

Assessing use of Video Conferencing Applications by Select Nigerian TV Stations in Disseminating Information on Coronavirus Pandemic

Israel Nandi Bigun¹

Department of Mass Communication

Federal University Lokoja, Nigeria, and

PhD Student – Development Communication

Institute of Strategic and Development Communication

Nasarawa State University Keffi, Nigeria

Dr. Simon Reazanyi Sheyigari²

Department of Mass Communication

Federal University Lokoja, Nigeria

Abstract:- Video conferencing applications (VCAs) also referred to as web-conferencing systems (WCS) have long been incorporated into television broadcasting to interactively engage with persons from different locations, resulting in collective intelligence and a participatory culture. The outbreak of coronavirus pandemic culminated in social restrictions and lockdowns thereby limiting TV professionals from face-to-face interactions. This study investigated the use of VCAs by Channels TV and TVC News Nigeria to disseminate information on coronavirus. Using convergence media culture theory as a lens through which the study is viewed, the study employed Key Informant Interviews (KII) as research design. All data collated were analysed using scissor-and-sort descriptive statistics suitable for analysing qualitative data. Results have shown that VCAs aided immensely in providing up-to-date information on the pandemic, enhancing adherence to safety protocols, giving expert opinion, and engendering interactive and participatory communication aimed at preventing further spread of the pandemic. It however revealed that poor visuals and sound occasioned by epileptic network services distorted effective communication. The study thus recommends among other things that government should collaborate with service providers to ensure that the best telecommunications technologies are acquired and used to ensure seamless communication in the event of future national, sub-regional, regional, or global crises.

Keywords:- Video Conferencing, Coronavirus, Television, Collective Intelligence, Participatory Culture.

I. INTRODUCTION

➤ Background to the Study

Covid-19 has manifestly transformed the world in some considerable ways which is synonymous with rebirth, rebuild, and reconstruction of humanity within the socio-cultural, socio-economic and political interference, leading to technological growth of the environment, society and the world at large (Dhar, 2022). In December 2019, the coronavirus began spreading in Wuhan, China, initially classified as a zoonotic disease due to its origin in animals. However, it was later identified as a strain of SARS-CoV-2,

leading to the World Health Organization (WHO) recognizing it as a Global Pandemic and attributed it the Covid-19 name (Salam, 2020). Owing to this realization, the World Health Organisation (WHO) cited in Obi-Ani et al. (2020) noted that the WHO on 11 March 2020 declared the new diseases a pandemic of global implications.

Similarlaly, Shereen, et al. (2020) corroborated that the new infectious disease which causes respiratory infections ranging from the common cold to more serious respiratory problems originated from the Hunan seafood market at Wuhan, China in December 2019 (Shereen, et al., 2020). According to WHO (2020), the virus has been linked to about over five million deaths worldwide since it was discovered, with a startling total of over ten million positive cases that tragically rises rapidly every day. This received immediate global attention as governments around the world began to implement stringent measures to curtail its ever-increasing spread. Nigeria is one of such countries.

Counsequent upon the outbreak and the disease' increasing spread, an Italian man who landed in Nigeria in February 2020, became the first victim of the virus and was immediately admitted to an isolation centre in Yaba, Lagos after exhibiting symptoms of the virus (NCDC 2020). Obi-Ani et al. (2020) registered that subsequently, the number of cases rose, and by June 2020, Nigeria had registered over twenty eight thousand (28,000) positive cases.

As noted earlier, a major consequence of the pandemic resulted in countries and governments fashioning out a number of ways in which they can curtail the further spread and contraction of the virus. Hacker, et al. (2020) observed that governments worldwide imposed Covid-19 restrictions, disrupting daily life and causing a shift from physical to virtual interactions, despite most people not contracting the virus. They maintained that this situation culminated in soaring the download counts of such Applications, and increased number of daily meetings indicate the pivotal role that Web-based conferencing systems, often referred to as video conferencing platforms, such as Zoom, have played in this revolution (Reuters, cited in Hacker et al., 2020). This is in consonance with Mobo and Ramat (2021) who contended that the Covid-19 pandemic significantly impacted the

business and economic sectors, necessitating strict health protocols such as social distancing, mandatory face mask wear, and mass gathering avoidance, and thus, proposed the use of video conferencing Applications besides learning management systems to replace face-to-face setups.

According to Salam, (2020) the term “social distancing” gained popularity during the pandemic, along with quarantines and lockdowns to maintain herd immunity and standard Operating Procedures (SOPs) were widely understood to include social distancing, frequent hand washing, mask wearing, and Personal Protective Equipment (PPEs) use for medical professionals and other risky professions. She further explained that the media took over as the main source of information due to the impact of Covid-19 on every aspect of life and with the multiplicity of media platforms available to news consumers, traditional media now competes with digital media for viewership.

As such, it is manifestly evident that the changing global ecology has impacted tremendously on the media and journalistic practice by engineering certain attendant shifts such as the changing newsroom, remote working and participatory interactions via WCS to disseminate information on the pandemic and other burning issues. Newman (2021) observed that the most significant shift to remote work through online platforms like Zoom and Slack has significantly impacted journalism practice, enabling news companies to produce news from various locations like the comfort of their homes, while many journalists previously averse to the incorporation of such technologies in their work discovered they liked the new flexibility it affords. However, he maintained that concerns regarding effective communication and the mental health of employees are among the issues that newsroom management are worried about as they relate to the effects of remote work on innovation, staff pressure, and relationship building. This position suggests challenges posed by remote working through the use of video conferencing applications.

Hence, this study puts up and inquest aiming at assessing the use of video conferencing applications by Channels Television and TVC News Nigeria to disseminate information on coronavirus pandemic. The following questions were posed in order to help provide answers that could be used in drawing conclusions.

➤ Research Questions

The study was guided by some questions, among which are:

- How often did Nigerian TV Stations use Video Conferencing in the Covid-19 era?
- What advantages does video conferencing offer over face-to-face interviews?
- How has video conferencing helped in dissemination of information on coronavirus pandemic?
- What are the challenges remote working through video conferencing pose to television journalism?

II. LITERATURE REVIEW

➤ Conceptual Framework/ Clarifications

Video conferencing applications are an integral components of social media. Scholars have described social media as a collection of web-based applications that build on the ideological and technological foundations of Web 2.0, and allow for the creation and exchange of user-generated content (Critenden, et al., 2011; Kaplan & Haenlein, 2010). Kaplan & Haenlein, posit that social media is made up of *collaborative projects* such as Wikipedia; *blogs and micro-blogs* like Twitter; *content communities* as in YouTube; and *social networking sites* such as Facebook; *virtual game worlds* as in world of Warcraft and *virtual social worlds* such as Second Life (2010). This paper proposes video conferencing applications (VCAs) also referred to as web-conferencing systems (WCS) as social media considering their capabilities and possibilities for social interactions, participatory communication, content creation and generation, dissemination of information and instant feedback.

Rop and Bett (2012) are of the view that for the past decade, video conferencing (VC) has become more popular and more reliable as a tool to bridge the distance gap when travel is not an option, impractical or undesired as it uses audio and video telecommunications to bring people at different sites together. According to the JNT Association (2007) video conferencing is a technology that allows for simultaneous interactive contact through data, visual, and sound signals, enhancing human communication through facial expressions and body language, making it far more effective and personable than audio interactions. Video conferencing works by using a few different technologies. Video conferences connect multiple locations and can be held in a video conferencing studio, home computer, or 3rd-generation mobile phone. Participants use a video conferencing system, web-based application, or on-premise software for interactive virtual meetings or classrooms. This approach is convenient, cost-effective, and offers easy access to file sharing and collaborative services (Rop & Bett, 2012; Robert, 2009). This corroborates Denstadly et al. (2012) who asserted that creative communication concepts have gained popularity in the computer industry, with VCA equipment manufacturers offering flexible services for conference rooms, desktops, and mobile terminals, saving time and money.

Consequently, the technology has become very useful in the age of Covid-19 where social interactions have become increasingly restricted. Considering the attendant restrictions that come with such a global pandemic, WCS have become increasingly viable as communication tools. Arsand (2020) posit that the Covid-19 pandemic has highlighted the growing importance of technologies, particularly video conferencing and submitted that the situation resulted in a scenario wherein numerous patient-provider meetings could only be conducted through video conferencing.

Over and beyond, owing to the above, the possibilities that VCAs present have become imperative for adoption in television broadcasting and journalism for optimum update and awareness programmes or reportage on covid-19. How Nigerian TV Stations have maximized these possibilities is the core of this study.

➤ *Review of Empirical Studies*

In a related study, Hacker et al. (2020) examined how web conferencing systems facilitated and enhanced a new virtual interactivity during the Covid-19 crisis. They are of the view that Covid-19 regulations significantly impacted businesses, institutions, and individuals, prompting researchers to discuss the role of information technology in managing the situation. The study analyzing 3 million tweets from March 2020 reveals that web-conferencing systems (WCS) like Zoom emerged as a social technology, facilitating access to everyday activities and contacts that were previously locked away due to COVID-19 measures. The study however failed to make any recommendations. More so, the sample size of 3 million tweets may have been too cumbersome for analyses, although it may be the researchers' way of ensuring generalizability. Therefore, the study is relevant to the current study on video conferencing application and dissemination of information on coronavirus pandemic by select Nigerian TV stations as it provides literature for concept clarifications.

Similarly, Denstadly et al. (2012) carried out a study which examines how Norwegian business travellers utilise in-person and virtual meetings, revealing that access and utilisation are impacted by industry and organisational structure. A major strength of the study is that a pathway to understanding of the growing role of VCAs in communication is provided through the framework it suggests. The study is relevant to this current work as it seeks to probe the possible advantages video conferencing offer over face-to-face interviews in television broadcasting in covid-19 era.

Furthermore, Kop and Bett (2012) studied video conferencing and its application in distant learning. The study exhaustively traversed the frontiers of video conferencing technology and the concept of distant learning and laid bare the benefits of both (concepts/technologies). However, although the study concludes that video conferencing could facilitate a dual approach, enhancing student responsibility, group work, and educational tasks, which would enhance conventional teaching methods, it failed to apply the steps for scientific research. It is more of a library research or discourse analyses rather than an empirical study. However, it was relevant for this study as it also provided literature for concept clarification.

Mobo and Rahmat (2020) explored the impact of video conferencing platform in all educational sectors during the covid-19 pandemic. The researchers proposed video conferencing application which affords provide real-time feedback from the students to the teacher. The study relied on data elicited through interviews to arrive at conclusions. The results suggest that video conferencing will ensure the safety

of both students and the teachers in turbulent times such as global pandemics. Although the study recommends adoption of web-based technologies, its methodology does not conform to accepted standards of empirical research as it failed to provide clarity on research design and the type of interviews that were conducted. It is however relevant to the current study as it provided insights into the adoption of such technology within a different contexts to influence work and communication outcomes.

Obi-Ani et al. (2020) x-rayed social media and the covid-19 pandemic focusing on the Nigeria context. It qualitatively explored social media outlets such as Facebook, Twitter, WhatsApp, blogs, online newspapers, and YouTube where contestations about the pandemic are most pronounced. Although the study reveals that social media platforms have been misused, with users hiding behind their anonymity to disseminate false information and frighten the population, it came to the conclusion that social media platforms are important for spreading information, and this cannot be overstated. It recommends actively dispelling false information and teaching others the importance of exercising caution while disseminating unconfirmed information, it however failed to suggest whose responsibility that would be.

Arsand (2020) examined how covid-19 pandemic revealed the importance and shortcomings of technologies for diabetes support. He concludes that although video conferencing affords patients the opportunity to interact with healthcare providers, there is currently no health technology that can guarantee the delivery of medications to diabetics. However, although work was published in a journal, it does follow the rules for scientific inquiry. It is however relevant to this study.

➤ *Theoretical Framework*

This study is hinged or predicated upon the tenets and assumptions of Convergence media culture theory as propounded by Henry Jenkins (2006).

The globe has been profoundly affected by media convergence, especially in the communication sector altering pattern of news gathering, reporting and accessing news sources. There is no consensus among media scholars and professional as to the nature of convergence as perspectives differ. Convergence is perceived from the purview of technological convergence of media organisations, ownership convergence as seen in mergers, and cross-media cooperation, partnerships, and content sharing (Lawson-Borders, 2006; Grant & Wilkinson, 2009; Menon, 2006; Deuz, 2004).

However, Jenkins (2006, p.18) described convergence as "a cultural shift that encourages news consumers to be more active and curious seekers of new information and build alliances across different media content." He is of the view that traditional consumer is passive, while modern consumers are active and socially connected. Traditional consumers are easier to control, while new consumers are vocal and attract attention, making them more active in media consumption. (p. 19). The major tenets of the theory are that:

- The convergence of media culture presents new possibilities, merging corporate and grassroots media, old and new media, and unpredictable interactions between media producer and consumer.
- New media will not replace old ones as it is a continuous process of exchange, collaboration, and cooperation between previously unconnected media forms.
- Convergence, a result of the digitization of media content and the internet's popularity, combines computing, communication, and content (three Cs).
- Participatory culture of convergence encourages public participation in media circulation and propagation, fostering a culture where consumers are not just consumers but also producers and contributors.
- There exists, a collective intelligence where shared or group intelligence is generated through the collaboration and efforts of many individuals, leveraging their combined expertise to generate a unified understanding of a topic.

This theory is suitable for this study because it seeks to assess how video conferencing domiciled on computer systems and mobile devices is integrated into television

broadcasting to disseminate information on coronavirus. More so, video conferencing allows television stations utilize its participatory culture possibilities to interview health experts, government officials, policy makers, citizen groups or individuals and the likes on issues related to covid-19 without breaking safety protocols.

III. METHODOLOGY

This study adopts Key Informant Interviews (KII) as research design. The researcher used KII in sampling the attitudes and dispositions of Channels Television and TVC News correspondents in Jos to ascertain their perception on possible advantages of video conferencing over face-to-face interviews, the contribution of the applications in dissemination information on the pandemic as well as the challenges remote working through video conferencing pose to the practice of journalism. The researcher adopts purposive sampling technic. The KII were transcribed and analysed using scissor-and-sort descriptive statistics suitable for analyses qualitative data. words and their definitions, the comments' context, internal coherence, frequency, and scope, the clarity of the responses, and the significance of determining the key points were analysed qualitatively.

IV. RESULTS AND DISCUSSION

Table 1 Data on Utilisation of Video Conferencing Applications

Coding Category	KII Sessions	Dominant Views/Responses
KII 1	Channels TV	
A		We use either Skype or Zoom
C		To minimise physical contact
C		To minimise contact, instead of going to meet them and have face-to-face contact
B		Nearly most of the reports and specialised programmes at the peak of the pandemic, especially our flagship, Sunrise Daily incorporates video conferencing
B		Most of the discussions were held with the various personalities via video conferencing
A		If you have any interview to conduct, we also resort to video conference
A & C		Up till now, most of the coverage are mainly through this video conference
KII 2	TVC News	
A		it's very easy having this application; the video conferencing...
A		You can just sit from wherever you are and get the person connected and then discuss whatever you want to discuss
C		COVID-19 protocols; social distancing
B		It's almost a daily kind of a thing
B		Look, it's an everyday thing

➤ *Question 1: How often do Nigerian TV Stations use video conferencing in the Covid-19 era?*

- Coding Category:
 - ✓ Confirmation of Use
 - ✓ Extent of Use
 - ✓ Purpose of Use

The data above sought to find confirm how Nigerian TV Stations utilize video conferencing in the Covid-19 era. Results show that the TV Stations use video conferencing applications like Skype and Zoom to observe Covid-19 protocols, minimize physical contact, conduct interviews and facilitate other discussions with various personalities.

Table 2 Data on Benefits of Video Conferencing over Face-to-Face Interviews

Coding Category	KII Sessions	Dominant Views/Responses
KII 1	Channels TV	
A		The advantage is to observe the known protocols
B		Observe the non-pharmaceutical protocols of Covid-19
B		If you want to get any information, instead of meeting the person physically, now you make use of the video conferencing
A		In relation to the pandemic, it goes a long way to minimise contact
KII 2	TVC News	
A		The world is gradually becoming a digital
A & B		I prefer the video conferencing because it makes it very easy for me to communicate with a person without having such (Covid-19) risks
B		It saves you from cost; risks
B		Saves one from traveling long distances

➤ *Question 2: What advantages does video conferencing offer over face-to-face interviews?*

• Coding Category:

✓ Confirmation of Benefit

✓ Type of Benefit

The table above is an inquest into the benefits of video conferencing over face-to-face interviews. The data reveals that video conferencing helps in enforcing the non-pharmaceutical protocols of Covid-19. It also shows that the trend makes for easier communication, saves costs and reduces risks of traveling long distances in search of information.

Table 3 Presents Analysis of Data on Benefits of Video Conferencing over Face-to-Face Interviews

Coding Category	KII Sessions	Dominant Views/Responses
KII 1	Channels TV	
A		Reduces the risk of contracting the virus in terms of infection through its communication possibilities
A		Minimised physical contact
B		It has positively enhanced the digitalisation of the organisation in reaching out to the mass audience
B		It has enhanced both the staff and the people we are getting in touch with, to be up to date in this digital era; people now possess gadgets that can enhance video conferencing
KII 2	TVC News	
A		Helps in preventing the further spread of the COVID-19 pandemic as health professionals reach out to the public from their comfort zones
A		Observance of all the safety protocols
B		video conferencing now makes it very easy for media outfits to achieve their aim of communicating with some key people they would want to discuss on a particular issue or topic without coming close to them
B		Helps promote interactions in media business in the era of restrictions

➤ *Question 3: How has video conferencing helped in dissemination of information on coronavirus pandemic?*

• Coding Category:

✓ Health Benefits

✓ Industry Benefits

Results above reveal that video conferencing aided in reducing risks of contracting the virus and helped in curtailing the further spread of the virus as it offered TV Stations possibilities to connect with health professionals to reach out to the public from their comfort zones (people get up-to-date information on the pandemic). It also promoted media interactions in the age of social restrictions. Results also reveal more and more people now possess the gadgets and software that enhance video conferencing.

Table 4 Data on Challenges Video Conferencing Pose to Television Journalism

Coding Category	KII Sessions	Dominant Views/Responses
KII 1	Channels TV	
A		Interruptions which affects the quality of visuals, sound, resulting in inaudibility; people cannot get the message properly due to service providers and their epileptic network services
A		You cannot access a person no matter how important the information the person wants to give out is, if he's not within the network coverage
B		Basically, service providers should ensure that the services are effective
A		Everybody has to have the gadget and application
B		TV Stations should provide gadgets that will enhance communication
KII 2	TVC News	
A		It is easier to curtail people's excesses in a face-to-face setting when their contribution go against ethics of journalism than when you're video-conferencing
B		It is the duty of the TV professional to educate discussants on the rules and ethics of the profession as prescribed by NBC
B		One needs to guide the interviewee

➤ *Question 4: What are the challenges remote working through video conferencing pose to television journalism?*

• Coding Category:

- ✓ Challenges
- ✓ Solutions

Data from the inquest above sought to show the challenges remote working through video conferencing pose to television journalism. Findings reveal that interruptions that affect the quality of visuals and sounds results in inaudibility due to service providers and their epileptic network services which distorts proper comprehension of messages. This corroborates Yang and Chen cited in Upshaw (2019) who found that time lags were still a frustration when trying to use video conferencing. The study further proves that people who are not within a network area cannot be reached through video conferencing irrespective of the information they have to share and there also exists, the challenge that everyone has to have certain gadgets and software before connecting. Adherence to ethics of broadcasting while connecting to a TV station from a remote environment was also identified as a challenge. However, the also shows that the challenge of bad network can be mitigated by service providers providing effective network service. This is in consonance with Smith (2017) who opined that as long as you have an internet speed with download rates at least 2mbps, you will be fine with most software.

V. CONCLUSION

From the foregoing discussions, it is evidenced that video conferencing applications are very crucial to television journalism and television broadcasting as a whole in the age of social restrictions occasioned by the coronavirus pandemic. It serves as a veritable tool for providing up-to-date information on the pandemic, enhancing adherence to safety protocols, giving expert opinion, engendering interactive and participatory communication aimed at preventing further spread of the pandemic. The study

concludes that without video conferencing applications in the era of social distancing and total or partial lockdowns, journalists and television broadcast stations would not have been able to attempt keeping up with their responsibility of providing truthful, accurate and complete information that is in the interest of the general public. The study also concludes that the software applications have been put to use like never before (in unprecedented ways) and 21st century television broadcasting will continue to witness increased adoption in more and more TV organizations for optimum performance and information sharing without barriers of physical restrictions.

However, the study also reveals that lag and network interruption affect visual and sound quality. Findings also reveal that people outside a network area cannot be reached via video conferencing irrespective of the information they have to share. The study concludes that although there are disadvantages to employing video conferencing systems in TV broadcasting, but overall, the benefits exceed the challenges. Hence, it is imperative that these challenges are mitigated in order to enhance communication especially in the face of global pandemic, disasters, epidemics, flooding, insecurity, and the likes that has bedevilled Nigeria today.

RECOMMENDATIONS

➤ *Consequent upon the above, the study Recommends that:*

- Video conferencing cannot be neglected in television broadcasting owing to its huge possibilities of interactive, participatory and remote of distant communication. As such TV stations in Nigeria who have not keyed in to computer media communication (CMC) made more effective with improvement in video conferencing should adopt it for optimum performance and information sharing. More so, TV journalists who are yet to explore such software must arm themselves with the knowledge as this study proves it enhances digitization and IT compliance.

- The capacity and possibilities of the applications to help in enhancing social distancing and other Covid-19 protocol to prevent further spread of the dreadful virus has been established in this study. Thus, government, NGOs, civil society groups, citizen groups and the likes must encourage the adoption of video conferencing not just in journalistic circles but in schools, hospitals, the business sectors among others to minimize physical contacts and risks of contracting the virus and prevent another wave of the virus.
- In tackling the challenge of poor visuals and sound quality occasioned by poor service/network, government should work hand in hand with service providers to ensure that the best telecommunications technologies and acquired and used to improve communication to avoid lag and breakages that will lead to ineffective communication in situations of national, sub-regional, regional of global pandemics or crises.
- National Broadcasting Commission should initiate policies that would ensure that web-conferencing systems are part of the requirements of issuing out licence to new TV Stations and the regulation or reissuance of licence to existing TV organisations.

REFERENCES

- [1]. Arsand, E. (2020). The COVID-19 pandemic revealed the importance and shortcomings of technologies for diabetes support. *Journal of Diabetes Science and Technology*, 14(4) 712 – 713.
- [2]. Crittenden, V. L., Hopkins, L. M., & Simmons, J. M. (2011). Siterists as opinion leaders: Is social media redefining roles? *Journal of Public Affairs*, 11(3), 174 – 180. <https://doi.org/10.1002/pa.400>
- [3]. Denstadli, J. M., Julsrud, T. E., & Hjorthol, R. J. (2012). Videoconferencing as a mode of communication: A comparative study of the use of videoconferencing and face-to-face meetings. *Journal of Business and Technical Communication*, 26(1), 65 – 91.
- [4]. Deuze, M. (2004). What is multimedia journalism? *Journalism studies*, 5(2), 139 – 152.
- [5]. Grant, A., & Wilkinson, J. (2009). *Understanding media convergence: The state of the field*. Oxford University Press Inc.
- [6]. Hacker, J., Brocke, J. V., Handali, J., Otto, M. & Schneider, J. (2020). Virtually in this together – how web-conferencing systems enabled a new virtual togetherness during the COVID-19 crisis. *European Journal of Information Systems*, 29(5) 563 – 584. <https://doi.org/10.1080/0960085X.2020.1814680>
- [7]. Jenkins, H. (2006). *Convergence culture: where old and new collide*. New York University Press.
- [8]. JNT Association (2007). *Introduction to Video Conferencing*. The JNT Association.
- [9]. Kaplan, A. M., & Haenlein, M. (2010). Users of the world unite! The challenges and opportunities of social media. *Business Horizons*, 53 (1), 59-68.
- [10]. Lawson-Borders, G. (2006). *Media Organizations and convergence. Case studies of media convergence pioneers*. Lawrence Erlbaum.
- [11]. Menon, S. (2006). Policy initiative dilemma surrounding media convergence: A cross national perspective. *Prometheus*. 24(1), 59 – 80.
- [12]. Mobo, F. D., & Rahmat, A. (2020). The impact of video conferencing platform in all educational sectors amidst covid-19 pandemic. *Jurnal Ilmu Pendidikan Nonformal*, 7(1), 15 – 17.
- [13]. NCDC. (2020). Twitter @NCDCgov. Retrieved April 05, 2021.
- [14]. Newman, N. (2021). Journalism, media, and technology trends and predictions 2021. Reuters Institute for the Study of Journalism, Oxford University. Retrieved April 05, 2021 from www.digitalnewsreport.org
- [15]. Obi-Ani, N. A., Anikwenze, C., & Isiani, M. C (2020). Social media and the covid-19 pandemic: Observations from Nigeria. *Cogent Arts & Humanities*, 7(1), 1 – 15. <https://doi.org/10.1080/23311983.2020.1799483>
- [16]. Roberts, R. (2009). Video conferencing in distance learning: A New Zealand School's perspective. *Journal of Distance Learning*, 13, 91 – 107.
- [17]. Rop, K. V., & Bett, N. K. (2012). Video conferencing and its application in distance learning. Retrieved April 06, 2021 from <https://www.researchgate.net/publication/251237239>
- [18]. Salam, A. (2020). *Journalism in the age of Covid-19: Perspective from Pakistan*. Friedrich-Ebert-Stiftung (FES).
- [19]. Shereen, M. A., Khan, S., Kazmi, A., Bashir, N., & Siddique, R. (2020). COVID-19 infection: Origin, transmission, and characteristics of human coronaviruses. *Journal of Advanced Research*, 24, 91 – 98. <https://doi.org/10.1016/j.jare.2020.03.005>
- [20]. Upshaw, B. A. (2019). *The effects of video conferencing as an instructional tool in the high school Spanish II classroom* [Unpublished doctoral thesis]. Carson-Newman University.