Facebook messenger)	27	50.94
2	Whatsapp	16	30.19
3	Zoom	32	60.38
4	Google class and Google meet	22	41.51
5	Skype	4	7.55
6	Coursera	2	3.77
7	YouTube	9	16.98
8	Microsoft teams	5	9.43
9	None	4	7.55

Table 9 above shows the response of Estate Surveyors and Valuers in respect to type of media/platform attended seminar/training during the pandemic, 27 out of 53 respondents representing 50.94% use facebook (facebook messenger), while 16, 32, 22, 4, 2, 9, 5 and 4 out of 53 respondents representing 30.19%, 31.89%, 60.38%, 41.51%, 7.55%, 3.77%, 16.98%, 9.43% and 7.55% in that order uses whatsapp, Zoom, Google class and Google meet, Skype,

Coursera, YouTube, Microsoft teams and None respectively. The implication of the result presented here is that majority used zoom, followed by facebook and Google class and Google meet than others.

Table 10. Medium or platform respondents are more comfortable within business transactions or meetings

S/N	Media/Platform	No of respondents	Percentage (%)
1	Zoom	32	60.38
2	Whatsapp	32	60.38
3	Google class and meet	29	54.72
4	Facebook messenger	27	50.94
5	YouTube	13	24.53
6	Microsoft teams	5	9.43
7	Skype	4	7.55
8	Coursera	2	3.77

Table 10 above shows the response of Estate Surveyors and Valuers in respect to medium or platform respondents are more comfortable with, 32 out of 53 respondents representing 60.38% are more comfortable with zoom and whatsapp platforms, while 29, 27, 13, 5, 4, and 2 out of 53 respondents representing 54.72%, 50.94%, 24.53%, 9.43%, and 3.77% in that order uses Google class and Google meet, Facebook messenger, YouTube, Microsoft teams, Skype and Coursera respectively. The implication of the result presented here is that majority of the respondents are more comfortable with zoom and whatsapp platforms.

Table 11. Reasons for preference

S/N	Media/Platform	No of respondents	Percentage (%)
1	It's cheap in terms of data consumption	30	56.60
2	Simple/easy to use	31	58.49
3	Easily accessed on laptop and/or mobile device	35	66.03
4	Ideal for participants control and screen sharing	33	62.26
5	Has free version	2	3.77
6	Meeting conducted with no time limit	25	47.17

Table 11 above shows the response of Estate Surveyors and Valuers on reasons for their preference of their respective choice of media. This means that ESVs who chooses for example Google classroom finds it cheaper compared to other platforms etc. 30 out of 53 respondents representing 56.60% were of the opinion that the medium they use is cheap in terms of data consumption, while 31, 35, 33, 2, and 25 out of 53 respondents representing 58.49%, 66.03%, 62.26%, 3.77%, and 47.17% gave reasons such as simple/easy to use, easily accessed on laptop and/or mobile device, ideal for participants control and screen sharing, has free version and meeting conducted with no time limit. From the presentation and data available the highest in terms of reasons for preference if that according to respondents the media they preferred is easily accessed on laptop and/or mobile device.

Table 12. Challenges encountered during the presentations via online using their respective platforms

S/N	Nature of the challenges	No of respondents	Percentage (%)
1	Poor network	47	88.68
2	User distortion in form of noise from their background caused by user and network issues.	6	11.32
Total		53	100

Table 12 above shows challenges encountered during the presentations via online platforms by Estate Surveyors and Valuers. 47 out of 53 respondents representing 88.68% said its poor network while 6 respondents representing 11.32% identified user distortion in form of noise from their background. The issue of poor network is an indication of deficient ICT infrastructure in a third world country like Nigeria and the user distortion, a testimony to poor ICT infrastructure.

Summary of Major Findings

This work no doubt has exposed the attitude of practitioners on the use ICT and other innovations, the study identified various Medias practitioners used in marketing of real estate, and the list in the rate of popularity amongst the respondents studied includes, Facebook, Whatsapp, Telegram, Linkdln, twitter and Instagram. This explains that Facebook is widely and most used medium and well accepted by practitioners. This confirms the study by Olukolajo and Ojo, (2015) which found out that Social Medias such as Facebook, YouTube, and Twitter, are the most used social media among the Estate Surveyors and Valuers in Lagos State. It's important to state that some of these Medias were rated very reliable by the respondents for example whatsapp, facebook etc. This means that they find those media very relevant and have wholly embraced those Medias as they go further in practice. In the case of platforms they attended online seminars/training, the respondents identified the following, Facebook (Facebook messenger), Whatsapp, zoom, Google class/ Google meet, Skype, Coursera and YouTube as platforms they attended, it is also important to note that in the case of the platforms there were more conformable with; Zoom, Whatsapp, Google class and meet, Facebook messenger, YouTube, Microsoft teams, Skype and Coursera in that order were the order of the priority of respondents. The reasons for seeming preference of these by the respondents are; it's cheap in terms of data consumption, simple/easy to use, easily accessed on laptop and/or mobile device, ideal for participants control and screen sharing, meeting conducted with no time limit and has free version.

The respondents were said to be aware of the use of spread in valuation but majority had not in any time used same in the exercise, same applies to the use of drone, the implication is that effort should be intensified towards ensuring that these breakthrough in technology are adopted by the ESVs for effective and efficient practice/service delivery. This is an indication of lag in ICT and technology usage hence, Odufuwa, (2012) noted that in spite of the widely publicized successes, Nigeria, as highlighted in this RIA Sector Performance Review (SPR), lags behind many other African countries with respect to a number of market indicators. Further to that, in RIA ICT Survey countries, Nigeria ranks 5th with respect to mobile penetration and 5th in terms of industry perception of the effectiveness. The covid-19 pandemic no doubt has ushered in the new ways of doing business, not only that it has done that, it succeeded in making many to think internet, act internet and as well embrace technological innovation.

Implication to Practice

Technology has really improved practice and has continued to change hence, dynamic. It is imperative that Estate Surveyors must brace up to the challenges and fully key into opportunities created by technological innovations and ICT to ensure that they not outdated. If they are lacking in terms of embracing modern technology then, they may be become irrelevant.

Recommendation and Conclusion

The world has become one big village and business of real estate especially on marketing and consultancy can be done within the comfort of one's home without visiting the sites. Access to information is made easier. It is expected that practitioners who have not fully adapted to the new ways of doing business should as a matter of necessity avail themselves of the vast opportunities in the new ways of doing things, i.e. the new normal. Doing this will help one in minimizing the impact of the pandemic on their respective works.

Future Research

This study no doubt has really touched the crucial area/means by which practice can be enhanced however needs more empirical evidence to further buttress the points/issues raised. More investigation is needed to fully capture why spread sheet applications were not fully adopted by Estate Surveyors in practice.

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