Ethical Media Literacy in Africa's Post Covid-19 Digital Era

Anne N. Odoh and Temitope Falade[*]

School of Media and Communication, Pan-Atlantic University, Nigeria

ARTICLE INFO

ABSTRACT

The digital era has brought about disruptions that have revolutionized communication. Digitization, the Internet and its inherent innovations have drastically transformed the dissemination of information making it cheaper, faster and easily accessible. However, inadequate content regulation on the Internet has birthed the practice of citizen journalism in the 21st century society, where consumers can easily create and share content online without proper verification. Such content could sometimes be misleading, a trend that has introduced the concept of "fake news" which became more prevalent during the recent Covid-19 pandemic and has continued to pose a problem to journalism practices in the post-Covid era. Similarly, deceptive journalism and the lack of critical assessment of digital media content before creating and disseminating information online poses a challenge to ethical journalistic practices. Thus, it has become pertinent for educational institutions and media professionals in African countries to formally educate students of journalism as well as the wider society on the importance of ethical journalism and the implications of fueling mis-information and mal-information on the Internet. Using the positivist theoretical perspective, the Refracted Publics and Networked Public theories, this study adopts quantitative methods to assess the ethical digital media literacy of Nigerian consumers. It contributes to the wider literature on digital media literacy and ethical journalism education from the context of the Global South, where there is a dearth of such studies. The findings provide insights for improving the journalism pedagogy, whilst ensuring that the core ethical groundings of journalism are not compromised.

1. Introduction

The 21st century is an era characterized by digitization, the Internet and its inherent innovations. These have led to radical digital transformation (digitalization) in every business sector. In the media and communication sector, the Internet and the Web of People (social media) have facilitated the faster, wider and cheaper dissemination of information either asynchronously or in real time. Although the Internet has become a medium for the massive dissemination of real time news and communication, it has also birthed a number of risks for individuals and the society such as misinformation, disinformation (also known as "fake

---

[*]Corresponding author's E-mail address: tfalade@pau.edu.ng

news"), cyber bullying (also known as mal-information) and cybercrimes (Lee, 2018). The unregulated nature of the Internet has promoted citizen journalism where consumers are free to create and share information without proper verification of the message's authenticity. This practice could be attributed to a lack of sufficient digital media literacy where consumers of media do not ask pertinent questions about received messages before re-sharing or fully consuming such messages.

Media literacy has been defined as the ability to critically question messages that are received and transmitted into the society in order to understand the intended goal of transmitting the message as well as their likely effect on individuals, the society and the environment (Cherner & Curry, 2019). The call for media literacy is decades old (Cherner & Curry, 2019), spanning as far back as 1939 (Cunliffe-Jones et al., 2021) to date. There have been several calls for educational institutions to incorporate a module on media literacy within the curriculum for journalism and media studies (Cherner & Curry, 2019; Cunliffe-Jones et al., 2021; Dame Adjin-Tettey, 2022), while notable scholars (Lee, 2018; Cherner & Curry, 2019) have called for teachers to help students develop relevant critical thinking and decision-making skills in the creation, consumption and sharing of content. It is also pertinent for teachers to be competent in digital media literacy skills in order to adequately implement these teachings in their classrooms (Cherner & Curry, 2019). This argument is also applicable to digital media educators in the sub-African region.

This paper therefore aims to highlight the need for educational institutions and media professionals in African countries to formally educate students, private and civil society groups, on the importance of ethical digital media literacy. It also espouses the implications of fueling mis-, dis- and mal-information on the Internet particularly in sub-Saharan Africa, which is a different context from the dominant, widely researched Western territories. This research contributes to the wider literature on digital media literacy and ethical journalism education in the post-Covid digital era from the context of the sub-Saharan West African region, where there is a dearth of such studies. On the practice end, it aims to promote an ethically media literate public in the post-Covid era that will influence positive transformations in African societies. To this end, this research seeks to meet the following objectives:

- To assess the digital media literacy skills of Nigerians in the Post Covid-19 Digital era
- To appraise the challenges of Nigerians in conforming to ethical digital media practices in the Post Covid-19 digital era
- To assess the critical thinking skills and strategies of Nigerians in the creation and consumption of digital media content
- To appraise the digital media verification strategies being used by Nigerians in the Post Covid-19 Digital era

Therefore, the following research questions were formulated to guide this study:

1. To what extent can Nigerian citizens be assumed to have attained digital media literacy in the Post Covid-19 Digital era?
2. What are the challenges faced by Nigerians in conforming to ethical digital media practices in the Post Covid-19 digital era?
3. What are the critical thinking strategies adopted by Nigerians in the creation, consumption and sharing of digital content?
4. What factors determine the digital media verification strategies used by Nigerians in the Post Covid-19 Digital Era?

The ensuing sections of this paper present a review of literature on the issues of ethical journalism education and practice in the age of the Internet, Covid-19 and fake news, before discussing the theoretical and philosophical perspectives that guided this study. Next, the methodology and the findings are discussed before presenting the conclusions and recommendations of the study.

2. Literature Review

2.1. Impact of the Internet on Journalism Education and Practice

Disinformation is described as false or misleading content that is deliberately created and has the potential to harm the rights of persons, a social group, an organization or a nation (UNESCO, 2019). Disinformation is malicious, manipulative and aims to confuse people by deliberately disseminating false information to them (Dame Adjin-Tettey, 2022). It is a global phenomenon that takes advantage of the access to information provided by the Internet, as well as the international human rights freedom of expression. "Fake news" dissemination and consumption was prevalent during the global covid-19 pandemic, and has remained a malignant practice to date. With the lockdown restriction on movement, consumers resorted to social media, blogs and various online news sources for latest updates about the virus and other restrictions. Unfortunately, this further fueled the unethical practice of disinformation in the media via text, voice and video media causing social media platform owners to be the gatekeepers of information on their platforms.

"Fake news" and misinformation is also prevalent online during the period of political campaigns and elections, which influences citizens' understanding of issues. Disinformation was particularly prominent and received heightened attention during the 2016 USA presidential elections between Joe Biden and Donald Trump, posing a threat to America's democracy (Dame Adjin-Tettey, 2022). Wasserman (2022) however argued that in some developing countries where the State explicitly controls the traditional media channels, mainstream news is also capable of spreading disinformation that intrinsically represents the interests of the ruling political class. The low level of literacy in African countries compared to the fast-evolving digital technology of the 21st century poses additional challenges for journalism education and practice in this region. Therefore, it has become imperative that ethical digital media literacy be emphasized at the institutional and civil society levels in African countries. This will equip students of journalism and media outlets with the knowledge and skills needed to ethically create and critically assess both traditional and digital media messages before consumption, particularly in this region.

Contrary to disinformation, misinformation can be described as content that is misguided, uninformed and without any malicious intent (UNESCO, 2019). Although misinformation is unintended, the potential harmful effect of such content cannot be overstated. The study by Egere (2019) uncovered that though the Internet promotes unethical journalism practices, it also enhances media studies and creates opportunities to correct online misinformation. The author further argued that digital media literacy, when incorporated into school curriculum and promoted at the private and public levels, aids in mitigating the risks of propagating mis- and dis-information amongst consumers. Instances of misinformation can be easily resolved by educating the sender of the content. Therefore, digital media and information literacy is pertinent for both content creators and consumers to be able to discern the authenticity of content created in new media forms and subsequently disseminated on digital platforms (Rapp and Salovich, 2018; Dame Adjin-Tettey, 2022). Journalism educators can enlighten content creators as well as consumers on ethical ways to verify online content before it is

created, consumed or shared. It is important to ensure digital media literacy for individuals at all levels because the Internet provides an enabling environment for the quick and massive dissemination and consumption of information in real time, due to its ubiquitous nature. It can also be used to globally educate the public on how to verify the accuracy of content that is disseminated online.

Mal-information on the other hand is information that is deliberately intended to harm an individual, social group or nation, based on reality (UNESCO, 2019). Mal-information changes the context, date or time of typically confidential information to align with personal or corporate interests, before disseminating such information (Dame Adjin-Tettey, 2022). Mal-information consists of various forms of cyber bullying and Internet trolling. Online journalists are often victims of Internet trolling and backlash by online consumers, particularly when they report on controversial issues. Malicious information is spread about such journalists to discredit them, which sometimes affects their mental health. As a coping measure, comments are sometimes turned off on journalists' online posts.

In the digital age, journalists face pressure to be the first to break a story, which can sometimes lead to errors, inaccuracies or misinformation. However, it is important for journalists to prioritize accuracy over speed by deploying critical thinking and active inquiry before creating or sharing messages (Bago et. al., 2020). The Balancing Act report (UNESCO, 2020) has ensured that academics, individuals and civil society groups can pinpoint instances of mis- and dis-information (Wasserman, 2022). Fact-checking and verifying sources are crucial to ensuring that the information presented is reliable and trustworthy, which re-emphasizes the argument that research is key to evidence-based practice. Online journalists also have a responsibility to correct any errors or misinformation that they may have published.

2.2. Effect of Covid-19 on Digital Journalism and the Spread of "Fake News"

The impact of Covid-19 on the spread of "fake news" has been significant, as the outbreak provided a fertile ground for the dissemination of false information (Uwalaka, Nwala, & Chinedu, 2021). The pandemic highlighted the dangers of misinformation and disinformation, which can have serious consequences for public health and safety (World Health Organisation , 2020). The restricted movement and heightened need for information about the virus saw a surge in online activity. This provided an opportunity for disseminators of false information to reach a wider audience. Misinformation about the virus included false claims about cures, conspiracy theories, and hoaxes (Evanega et. al., 2020). The spread of "fake news" during the pandemic had serious consequences. False information led people to take dangerous actions, such as consuming harmful substances or ignoring public health guidelines. It also created confusion and panic, which exacerbated the spread of the virus (Naeem, Bhatti, & Khan, 2021).

The impact of "fake news" during the Covid-19 pandemic was particularly pronounced in developing countries, where access to accurate information is often limited (Zevallos & Martínez, 2023). In some cases, false information was spread deliberately to undermine public trust in governments and public health institutions. To combat the spread of "fake news", many organizations took steps to promote accurate information about the virus such as fact-checking initiatives, educational campaigns and social media monitoring. Governments also took mitigating actions like implementing laws to curb the spread of false information. Essentially, the Covid-19 pandemic highlighted the importance of accurate information and the dangers of "fake news". It underscored the need for individuals and

organizations to take responsibility for promoting accurate information and combatting false information (Ceron, Santos, & Quiles , 2021).

2.3. Ethical Journalism in the Digital Age

The rise of digital technology has transformed the way news is produced, distributed, and consumed. The Internet and social media platforms have enabled journalists to reach a wider audience than ever before, but this has also created new ethical challenges (Apuke & Omar, 2020). The digital age has made it easier for misinformation and "fake news" to spread, which has led to a decline in public trust in journalism. Similarly, deceptive journalism and the lack of critical assessment of digital media content before creating and disseminating information online poses a challenge to ethical journalistic practices. Essentially, it is important for journalists to adhere to ethical principles of journalism to maintain their credibility, and guarantee the trust of their audience (Auman, Stos, & Burch, 2020).

One of the key ethical principles in journalism is impartiality. In the digital age, the rise of echo chambers and filter bubbles has made it more difficult for journalists to reach a diverse audience. However, journalists should strive to present a range of perspectives in a fair and unbiased manner, while avoiding sensationalism or the lure of clickbait headlines. Lack of a critical assessment of the authenticity of digital media content could lead to digital journalists misinforming the public on a wide scale, causing the latter to make erroneous decisions (Rapp and Salovich, 2018). Furthermore, it has been suggested that journalists and news reporters stay detached from the message being transmitted, in order to maintain an objective position (Knight, 2020; Mellado, C., & Alfaro 2020). The un-biased media reporting of positive and negative issues aids development of a nation.

Privacy is another important ethical consideration in digital journalism. Concerns have been raised about journalists' disregard for the privacy of individuals and resorting to deceptive means, especially while gathering sensitive or personal information. Deceptive tactics could be active (e.g impersonation, comment alterations) or passive (hidden cameras, hidden professional identity, giving bribes or other forms of payment in exchange for information) aimed at obtaining more ostentatious information. This raises concerns about the transparency of information gathering when reporting a story, and the integrity of the journalist. Consequently, this creates a paradox between the right of the public to know the truth of a matter and the actual reporting of the truth of a matter (Ofori-Parku & Botwe, 2020).

2.4. Rethinking Media Education in the Digital Era

Digital literacy plays an important role in how knowledge about the digital landscape has evolved. There is a misconception that digital literacy is merely a tool. Arguably, there is a need to rethink and comprehensively review media education in the digital era, by revisiting regulations and reforms to address the problem of media commercialization by digital platform owners. (Buckingham, 2020). Leaning (2019) also argued that users of digital media platforms should be empowered with critical thinking and creative content production skills that will positively impact the society. The importance of media literacy has always existed, and preserving the history of media evolution can provide insights into the future of digital literacy.

This review has highlighted studies that assessed the media literacy of educators and consumers as well as strategies for fighting "fake news" in global regions. While there have been calls for media and information literacy by extant scholars, there is a dearth of studies

that investigated the challenges faced by consumers in the sub-Saharan African region regarding the authenticity of digital media content. Studies are also limited that address how the same consumers are conforming to ethical digital media practices, particularly in the aftermath of the Covid-19 pandemic, which has seen an increase in "fake news" creation and dissemination on digital platforms. These are the research gaps that this study seeks to fill.

2.5. Theoretical Underpinnings

This study is hinged on the theoretical frameworks of Refracted Publics Abidin (2021) and the Networked Public Theory (Boyd, 2010). The theory of refracted publics posits that the digital landscape particularly the social media space, is highly fragmented, and it is impossible to get the entire users to think alike or align in a single direction. This fragmentation in turn could lead to issues of polarization, misinformation, and disinformation. In relation to this study, the diverse views and opinions of content creators (that have been enabled by the low entry barriers of the Internet) have populated the online space with user-generated content that is sometimes unverified. This is further heightened in Africa where digital media literacy is in its budding stage.

The Networked public theory focuses on how emerging technologies are shaping different domains of life such as learning, human relationships, news and even politics. People from all facets of life now connect with each other on social networking sites to share news, information, and entertainment-related content. Earlier studies on the public sphere highlight how public opinion is formed through the public sphere and its implications for democratic societies (Habermas et al., 1974). Similarly, (Habermas, 1991) offers extensive discussions on how public opinion has morphed, and the impact of this change on democratic societies. This study leverages on this theory to explore how social media has shaped the opinions of individuals that lack sufficient digital media literacy skills. Consequently, they trust content that is circulated on their social communities particularly because it is considered as popular opinion of the community members. In recent times, digital technologies have served as the building blocks for a networked public. Through social media, people can create and share information in a networked society. Typically, a networked public exists within a virtual domain and people can interact in real time. This possibility has been advanced post Covid whereby more people now adopt virtual means of interaction beyond what existed in the past.

2.6. Philosophical Perspective

This research adopts a positivist theoretical perspective, while the epistemology that aids our understanding and knowledge of humans and the social world is objectivism. This epistemology posits that assuming a *real* reality, the researcher must be objectively detached from the study in order to discover the real nature of things (Guba and Lincoln, 1994). The objectivist epistemology sees only one objective truth, devoid of conscience, which can only be ascertained by scientific research. According to Crotty (2020), truths and meaning exist objectively in themselves, waiting to be discovered with precision and certainty through scientific research. Similarly, the positivist view posits that knowledge can only be arrived at from the deductive gathering of facts, which serve as a basis for the formulation of laws (Bell et. al., 2022).

Since the findings of this research are intended to aid generalization of the issue under investigation, the positivist perspective was adopted. Hence, objectivism underpins our positivist philosophical perspective and subsequently, the choice of a survey research methodology. This research therefore adopts an objectivist viewpoint in attempting to provide answers to the study's research questions. Hence, the researchers who are Nigerians,

detached their preconceived views and opinions about the digital media literacy of Nigerians and relied on the findings of the empirical data to ascertain the true nature of things.

3. Methodology

The research design was both descriptive and correlational, while quantitative methodology was adopted for this study. , An online survey was the method of data collection deployed, while the instrument of data collection was an online questionnaire. This method offered a convenient and seamless avenue for administering and collating responses electronically into a database. Quantitative method allows for the collection of data from a large population, as well as when the issue under investigation is well defined (Ahmad et. al, 2019). It is also useful for generalization of findings from a sub-group in a study, to an entire population.

The population for this study was purposively chosen from students and staff of the University of Lagos (UNILAG), the most populated public university that is situated in Lagos state, Nigeria. Lagos was selected for this research because it is the most populated urban city in Nigeria, has the most universities, and is the fastest-growing city in Nigeria. A student population was preferred because according to Dame Adjin-Tettey (2022), they are the heaviest users of innovative digital tools and platforms. A structured questionnaire with 17 close-ended and one open-ended question was administered online using Google Forms, and sent to a total of 220 respondents via email and social networking sites. The survey data was collected from the 1st to 22nd of June 2023. Likert scales were used to assess the participants' perceptions of their online habits, digital media usage and consumption. The online sample size calculator (RAOSOFT) was used to calculate the sample size for this study. Using a population size of 44, 000 for staff and students of the University of Lagos, a confidence level of 95%, a margin of error of 5% and a response distribution of 85%, the sample size arrived at was 196.

Figure 1. Sample size calculation

3.1. Instrument Reliability and Validity

3.1.1. Reliability

Cronbach's alpha coefficient was used to determine the reliability and internal consistency of the 9-item Literacy scale. Therefore, the results indicate that the scale has good reliability and internal consistency (Cronbach's alpha coefficient = 0.664).

Scale: LITERACY

Case Processing Summary

		N	%
Cases	Valid	200	96.6
	Excluded[a]	7	3.4
	Total	207	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.664	.650	9

Figure 2. Reliability Scales

3.1.2. Validity

The results obtained from the Pearson correlation coefficient show that the questions are valid. Correlation is significant at the 0.05 level (2-tailed).

The research instrument passed the reliability and validity test.

Correlations

		Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Total
Q1	Pearson Correlation	1	.096	.386**	-.171*	.213**	.061	.321**	.112	.577**
	Sig. (2-tailed)		.172	.000	.014	.002	.391	.000	.113	.000
	N	205	205	205	205	205	203	204	203	205
Q2	Pearson Correlation	.096	1	.092	.094	-.187**	-.093	-.121	-.090	.313**
	Sig. (2-tailed)	.172		.191	.179	.007	.188	.084	.202	.000
	N	205	205	205	205	205	203	204	203	205
Q3	Pearson Correlation	.386**	.092	1	-.084	.146*	.137	.210**	.042	.533**
	Sig. (2-tailed)	.000	.191		.233	.037	.051	.003	.556	.000
	N	205	205	205	205	205	203	204	203	205
Q4	Pearson Correlation	-.171*	.094	-.084	1	-.104	.068	-.103	-.009	.212**
	Sig. (2-tailed)	.014	.179	.233		.140	.338	.142	.894	.002
	N	205	205	205	205	205	203	204	203	205
Q5	Pearson Correlation	.213**	-.187**	.146*	-.104	1	.200**	.424**	.224**	.391**
	Sig. (2-tailed)	.002	.007	.037	.140		.004	.000	.001	.000
	N	205	205	205	205	205	203	204	203	205
Q6	Pearson Correlation	.061	-.093	.137	.068	.200**	1	.297**	.102	.485**
	Sig. (2-tailed)	.391	.188	.051	.338	.004		.000	.149	.000
	N	203	203	203	203	203	203	202	201	203
Q7	Pearson Correlation	.321**	-.121	.210**	-.103	.424**	.297**	1	.381**	.659**
	Sig. (2-tailed)	.000	.084	.003	.142	.000	.000		.000	.000
	N	204	204	204	204	204	202	204	202	204
Q8	Pearson Correlation	.112	-.090	.042	-.009	.224**	.102	.381**	1	.368**
	Sig. (2-tailed)	.113	.202	.556	.894	.001	.149	.000		.000
	N	203	203	203	203	203	201	202	203	203
Total	Pearson Correlation	.577**	.313**	.533**	.212**	.391**	.485**	.659**	.368**	1
	Sig. (2-tailed)	.000	.000	.000	.002	.000	.000	.000	.000	
	N	205	205	205	205	205	203	204	203	206

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

Figure 3. Correlations

4. Analysis and Discussion

The survey data was analyzed and presented using descriptive (see Appendix A) and inferential statistics. Some of the results were also presented in graphs and charts. From the 220 questionnaires administered, 207 responses were received, out of which 109 (53.2%) were women while 96 (46.8%) were men. The results of the survey showed that 88.8% of the respondents were highly intellectual (Figure 2), with qualifications spanning Bachelors, Masters and Doctorate degrees.
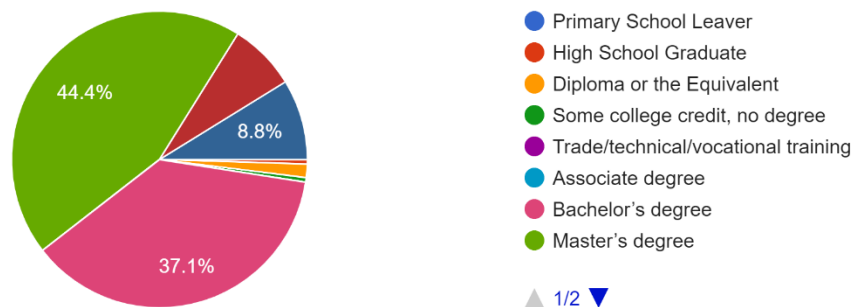
Highest Educational Qualification
205 responses

Legend:
- Primary School Leaver
- High School Graduate
- Diploma or the Equivalent
- Some college credit, no degree
- Trade/technical/vocational training
- Associate degree
- Bachelor's degree
- Master's degree

▲ 1/2 ▼

Figure 4. Highest Educational Qualification

		How proficient are you with creating and sharing content on the Internet?	How frequently would you rate your usage of online platforms post-covid?
How proficient are you with creating and sharing content on the Internet?	Pearson Correlation	1	.386**
	Sig. (2-tailed)		.000
	N	205	205
How frequently would you rate your usage of online platforms post-covid?	Pearson Correlation	.386**	1
	Sig. (2-tailed)	.000	
	N	205	205

**. Correlation is significant at the 0.01 level (2-tailed)

Figure 5. Correlation of Digital Media Literacy and Usage Frequency

There is a statistically significant relationship between usage frequency and digital media literacy and the correlation between them is positive. Hence, an increase in the usage frequency of social media in turn leads to an increase in the proficiency of users' ability to create and share content.

The Correlation is significant at the 0.01 level (2-tailed).

Correlation coefficient (r) = .386 indicating a moderate correlation.
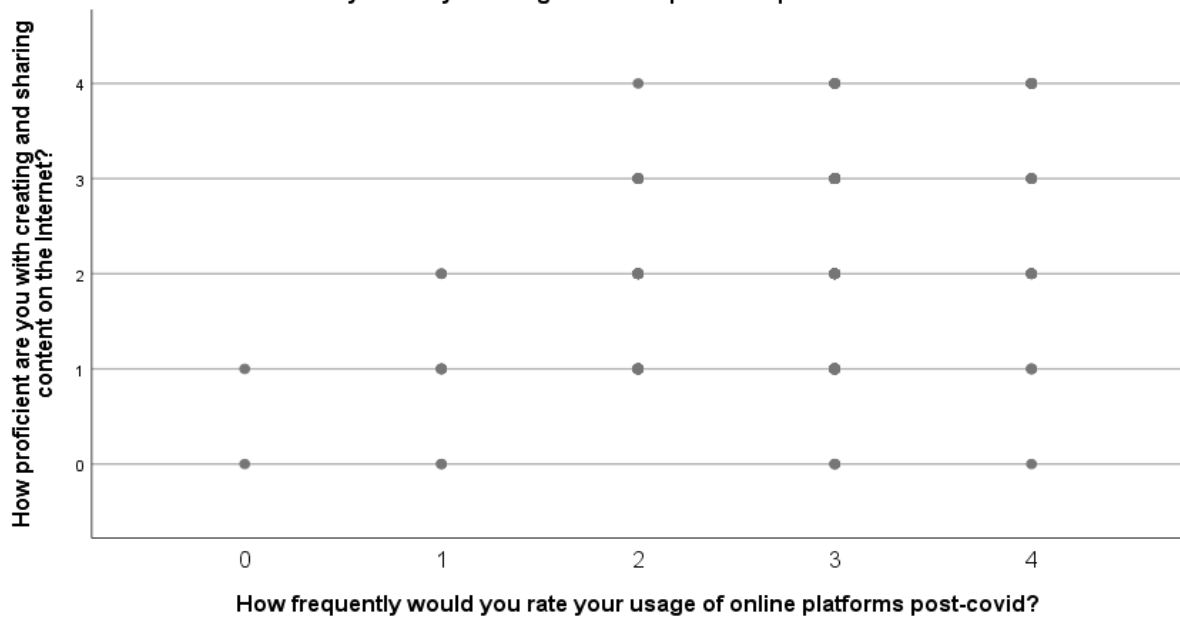

Figure 6. Scatter plot of Digital Media Literacy and Usage Frequency

The scatter plot graph in Figure 4 indicates a linear relationship between proficiency in sharing and creating content and frequency of usage of online platforms. The data analysis of the survey data revealed that the Covid-19 pandemic led to an increased usage of social media platforms among different categories of users. This in turn resulted in the improvement in the proficiency of users in creating and sharing content online.

While the pie chart (Figure 5) depicts the participants' extremely high ability to identify false and misleading digital content online (85.3%), their intention to be ethical in the use of digital media in the post-Covid era is equally very high at 82.7% (Figure 6). Arguably, this means that their propensity to share misleading information online is very low (13.2%) as depicted

in Figure 7. Similarly, the results of the descriptive statistics in figures 8 and 9 below also show a significant relationship between identifying misleading content online and ethical digital media usage post-Covid.

I can identify false and misleading digital content on the Internet
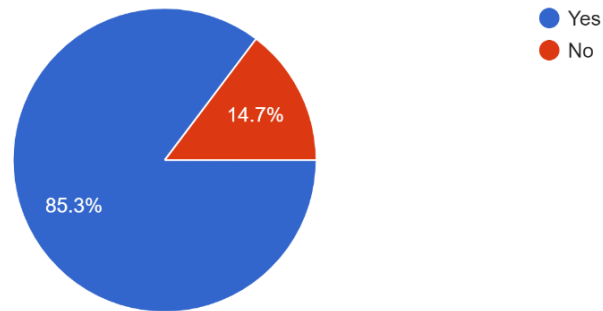204 responses

Figure 7. Identifying false and misleading digital content online

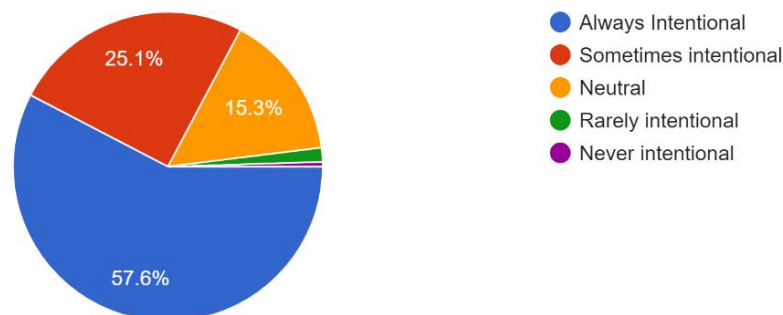**How intentional are you about ethical digital media use in the post-covid era?**
203 responses

Figure 8. Intentional ethical digital media use in the post-Covid era

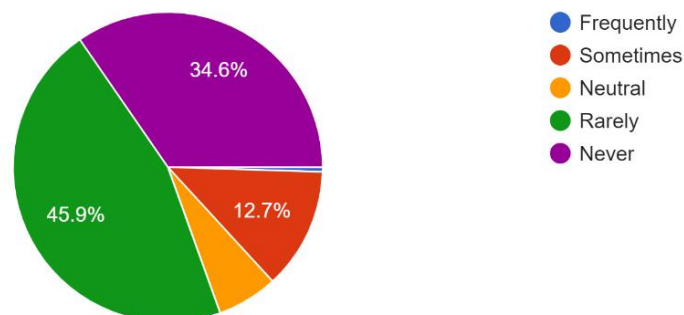**I have shared misleading information online**
205 responses

Figure 9. Sharing misleading information online

		I can identify false and misleading digital content on the Internet	How intentional are you about ethical digital media use in the post-covid era? "
I can identify false and misleading digital content on the Internet	Pearson Correlation	1	.198**
	Sig. (2-tailed)		.005
	N	204	202
How intentional are you about ethical digital media use in the post-covid era? "	Pearson Correlation	.198**	1
	Sig. (2-tailed)	.005	
	N	202	203

**. Correlation is significant at the 0.01 level (2-tailed)

Figure 10. Correlation of Identifying False Information and Intentional ethical digital media use in the post-Covid era

The Correlation is significant at the 0.01 level (2-tailed).

$$r = [n\sum x2 - (\sum x)2][n\sum y2 - (\sum y)2)]n(\sum xy) - (\sum x)(\sum y)$$

Correlation coefficient r = .198 indicating a positive significance at a negligible level.
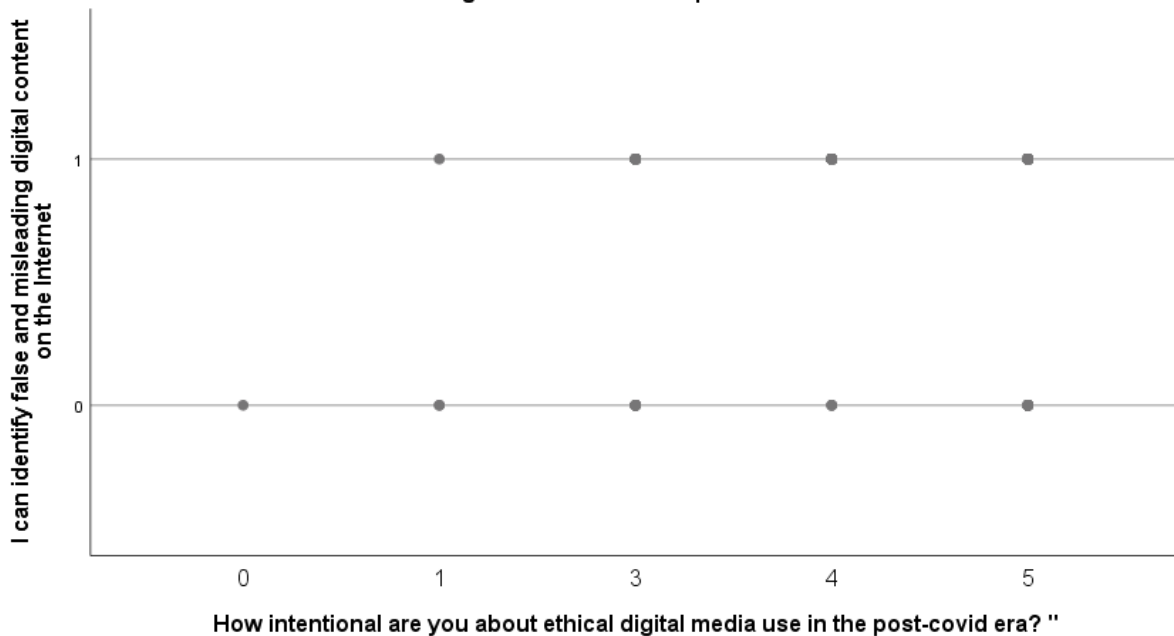

Figure 11. Scatter plot of Identifying False Information and Intentional ethical digital media use in the post-covid era

The results of the correlation analysis show a high correlation between consumers' identification of misleading digital content and their intention to conform to ethical digital media use in the post-Covid era. Therefore, it can be inferred from these results that since the consumers in contemporary times are able to identify misleading content online and they have a low propensity to create or further disseminate such misleading content, therefore they have a relatively high knowledge and compliance to ethical digital media literacy in the post-Covid era. These results answer the first research question of the study.

Although the participants claimed to be more intentional about ethical digital media use and authenticating the content they disseminate online, 45.9% did not indicate the use of any fact-

finding tools. A further 7.5% indicated that they rely on Google searches or trusted online newspapers (Punch, Premium Times, and others), mainline media organizations, verified websites and even ChatGPT (see Figure 10). An interesting perspective to this argument is that the Internet (including online news sites) is populated by user-generated content from humans and sometimes Artificial Intelligence bots. If such content is originally false or misleading, search engines like Google will only find and display the same false information to users, who rely on search engines to validate information online. The converse of this argument also applies.
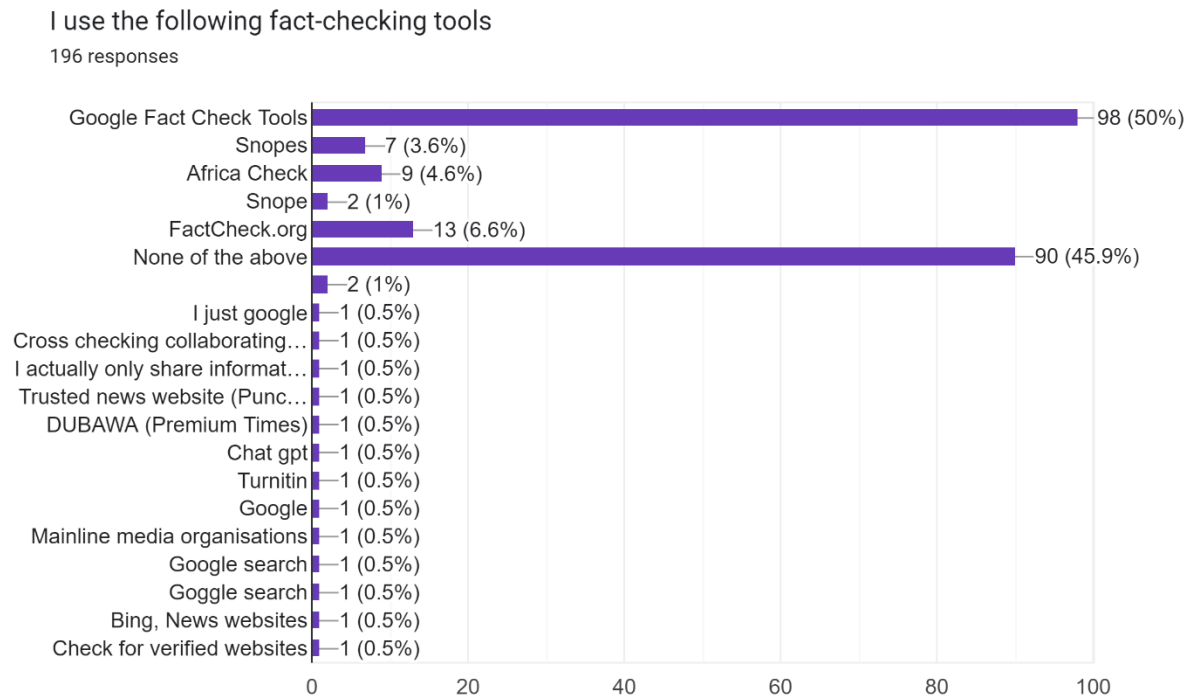
I use the following fact-checking tools
196 responses

Tool	Count (%)
Google Fact Check Tools	98 (50%)
Snopes	7 (3.6%)
Africa Check	9 (4.6%)
Snope	2 (1%)
FactCheck.org	13 (6.6%)
None of the above	90 (45.9%)
	2 (1%)
I just google	1 (0.5%)
Cross checking collaborating…	1 (0.5%)
I actually only share informat…	1 (0.5%)
Trusted news website (Punc…	1 (0.5%)
DUBAWA (Premium Times)	1 (0.5%)
Chat gpt	1 (0.5%)
Turnitin	1 (0.5%)
Google	1 (0.5%)
Mainline media organisations	1 (0.5%)
Google search	1 (0.5%)
Goggle search	1 (0.5%)
Bing, News websites	1 (0.5%)
Check for verified websites	1 (0.5%)

Figure 12. The use of fact-checking tools

		I can identify false and misleading digital content on the Internet	I fact-check messages before sharing
I can identify false and misleading digital content on the Internet	Pearson Correlation	1	.455**
	Sig. (2-tailed)		.000
	N	204	202
I fact-check messages before sharing	Pearson Correlation	.455**	1
	Sig. (2-tailed)	.000	
	N	202	203

**. Correlation is significant at the 0.01 level (2-tailed)
Figure 13. Correlation of Identifying False Information and Fact-checking messages before sharing

$$r=[n\sum x2-(\sum x)2][n\sum y2-(\sum y)2)]n(\sum xy)-(\sum x)(\sum y)$$

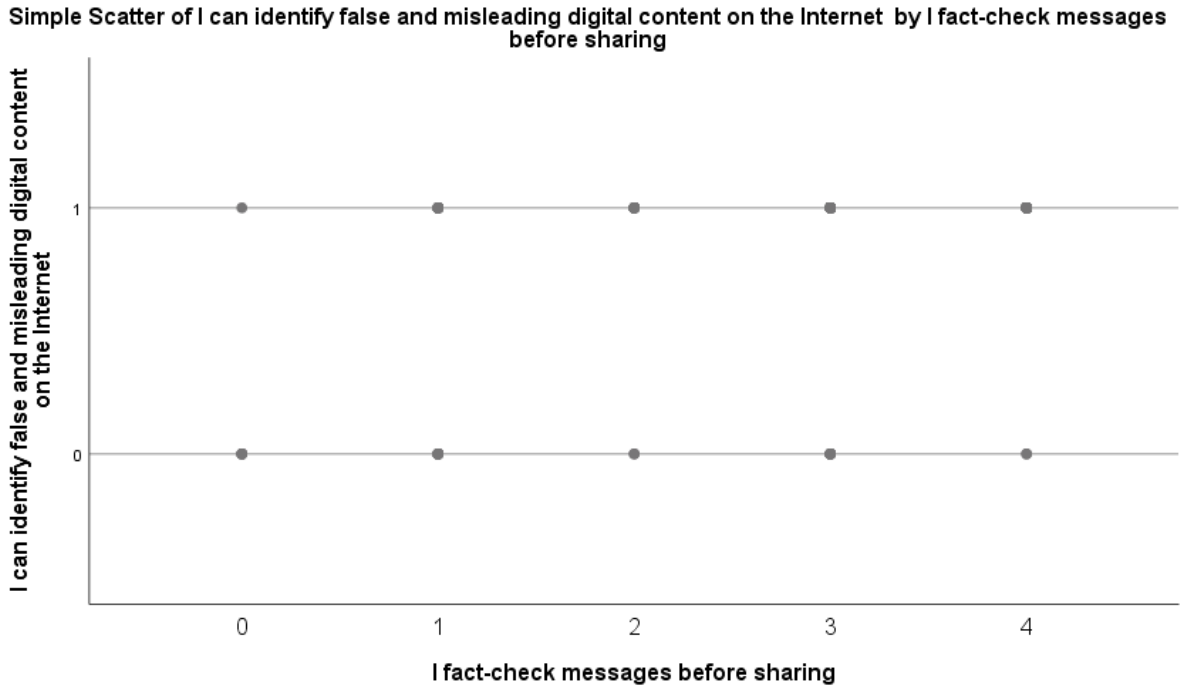Correlation coefficient r = .455 indicating a positive significance at a low level.

Figure 14. Scatter Plot of Identifying False Information and Fact-checking messages before sharing

		How intentional are you about ethical digital media use in the post-covid era? "	I fact-check messages before sharing
How intentional are you about ethical digital media use in the post-covid era? "	Pearson Correlation	1	.313**
	Sig. (2-tailed)		.000
	N	203	201
I fact-check messages before sharing	Pearson Correlation	.313**	1
	Sig. (2-tailed)	.000	
	N	201	203

**. Correlation is significant at the 0.01 level (2-tailed)

Figure 15. Correlation of Intentional ethical digital media use in the post-Covid era and Fact-checking messages before sharing

$$r=[n\sum x^2-(\sum x)^2][n\sum y^2-(\sum y)^2)]n(\sum xy)-(\sum x)(\sum y)$$

Correlation coefficient r = .313 indicating a positive significance at a low level.
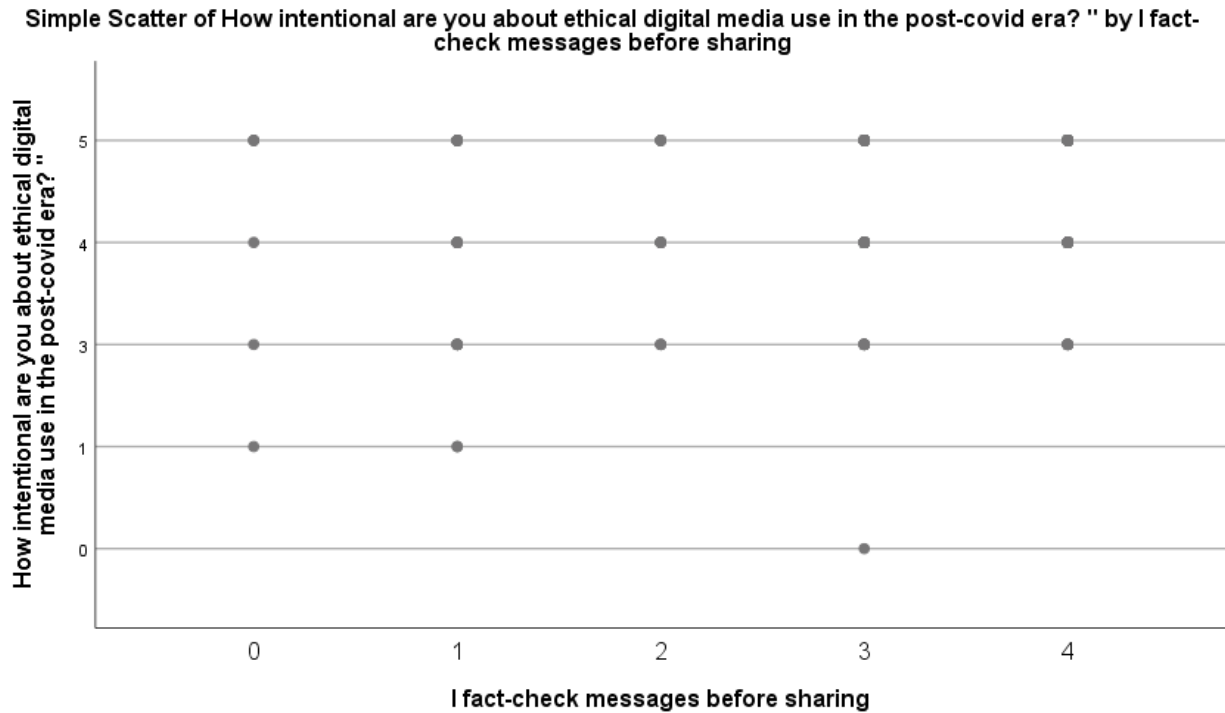
Figure 16. Scatter Plot of Intentional ethical digital media use in the post-Covid era and Fact-checking messages before sharing

The results of the correlation analysis in figures 11 and 13 show a low propensity to fact-check information online before creating and disseminating digital content, as well as a low correlation between consumers' identification of misleading digital content and their intention to conform to ethical digital media use in the post-Covid era.

Do you have access to tools that enable you fact check information online?
204 responses

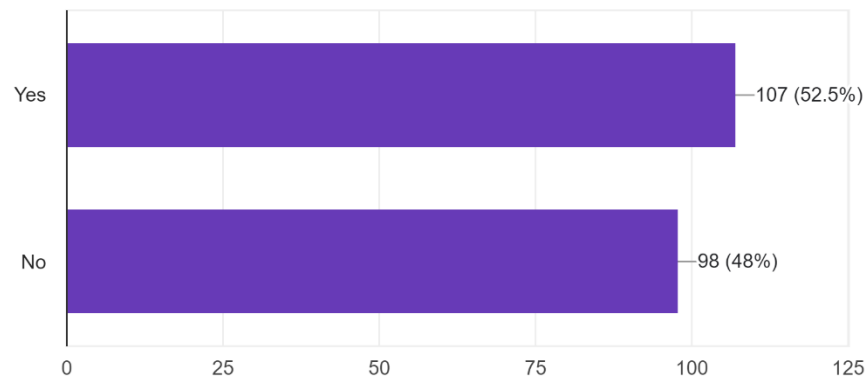*Figure 17.* Access to Fact-checking Tools Online

Furthermore, it can be inferred from the results of Figure 15 that consumers do not have access to scientific fact-checking tools online. Arguably, consumers share or refuse to share media content based on intuition or the viral nature of the content online, and not on scientifically informed instruments. This could be one of the reasons why mis- and

disinformation persists in the society. Therefore, this finding answers the second research question.

This finding is consistent with the argument by Rapp and Salovich (2018) that the inability of consumers to critically assess and discern content intended for disinformation could lead to dire consequences for the society. These findings answer the first, third and fourth research questions of this study. In line with the refracted publics framework (Abidin, 2021) and the findings from this study that underscore the objectivist epistemology (which uses scientific tools to ascertain the true reality of the extent to which Nigerians have attained ethical media literacy in the post-Covid digital era), it is pertinent that public discourse on social media be evaluated critically beyond what exists as popular opinion.

5. Conclusion

In conclusion, the digital age has presented new ethical challenges for journalism because of the reduced entry barriers and the unregulated nature of information that is shared on the Internet. However, it is also an avenue for correcting mis- and dis-information on a global level. Therefore, by adhering to principles of accuracy, impartiality, privacy, and independence, journalists can maintain their credibility and the trust of their audience. It is important for journalists to prioritize these principles in their reporting to ensure that the public can rely on them for accurate and reliable information.

The Covid-19 pandemic increased the rate at which consumers create and share digital content online, as well as their reliance on online platforms for communication, information dissemination, education and religious activities (see Appendix A). The level of false and misleading information during the Covid era also increased consumers' reluctance to share misleading information online, which increased their intention to be ethical in the creation and dissemination of content online, in the post-Covid era. Furthermore, a significant number of consumers claimed to be more intentional about using fact-checking tools to confirm the veracity of the content they consume, create and disseminate online. However, an insignificant percentage of consumers are deliberate about using scientifically verified fact-checking tools, while majority of them rely on Google searches, intuition and the viral nature of the content before deciding to create or share same online.

The findings from this study are useful for policy development and implementation. It is pertinent that policymakers prioritize the teaching of digital media literacy to students of journalism and media studies at the tertiary levels in African institutions. This will prepare them for successful careers either as freelancers or in media outlets. Specifically, the journalism pedagogy should be designed and enriched with new realities in digital journalism and media practices that are consistent with the post-Covid era, support the development of ethical digital media literacy and consequently influence positive transformations in African societies.

The importance of using Artificial Intelligence (AI) tools as well as human intelligence to verify what fact-checking tools uncover cannot be over-emphasized. This is because if the algorithms of AI tools are not effective, they will still spool mis-leading results to consumers, similar to the case of the 'EndSars' reporting in Nigeria (Adekoya, 2021; Ajaegbu et. al., 2022). Therefore, individuals also need to be intentional about populating the web with verified user generated content. The physical investigation and confirmation of information or news stories by humans, in conjunction with supporting pictures and audio or video evidence, should be intentionally sought and disseminated on the web for mass consumption. Essentially, what is required is a paradigm shift in the minds of Africans that AI is not just another tool of the digital revolution, but one that is capable of redefining societal norms.

6. Recommendations

The media literacy problems experienced by African countries are largely a result of poor policy implementation and not poor policy creation. A good media policy may limit mal-information (hate speech) online but its implementation should not restrict journalists' freedom of expression. It is recommended that policymakers and civil society groups should ensure that online journalists are protected from attacks like "trolling", which could sometimes affect their mental health. This can be achieved by public sensitization campaigns on all offline and online media channels, educating the public on the dangers of cyber bullying, Internet trolling, privacy infringement of journalists, and the dangers of consuming and disseminating misleading digital online content.

It is also recommended that Schools of Journalism and Media Studies in African higher educational institutions should update their current curriculum and training programmes to include latest strategies for teaching ethical digital media literacy at both the academic and practitioner level, through regular classroom sessions, workshops, seminars and symposiums. The new curriculum needs to cover both offline and online ethical journalism practices that are reflective of major challenges in their countries and region. These efforts will greatly improve the intention of content creators and the general public to be critical in the discernment and verification of digital content online. Ultimately, it is hoped that these efforts will prevent or reduce the mass dissemination of dis-, mis- and mal-information. Additionally, higher educational institutions should strive to improve networking relationships across journalism teachers, researchers and practitioners. This will ensure that findings from conferences, symposiums and latest empirical academic research are adequately communicated to practicing journalists for implementation in their careers.

Furthermore, the governments of African countries would need to be intentional about implementing ethical digital media literacy in tandem with their mass literacy efforts, since the findings of this study show that high cognitive skills tend to cause a reduction in the dissemination of misleading digital content. The relevant regulatory ministries, departments, agencies of education, information and communication would need to aggressively work with educational institutions and civil society groups to ensure that this goal is achieved. Also, it is recommended that they formulate and implement policies that discourage and penalize the fueling of mis, dis and mal-information within Africa's Internet space. All these efforts will contribute towards ensuring a more ethical and digitally literate African society.

The sample used for this study was culled from a public university in an urban city of Nigeria. It would be interesting to conduct a similar study using a heterogeneous sample of both intellectual and non-intellectual individuals in the six geo-political zones of Nigeria. This is because ethical media literacy is not limited to intellectuals in the society. Also, a mixed-methods research design could be adopted such that qualitative methods would be able to ask further probing questions and extract the nuances in the consumers' responses regarding the study under investigation.

References

Abidin, C. (2021). From "Networked Publics" to "Refracted Publics": A Companion Framework for Researching "Below the Radar" Studies. Social Media + Society, 1-13. https://doi.org/10.1177/2056305120984458

Adekoya, C. O. (2021). Information and Misinformation during the# EndSARS Protest in Nigeria: An Assessment of the Role of Social Media. COVENANT JOURNAL OF LIBRARY AND INFORMATION SCIENCE.

Ahmad, S., Wasim, S., Irfan, S., Gogoi, S., Srivastava, A., & Farheen, Z. (2019). Qualitative v/s. quantitative research-A summarized review. Journal of Evidence Based Medicine and Healthcare, 6(43), 2828-2832. https://doi.org/10.18410/jebmh/2019/587

Ajaegbu, O., Ajaegbu, C., & Quilling, R. (2022). Nigeria EndSARS Protest: False Information Mitigation Hybrid Model. Ingénierie des Systèmes d'Information, 27(3). https://doi.org/10.18280/isi.270311

Apuke, O. D., & Omar, B. (2020). Fake news proliferation in Nigeria: Consequences, motivations, and prevention through awareness strategies. *Humanities and social sciences*, 318-327. https://doi.org/10.18510/hssr.2020.8236

Auman, A., Stos, S., & Burch, E. (2020). Ethics Without Borders in a Digital Age. *Journalism & Mass Communication Educator*, 9 –15. https://doi.org/10.1177/1077695820901941

Bago, B., Rand, D. G., & Pennycook, G. (2020). Fake news, fast and slow: Deliberation reduces belief in false (but not true) news headlines. Journal of experimental psychology: general, 149(8), 1608. https://doi.org/10.1037/xge0000729

Bell, E., Bryman, A., & Harley, B. (2022). Business research methods. Oxford university press. https://doi.org/10.1093/hebz/9780198869443.001.0001

Boyd, D. (2010). Social Network Sites as Networked Publics: Affordances, Dynamics, and Implications. In Z. Papacharissi, A Networked Self. Routledge.

Buckingham, D. (2020). Rethinking digital literacy:Media education in the age of digital capitalism. Digital Education Review, 230-239. https://doi.org/10.1344/der.2020.37.230-239

Ceron, W., Santos, M. F.-L., & Quiles, M. (2021). Fake news agenda in the era of COVID-19: Identifying trends through fact-checking content. *Online Social Networks and Media*. https://doi.org/10.1016/j.osnem.2020.100116

Cherner, T. S., & Curry, K. (2019). Preparing Pre-Service Teachers to Teach Media Literacy: A Response to" Fake News". *Journal of Media Literacy Education*, 11(1), 1-31. https://doi.org/10.23860/JMLE-2019-11-1-1

Crotty, M. (2020). The foundations of social research: Meaning and perspective in the research process. https://doi.org/10.4324/9781003115700

Cunliffe-Jones, P., Gaye, S., Gichunge, W., Onumah, C., Pretorius, C., & Schiffrin, A. (2021). The state of media literacy in sub-Saharan Africa 2020 and a Theory of Misinformation Literacy. Misinformation Policy In Sub-Saharan Africa: *From Laws and Regulations to Media Literacy.* https://doi.org/10.16997/book53

Dame Adjin-Tettey, T. (2022). Combating fake news, disinformation, and misinformation: Experimental evidence for media literacy education. Cogent Arts & Humanities, 9(1), 2037229. https://doi.org/10.1080/23311983.2022.2037229

Egere, I. (2019). Digital media literacy in Africa: Precautionary principle and discourse strategies. *International Journal of Pedagogy, Policy and ICT in Education*, 7, 65-89.

Evanega, S., Lynas, M., Adams, J., & Smolenyak, K. (2020). Coronavirus misinformation: quantifying sources and themes in the COVID-19 'infodemic'. *JMIR Preprints*. https://doi.org/10.2196/preprints.25143

Guba, E. G., & Lincoln, Y. S. (1994). Competing paradigms in qualitative research. *Handbook of qualitative research*, eds N.K. Denzin & Y.S. Lincoln, Sage, Thousand Oaks, pp. 105-17.

Habermas, J., Lennox, S., & Lennox, F. (1974). The Public Sphere: An Encyclopedia Article (1964). *New German Critique*, *3*, 49. https://doi.org/10.2307/487737

Habermas, J. (1991). *The structural transformation of the public sphere: An inquiry into a category of bourgeois society*. The MIT Press.

Knight, C. (2020). Emotionality and professionalism: Exploring the management of emotions by journalists reporting on genocide. Sociology, 54(3), 609-625. https://doi.org/10.1177/0038038519882608

Leaning, M. (2019). An Approach to Digital Literacy through the Integration of Media and Information Literacy. *Media and Communication*, 4-13. https://doi.org/10.17645/mac.v7i2.1931

Lee, N. M. (2018). Fake news, phishing, and fraud: a call for research on digital media literacy education beyond the classroom. *Communication Education*, 67(4), 460-466. https://doi.org/10.1080/03634523.2018.1503313

Mellado, C., & Alfaro, A. (2020). Platforms, journalists and their digital selves. Digital journalism, 8(10), 1258-1279. https://doi.org/10.1080/21670811.2020.1817763

Naeem, S. B., Bhatti, R., & Khan, A. (2021). An exploration of how fake news is taking over social media and putting public health at risk. *Health information and libraries journal*. https://doi.org/10.1111/hir.12320

Ofori-Parku, S. S., & Botwe, K. (2020). "This is (not) journalism": Corruption, subterfuge, and metajournalistic discourses on undercover journalism in Ghana. Journalism Studies, 21(3), 388-405. https://doi.org/10.1080/1461670X.2019.1664928

Rapp, D. N., & Salovich, N. A. (2018). Can't we just disregard fake news? The consequences of exposure to inaccurate information. Policy Insights from the Behavioral and Brain Sciences, 5(2), 232-239. https://doi.org/10.1177/2372732218785193

UNESCO. (2019). Journalism, "Fake News" and Disinformation: A Handbook for Journalism Education and Training. Paris: UNESCO. https://en.unesco.org/fightfakenews/

UNESCO. (2020). Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression. Paris: UNESCO. https://en.unesco.org/publications/balanceact/

Uwalaka, T., Nwala, B., & Chinedu, A. C. (2021). Social media, fake news and fake COVID-19 cures in Nigeria. *Journal of African Media Studies*. https://doi.org/10.1386/jams_00058_1

Wasserman, H. (2022). Disinformation in the Global South. D. Madrid-Morales (Ed.). John Wiley & Sons, Incorporated. https://doi.org/10.1002/9781119714491

WHO (2020). *Novel Coronavirus (2019 -nCOV) Situation Report* - 13. World Health Organisation (WHO).

Zevallos, J. D., & Martínez, L. B. (2023). COVID-19: Vaccination in a developing country. *Journal of Public Health*, e362-e363.