

DELTA JOURNALISTS' AWARENESS AND PERCEPTION OF THE USE OF ARTIFICIAL INTELLIGENCE IN JOURNALISM PRACTICE IN NIGERIA

NKIRU COMFORT EZEH (Ph.D)
Department of Mass Communication
Novena University Ogume, Delta State
ezehnkiru_ct@yahoo.com
+2348063287160

EMMANUEL CHUKUKA ODISHIKA
Department of Mass Communication
Novena University Ogume, Delta State
odishikaemmanuel@gmail.com
+2348066568533

&

CALISTUS C. DIKE, (Ph.D)
Department of Mass Communication
Novena University, Ogume, Delta State
caludyke@gmail.com
+2348039432782

Abstract

This study examined the awareness, usage and perception of Delta state Journalists regarding artificial intelligence in journalism practice in Nigeria. Two theories – Technological Acceptance Model and Lazy User Model of Solution Selection – were the theoretical foundation for this study. The study adopted survey design. Using census sampling method, the population consists of 312 journalists in Delta State. 103 respondents formed the sample size. Among the findings of this study, it was found that journalists in Delta State were aware of the emerging use of AI for journalism practice, the aspect with the highest influence being automated content writing. Nonetheless, they perceive that AI will do more good to journalism practice in the state than harm, at such should be adopted and integrated into the already existing system. With these findings, it is recommended that media houses, individual journalists even the government should harness ways of adapting and integrating the use of AI for journalism practice in the state, and even at the national level.

Keywords: Artificial intelligence, Awareness, Journalism, Perception

Introduction

Undoubtedly, AI is gradually affecting a variety of creative industries, including journalism, which has already been impacted by many other technological advances in the past. This is especially true given ongoing economic disruption and the digital revolution. In this sense, it can be asserted that the emergence of AI approaches has the tendency to fundamentally alter life and activities in newsrooms, particularly in relation to all areas of news creation and transmission. It is nothing to argue that whether in terms of the printing press or radio waves, the media sector has always changed in tight correlation with technological advancement (Waleed, 2019). Artificial intelligence (AI) refers to the ability of a computer's or a robot to carry out tasks that are typically performed by people since they call for human intelligence and judgment.

At this time, automation and artificial intelligence (AI) are major forces behind the evolution and/or revolution of the media in the ways that news and other media material is created, disseminated, and

consumed (Ukpong and Okpongkong, 2022; Pihlajarinne and Alén-Savikko,n.d). The growing use of AI and automation in media practices and the underlying technological architecture calls into question established media roles and functions and suggests changes to journalistic labor (Picard and Pickard, 2017). Matter of fact, Nnamdi and Nwanyanwu (2021) revealed from their study that artificial intelligence (AI) is changing present day journalism. Automated news writing and distribution, without human supervision, is already a reality. In fact, AI has changed the way journalists interact with the world outside the newsroom. It enables journalists to analyze data from multiple sources. In sum, they stated that artificial intelligence will help journalists to survive and overcome the core problems faced by contemporary journalism. Their study article

Following this, the use of AI has a wide range of effects on the media industry, from traditional media to internet platforms like social media. Additionally, according to Napoli (2011), the modifications affect the media's institutional structure deeply. It is becoming more and more crucial to perceive the media industry as a whole rather than as various silos. The boundaries of editorial behavior are no longer clearly defined, and there are problems with traditional theories of the media's purpose and function as well as with the incentives and conditions that allow for its operation in the modern digital age and data-driven society.

According to Saad and Issa (2020) cited the process of acquiring information, editing and publishing news, managing the journalistic activity, and the personalities of the parties participating in the journalistic process are only a few of the changes and alterations that have occurred in the field of journalism in recent years. The relationship between the journalist as a news producer and the public as a consumer and recipient has changed as a result of these changes. The journalist is no longer the only source of information, news, and opinion, and the public is no longer merely a passive audience but is now an active participant in the journalism process. This has resulted in numerous changes to the identity of journalism as well as to its goals, roles, and practices (Amal, 2010).

Consequently, the advent of artificial intelligence and its emerging use for journalism practice has raise great debates and argument. While some journalists and media believe that the advent of AI spells doom for human journalists; according to Salazar (2018), more and more media are embracing AI by integrating this technology into their various departments, from marketing to writing and design, and successfully automating many of their tasks in order to get out of economic and live-threatening crisis challenging the media. This is according to the most recent report by the Associated Press entitled “How Artificial Intelligence will impact journalism” (Marconi, 2017). In order to improve its outcomes, the American daily The New York Times has really utilized machine learning algorithms to look for trends in the finance data of its advertising campaigns. They also employ AI for content creation and management.

In Nigeria, it is obvious that the adoption of AI for content creation and management is still at its cradle stage. From cursory observation it is assumed that in as much as the knowledge of the trend is gaining prominence, its adoption and use requires empirical findings to ascertain. It is as a result of this that this study seeks to find out whether journalists in Delta State are aware of the use of artificial intelligence for journalism practices; the aspects of the emerging global trend of using artificial intelligence for journalism practice that journalists in Delta State are aware of; whether journalists in Delta State use artificial intelligence for journalism; and the perception of journalists in Delta State regarding the use of artificial intelligence in journalism practice in Nigeria.

Statement of the Problem

Many times and on several occasions the types of news journalists want to source for, write and disseminate require the journalist to put his or her lives in danger in order to gather the information. For instance, in COVID-19, reporters went outside to gather the information but ended up contracting the deadly virus in the course of trying to do their service to society. Other examples include earthquakes and bomb explosions, in which journalists on news hunting became victims of circumstances. In addition to this, the hostility that journalists face from their sources, the government and other government agencies are becoming heated. These situations drive media establishments and individual journalists to look for ways to be a bit distanced from the scene or sources of their stories.

Among the ways in which journalists attempted to achieve this distance was mobile journalism (*mojo*), the use of drones, third party source such as social media handles of their sources, etc. These could do the much it could as it was still fully dependent on the journalists to achieve the stated goals. Be that as it may be, the advent of artificial intelligence provides a possible solution to the problem. It has been assumed by a number of media scholars that AI can be very helpful because it can take up these live threatening journalism-related tasks away from the human journalists; and, reduce the exposure of journalists to live threats.

For this reason, it is said that AI can minimize human journalism related tasks. In as much as some scholars and journalists are pessimistic that the emphasis on machines during the job of journalists will lead to human journalists being redundant and subsequently irrelevant as time goes on. On the other hand, yet many others do not consider AI to be a threat. These conflicting schools of thought require in-depth and empirical study. It is as a result of this concern that this study was conducted to examine the awareness of journalists in Delta state and their opinion about the use of artificial intelligence in journalism.

Research Objectives

The objectives of this study were to:

- i. find out the extent to which journalists in Delta State are aware of the use of artificial intelligence for journalism practices;
- ii. determine which aspects of artificial intelligence for journalism practice that journalists in Delta State are aware of;
- iii. establish whether journalists in Delta State use artificial intelligence for journalism; and,
- iv. examine the perception of journalists in Delta State regarding the use of artificial intelligence in journalism practice in Nigeria.

Research Questions

The following questions were drawn from objectives to guide the execution of this study:

- i. To what extent are journalists in Delta State aware of the use of artificial intelligence for journalism practices?
- ii. Which aspects of artificial intelligence for journalism practice are journalists in Delta State are aware of?
- iii. Do journalists in Delta State use artificial intelligence for journalism?
- iv. How do journalists in Delta state perceive the use of artificial intelligence in journalism practice in Nigeria?

Scope of the Study

This study is delimited to the awareness and perception of Delta State journalists regarding the emerging trend of using Artificial Intelligence to perform a wide range of journalism-related task. This study delimits the concept awareness to mean seeing, reading, and/or hearing of Artificial Intelligence as it is used in journalism practices.

Significance of the Study

The finding of this study would be of great relevance within the media and journalism community and sector of the especially the digital and mass media. First, the media practitioners will realise the emerging role that artificial intelligence is playing in aiding the performance of journalism-related activities and it will highlight the challenge mitigating this practice. With this, the media houses, government as well as individual journalists can setup funding scheme to help facilitate and integrate the use of artificial intelligence for carrying out journalism practice – sourcing, gathering, producing and disseminating journalistic contents and creativity.

Second, the government would realise the important of using artificial intelligence for journalism practices, especially in this digital era. The mass media as a result of the finding of this study will discover the relevance of integrating this practice; thereby, making them to put more efforts, time and planning in

order to give the practice the very best. Thirdly, AI experts in Nigeria will learn about the new job opportunity opening for them in the media sector of the country and role they can play in giving a more professional touch to this practice. This awareness will enable them to partner with media practitioners to develop AI systems, contents and programmes that are of good quality and standard.

Lastly, this study will be a great contribution to the already existing body of knowledge in the areas of the use of artificial intelligence and the impact on journalism practice in Nigeria. Further researchers will find this study a resourceful methodological and empirical guide and foundation for their study that are similar in scope and method.

Conceptual Review

Understanding What Artificial Intelligence is

On a very basic level, machines that replicate and exhibit "human" cognitive abilities associated with the human mind, such as "learning" and "problem solving," were historically referred to as having "artificial intelligence." Major AI researchers now explain AI in terms of rationality and acting rationally, respecting this concept since it does not restrict how intelligence may be expressed. Advanced online search engines like Google, reconditioning systems used by YouTube, Amazon, and Netflix, and speech recognition are all examples of uses for AI (such as class). According to a broad definition, artificial intelligence (AI) refers to computer technologies that can do some tasks in place of human intellect.

Additionally, artificial intelligence (AI) refers to a computer's or a robot controlled by a computer's capacity to carry out tasks that are typically performed by people since they call for human intelligence and judgment. There are several forms of artificial intelligence (AI) or AI-based systems, including reactive machines, machines with limited memory, theory of mind, self-aware AI, etc. In addition, it is artificial intelligence, not the kind that naturally exists in creatures like humans. Any system that maintains its surroundings and performs actions that maximize its chance of attaining its goal is referred to as an intelligence agent and is the subject of AI research (Fay, 2020).

From their perspective, Burns, Laskowski, and Tucci (2022) states that the replication of human intellectual functions by machines, particularly computer systems, is known as artificial intelligence. Expert systems, natural language processing, speech recognition, and machine vision are some examples of specific AI applications. One important question is how does AI function? According to them, for the creation and training of machine learning algorithms, AI requires a foundation of specialized hardware and software. For the most part, AI systems function by consuming enormous quantities of labeled training data, searching the data for correlations and patterns, and then utilizing these patterns to forecast future states. In this way, an image recognition program may learn to recognize and characterize things in photographs by looking at millions of instances, much as a Chatbot can learn to make lifelike dialogues with humans by being given examples of text chats.

Furthermore, learning, reasoning, and self-correction are the three cognitive abilities that AI programming focuses on: the methods for learning. This area of AI programming focuses on gathering data and formulating rules on how to transform the data into useful knowledge. Algorithms are sets of rules that give computer equipment detailed instructions on how to carry out a certain task; reasoning techniques, this area of AI programming is concerned with selecting the best algorithm to achieve a particular result; self-correcting mechanisms, this feature of AI programming is to continuously improve algorithms and make sure they deliver the most precise results.

A Peep into What Journalism Practice Entail

Britannica (2020) defines journalism is the process of gathering, preparing, and disseminating news, as well as related commentary and feature materials, through print and electronic media like newspapers, magazines, books, blogs, webcasts, podcasts, social networking and social media sites, as well as radio, movies, and television. Newspapers were the primary medium for reporting on current events when the term "journalism" was first used, but as radio, television, and the Internet became more widely used in the 20th century, the phrase came to refer to all written and electronic communication that covered current affairs.

According to Salazar (2018), there has been a significant transformation in journalism over the latter half of the 20th century and more lately. The Internet provides a never-ending supply of information and material for journalists (Salazar Garca, 2003). Unstructured data in the Network of Networks has increased exponentially since the World Wide Web's creation in 1991, which made it easier for all users to access the Internet. Before technology appeared, journalists were the ones who gave readers the information they thought would be useful. The latter may now pull from the Internet what they find most fascinating using a variety of tools, including blogs, forums, digital newspapers, and themed websites. Given that anyone with access to the Internet may post anything without having to tell the truth, the options are numerous and not always trustworthy.

Artificial Intelligence in Journalism: Prospect or Threat

Robots, algorithms, artificial intelligence (AI), and other technologies are becoming an essential component of the new media ecosystem. As a result, a number of businesses, including Microsoft, Facebook, Google, and Minecraft, are making investments in artificial intelligence right now. In this context, artificial intelligence (AI) introduced a new media idea, known today as "Robot Journalism," "Algorithm Journalism," or "Automated Journalism" as well. Indeed, we do not see robots using a keyboard when we talk about them. They are really algorithms that have been developed to convert data into messages. One of the intriguing things about the advent of a new technology is that when a new technology is introduced, there are two schools of thought that are developed around it. The first and possibly initial opinion is always that of pessimism. This is seemingly natural because people are initially repulsive to change. The first school of thought on the use of artificial intelligence holds the opinion that the adoption of machines to do human works will lead to the facing out of human manpower and labour force. This fear was justified as at the time being because no one could ascertain the capability of these machines – even till now the potentials of artificial intelligence has not been adequately harnessed.

On the other hand, some journalists are of the optimistic point of view that the use of artificial intelligence in journalism related tasks is not a threat to the human workforce; rather, it will help make the work easier. As one of the proponents of the optimistic school of thought, Ali and Hassoun (2019) opines that the future of journalism is not threatened by artificial intelligence. To put it another way, artificial intelligence (AI) technologies are seen as the value-added of journalism in the digital era, but they cannot fully replace journalists, suggesting that their work will be enhanced rather than replaced. The following is a summary of some of the main points.

Taking a similar stand with Ali and Hassoun, Fay (2020) believes that similar to the exponential expansion that database technology witnessed in the latter part of the 20th century, this technology is presently developing at a rapid rate. Databases have developed into the foundational technology that powers enterprise-level software. Similar to this, during the next several decades, it is anticipated that AI will account for the majority of new value added in software (Fay, 2020). Following this, Luengo (2021) opines that the international mainstream media has dynamically portrayed automated journalism as a fact. The numerous studies that have been released in recent years that assist us determine the kind of coverage for which this technology is now being employed serve as evidence of this. The Media associations have been enthusiastic about investing resources in AI and are actively experimenting with the technology, according to a survey done by Kim (2019). More seasoned candidates in AI, machine learning, data science, and mobile engineering are being sought by The New York Times. The digital business publication Quartz has announced the opening of an AI studio, which will collaborate with journalists and other media organizations to produce AI-based articles.

Ways AI is affecting Journalism

Tom (2018) outlined 10 ways that AI is affecting journalism, including the following:

1. The newsroom is already being automated by AI,
2. Journalists are being aided by AI,
3. AI is spawning novel investigation methods reporting,
4. AI aids in fact-checking and verification.

5. AI is developing a customized user experience,
6. AI should be open and honest to foster trust.
7. AI is having moral repercussions,
8. Copyright laws are being redefined by AI,
9. Journalists are being forced to refocus by AI retrain,
10. AI will not reduce expenses or jobs.

Empirical Review

Researches on the use of artificial intelligence in journalism and media are emerging. Accordingly, it is necessary to look at what has been done already in this area of study in order to form an empirical backbone for this study. The study of Ali and Hassoun (2019) established that artificial intelligence (AI) plays a key role in journalism. As a result, they conducted a study to describe the current state of technology and its contribution to renewing and modernizing journalism, provide insights about the impact of artificial intelligence in changing journalism practice, identify potential implications of artificial intelligence on the future of journalists; and extrapolate ethical and professional challenges that may upend the practices of the journalism profession.

According to the study's findings, artificial intelligence technologies are seen as enhancing journalism in the digital age, particularly because of their capacity to address some of the most pressing issues facing modern journalism, such as the fight against fake news, editorial policy-compliant news editing, and content personalization. The study also found that artificial intelligence in journalism raises a number of professional and ethical concerns, including the erosion of originality, the lack of oversight, prejudice, openness, and justice, as well as the use and quality of data. Additionally, it came to the conclusion that rather than replacing journalism, artificial intelligence technology will actually improve it. Therefore, professional journalism is not threatened by artificial intelligence.

In their study, Yasin, Iqbal and Islam (2021) detail the uses of AI by international and Pakistani journalists, as well as the risks and advantages of the technology. In-depth interviews were used to help this study reach its goals. As a theoretical foundation, Diffusion of Innovation is used. Both "AI plays a crucial role in transforming conventional journalism into modern journals" and "AI use improves the working abilities of journalists" were testable claims. It was discovered that both foreign and domestic journalists employ AI to improve the quality of their job, although foreign media is more advanced than domestic media. However, the technology has not yet been accepted by every organization on a national and worldwide level, therefore it will take more time to deploy this technology.

Also, Khattab (2010) conducted a study to deal with the impacts of new technologies on journalism in general, specially the robotics and artificial intelligence technology, and what media institutions is using these technologies and how? trying to answer the question: is Artificial Intelligence (AI) will replace humans in media industry? Or it would help them to improve their career? And use it to do their work fast, accurate and more efficient? The researchers used qualitative methods such as observation, analysis of documents, and systematic review of the literature, data was collected from books, news articles, websites, published and unpublished studies. The study found that rapid technical advancements benefitted journalism; in fact, printing, one of the most significant technology advances in human history, is what gave rise to the profession.

Whether it be communication, photography, aging, or computerization, Sage (2019) claims in a research study that every confluence of technological innovation has changed jobs, tasks, and work processes in newsrooms in some manner. Similar to how AI is changing news reporting now and in the future, it will occasionally take the place of a skilled journalist while more frequently boosting it. According to a few expert assessments, around 15% of a reporter's job and roughly 9% of an editor's labor might be automated utilizing current levels of AI progress. Last but not least, the study submits that AI will help with accelerating and size of information in routine conditions, reinforcement and improved journalists and even gain additional opportunities for ground and personalization that would for no situation be possible. It can't actually achieve the majority of the newsroom work in various circumstances; make new errand and kinds of work. There are many people who are aware of the inevitable future of AI in journalism.

In similar study, Salazar(2018) conducted a study that examined the astonishing societal effects of robotics and artificial intelligence (AI) across all fields, with a particular emphasis on journalism. It also examines how these ideas have changed through time and the impact that science fiction literature and film have had on them. The merits and disadvantages of several contemporary projects for the development and application of these new technologies in the communication medium have been outlined from a professional and ethical perspective. Additionally, a number of studies on the topic have been considered at the worldwide level, and the genuine applicability of these technologies in the relevant sector has been discussed with industry professionals. The findings enable us to imagine a new kind of journalism that relies on face-to-face interaction between humans and machines and requires the journalist to reinvent themselves in order to adapt to the new environment.

From a Nigerian perspective, Nnamdi and Nwyanwu (2021) explored how artificial intelligence is impacting newsrooms and how it can be better adapted to the field of journalism. The study reveals that AI is already automating the newsroom, AI is augmenting journalists, AI is creating new forms of investigative reporting, AI is helping to verify and factcheck, AI is creating a personalized user experience, AI is creating ethical implications. However, the study reveals journalists in Nigeria are yet to embrace AI. Many challenges affecting the adoption of AI in Newsrooms in Nigeria include lack of electricity to effectively power the AI applications; lack of adequate infrastructure; lack of finance to purchase and maintain these equipment costs of Internet connection and the training of AI handlers among others.

Although there are challenges facing journalists in the use of AI, which include that it undermines creativity, there is the absence of monitoring, there could be bias, and there could be lack of transparency, fact-checking and fairness among others. However, it is imperative journalists especially in the developing countries like Nigeria, adjust and embrace these changes occasioned by Artificial intelligence. The study reveals artificial intelligence does not pose a serious threat to professional journalism. In other words, artificial intelligence technologies have added and still adding value to journalism in the digital age.

Theoretical Framework

There are so many theories that discuss the use of various media of communication as well as the adaptation of technological innovation for media and journalism practice. One that stands out most when the issues of using of technology for media practice and journalism is mentioned is the technological acceptance theory. This theory, technological acceptance theory (TAM), comes in handy whenever it is inimical to establish the reason a new technology was accepted for use or not accepted for use. This theory proposes two striking reason for the acceptance of any technology and/or media platform. This, thus, implies that the arrival of new media saw the emergence of a new theory of media use and consumption in term of technology.

The Technology Acceptance Model (TAM), which is considered in this study and was developed by Davis in 1989which, sets the scene for digital media use as. The theory is a modification of the uses and gratification theory. It was adapted from the Theory of Reasoned Action (TRA) by Ajzen and Fishbein (1980) and Theory of Planned Behaviour (TPB), developed by Ajzen (1985) and tailored to the context of technology acceptance and usage. The two items construe in the Technology Acceptance Model includes; perceived usefulness and perceived ease of use that are proposed to influence acceptance of a technology (Davis, 1989).

Technology Acceptance Model (TAM) is widely used and accepted to explain the relationship between perceptions and the use of technology such as business texting and the two main constructs that influence behavioural intention are Perceived Usefulness (PU) and Perceived Ease of Use (PEU); Perceived Usefulness (PU) is defined as the user's perception of the degree to which using the system will improve his or her performance in the workplace and Perceived Ease of Use (PEU) is defined as the user's perception of the amount of effort they need to use the system. On the foregoing, Fishbein & Ajzen (1979) as cited in Momani & Jamous, (2017) stated that Technology acceptance theories and models aim to convey the concept of how users may understand and accept the new technology and how they may use it.

Be that as it may be, usefulness may not equal to problem solving always. Thus, a second theory was introduced to explain the concept of using technology for the benefit of society. On the other hand, the

journalists in Delta state might want to use artificial intelligence to look for better ways to carry out the always hectic and cumbersome journalistic practices. The Lazy User Model of Solution Selection comes into play in this study. In 2007, Collan and Tetard proposed a follow up model to the technological acceptance theory.

The model was name the Lazy User Model of Solution Selection (LUM). Collan&Tetard (2007) designed this model in information systems in a bid to illustrate how individuals select a solution to fulfill a need from a set of possible solution alternatives. This model goes a bit further from TAM. The aim of TAM is to examine the acceptance and general usage. Whereas, LUM seeks to find out how media is used for problem solving. According to the initiators of the model, LUM holds a belief that a solution is selected from a set of available solutions based on the amount of effort the solutions require from the user.

As the name implies, the user is expected to select a very simple solution that will require the least amount of effort. It is on the basis of this theory that this study considers the use of digital media as one of the problem solving method of effective journalism practice among journalists in Delta. In line with the perceived ease of use, this theory shows that the adopted solution measures must be easy too. The social media pose as one of the easy ways to create awareness of waste recycling as far as the 21st century is concern. This explains the significance of this theory to the study.

Research Methodology

Given the nature of this study, the researcher adopted the quantitative design of research for this study. The research method adopted for this study was survey. The survey method is a method of study “of the characteristics of a sample through questioning that enables the researcher to make generalisations concerning the population of interest” (Ohaja 2003, p.11). The population of the study consists of of 312 journalists in Delta State (gotten from NUJ Factsheet send to their platform). Given the small size of the population, the census principle was applied in sample size selection. The principle states that when the population is a number that the researcher can comfortably study, then, all elements of the population show be used as the sample size for the study. Therefore, the sample size for this study was 312. The questionnaire is the main instrument appropriate for the study because of the rationale of this study. This design was suitable for the study as it has overtime proven to be the best method for analysing people’s opinions, which is the intention of the researcher. According to Asemah, *et al* (2012), the survey is the most popular technique of data collection among communication researchers. This design was used considering the nature of the research topic, objective vis-à-vis the research questions. Specifically, for the sake of convenience and ease of administration, the researcher adopted online survey (or the internet survey) in order to conveniently reach a large expanse of the study’s population. According to QuestionPro Survey Software (2021), online survey is one of the most popular data-collection sources, where a set of survey questions is sent out to a target sample and the members of the sample and the members of the sample can respond to the questions over the Internet. This method helped the researchers to overcome the challenge of distance barrier and reach to a large number of journalists in Delta state.

Data Presentation and Analysis

Out of 312 copies of questionnaire, the researcher retrieved 103 valid copies of questionnaire of respondents who were willingly to participate in the study. The data below represents the opinion of the 103 journalists that participated in the study.

Table 1: Respondents Distribution by Media Type

Options	Frequency	Percent (%)
Online	3	2.9%

Print	53	51.5%
Radio	35	33.9%
TV	12	11.6%
Total	103	100%

The above Table shows the type of media that the respondents of the study practiced in. Among the four key types of media sampled, the journalists from the print media were the most with 51.5%. This was followed by radio with 33.9% and the television with 11.6%. Respondents of the study that worked for online platforms were the least with just 2.9%. This implies that a great level of the generalization for this study will be mostly appropriate for the print media.

Table 2: Respondents Distribution by Year(s) in practice

Option	Frequency	Percent (%)
Below 5 years	38	36.9%
6 to 10 years	45	43.7%
More than 10 years	20	19.4%
Total	103	100%

Table 2 shows that the distribution for respondents who have below five (5) years of experience and those with 6 to 10 years of experience was almost the same. We have the younger experienced journalists that are yet to get acquainted to the systems, who will be easy to adapt to a new trend and a more experience set of journalists that have gotten use to their systems and who find it very difficult to let go of them. So, whatever the finding of this study will be, the, it will be a serious consensus between these two set of journalists and should be treated as very important.

Table 3: Delta State Journalists Awareness of the Use of Artificial Intelligence for Journalism Practices

Responses	Frequency	Percent (%)
Yes	84	81.6%
No	19	18.4%
Total	103	100%

Table 3 shows whether journalists in Delta State are aware of the emerging use of artificial intelligence for journalism practices. A majority of the respondents (84%) are of the opinion that they are aware of this practice. Only 18.4% of the entire respondents opined that they are not aware of the emerging trend of using AI for journalism practices. This table shows a great level of awareness by Delta state journalists about the emerging use of AI for journalism practice.

Table 4: Extent of Delta State Journalists Awareness of the Use of Artificial Intelligence for Journalism Practices

Options	Frequency	Percent (%)
Very High extent	9	8.7%
High Extent	8	7.8%
Low Extent	35	33.9%
Very Low Extent	4	3.9%
Not Aware	19	18.4%
Total	103	100%

After establishing the level of awareness, the extent of the awareness was assessed. The respondents, as revealed in Table 4, showed that the extent of this great level of awareness was low. That is, a majority of the respondents were aware of this practice to a low extent. This means that they did not possess sufficient knowledge to claim that they are aware to a high extent.

Table 5: Delta State Journalists Awareness of Aspects of Artificial Intelligence for Journalism Practices

Aspects	Frequency	Percent (%)
Automated content/writing articles	26	25.2%
Controls biases	2	1.9%
Flagging false information and alerts	7	6.8%
Monitoring trends/occurrences	11	10.7%
Sharing media contents	23	22.3%
Transcribing audio and video interviews	15	14.6%
Not aware	19	18.4%
Total	103	100%

Among the areas and aspects of journalism practice that has been influenced by AI, a majority of the respondents are of the opinion that the aspect with the highest influence is automated content writing, which had 25.2% of the respondents voting for it. The next aspect that was believed to be affected by the use of AI was the process of content sharing, which had 22.3%. Transcribing audio and video was the next aspects of journalism that saw the influence of AIs.

Table 6: Delta State Journalists Use of Artificial Intelligence for Journalism Practice

Options	Frequency	Percentage (%)
Yes, I have used AI for journalism related practice.	23	22.3%
No, but, I know a colleague who has used AI for journalism related practice.	12	11.7%
No, I haven't use and do not know someone who has used for journalism related practice.	68	66.0%
Total	103	100%

Table 6 showed whether or not journalists in Delta state actually use AI in the course of performing their duties. 66% of the respondents of the study are of the opinion that they have neither used nor know anyone that has used AI for journalism practices. In as much as 22.3% of the respondents had used AI for journalism before that is way below average. That means that the journalists in Delta state are only aware of the practice but have barely used it.

Table 7: Frequency of Delta State Journalists' Use Artificial Intelligence for Journalism Practice

Options	Frequency	Percent
Always	5	4.9
Often	13	12.6
Rarely	12	11.7
Never	73	70.8
Total	103	100

Table 7 shows that frequency of usage for the journalists who said they used AI and/or know colleagues who used AI for journalism practices. 70.8% of the respondents never used AI; while 12.6% of the respondents stated that they used it often. This was followed by those who opined that they rarely used AI for journalism practice, with 11.7%.

Table 8: Journalism-related Task Delta State Journalists perform with Artificial Intelligence

Journalism-related Tasks	Frequency	Percent (%)
--------------------------	-----------	-------------

News sourcing/gathering	11	10.7%
News writing	3	2.9%
News editing	4	3.9%
News production	4	3.9%
News dissemination	5	4.9%
Never Used AI	76	73.7%
Total	103	100%

For respondents who had used AI before, they were asked to identify the journalism-related task that they performed with artificial intelligence. A majority of the respondents, with 10.7%, picked news sourcing and gathering as the task that they had used AI for. Every other journalism related task had below 5%.

Table 9: Journalists Perception of AI

Statements	SA	A	U	D	SD	Total	Mean	Decision
	%	%	%	%	%			
AI was created by humans to reduce the labor that they had to do themselves.	45 43.7	20 19.4	16 15.5	13 12.6	9 8.7	103 100.0	3.8	Accepted
AI has significantly contributed to the modernization of journalism.	33 32.0	35 34.0	12 11.7	15 14.6	8 7.8	103 100.0	3.7	Accepted
AI is any software that mimics the learning and problem-solving processes of humans.	12 11.7	58 56.3	7 6.8	11 10.7	15 14.6	103 100.0	3.4	Accepted
AI can be employed for data collection and verification in journalism practice effectively.	73 70.9	19 18.4	11 10.7	0 0.0	0 0.0	103 100.0	4.6	Accepted

Analysis showed acceptance of all decisions of journalists' perceptions of AI. Impliedly, AI is of great importance in journalism as it aids the collection, processing and dissemination of messages.

Discussion of Findings

The findings of this study were discussed under the research questions formulated at the beginning of this study. To answer the first research question, "are journalists in Delta state aware of the use of artificial intelligence for journalism practices?" The first finding of this study is that 84% of the journalists in Delta state (a majority of the respondents) are aware of the emerging trend of using artificial intelligence in journalism practice. With the percentage of Delta journalists that are aware of this practice, it is clear that the level of awareness is great. However, the extent to which journalists in Delta were aware of this trend was low (as indicated by 33.9% of the journalists who participated in this study). This finding is contrary to the opinion of Missouri (2022) who opined that Americans tend not to know about the use of AI in journalism practice. The lack of knowledge of the respondents in Missouri's study might be because the respondents were not journalists. This present study's findings recorded a different result because the respondents were consisted mainly of journalists.

Following this, the next research question was "which aspects of artificial intelligence for journalism practice are journalists in Delta state are aware of?" Among the aspects of journalism practice that has been influenced by AI, most of the journalists in Delta state opined that the aspect of journalism practice with the highest influence by the use of artificial intelligence is automated content writing. The next aspect that was believed to be affected by the use of AI was the process of content sharing. This was followed by transcribing audio and video was the next aspects of journalism that saw the influence of AIs. According to European Science-Media Hub (2019), the implementation of Ai in European newsrooms is not spread evenly, and this shows a gap between the North and the South, which makes ascertaining the exact area

where journalists are conversant with still a subject requiring more research. The finding of this present study provide a substantial contribution to this area of research in the use of AI in journalism.

Furthermore, research question 3 read, “do journalists in Delta state use artificial intelligence for journalism?” According to the data analysed in the study, most journalists in Delta state despite they awareness of the use of artificial intelligence in journalism practice, have neither used nor know any journalist who have used AI for journalism practices. Only a handful of the journalists studied had actually used AI for journalism before that is way below average. That means that the journalists in Delta state are only aware of the practice but have barely used it. The journalists who used AI and/or know colleagues who used AI for journalism practice opined that they used it often. Also, a majority of the journalists picked news sourcing and gathering as the task that they had used AI for.

This is in line with the opinion of European Science-Media Hub (2019) that most journalists are still doing the work that machines should be doing: writing simple, basic news stories which does not add value to the reader because they are not using AI to generate data driven stories that will add value to the readers. On the contrary, Newman (2020) found that while many media house and journalists are experimenting with AI, relatively few are using it at scale.

More so, the last research question investigated how do journalists in Delta state perceive the use of artificial intelligence in journalism practice in Nigeria. The study’s participants collectively perceived that there is relatively little use of AI in journalism in Delta state. Another widely held perception was that international journalists are far away from journalists in Delta state and Nigeria, at large. Also, there is a string collective opinion by Delta state journalists that the value of AI in helping journalists to do their works better; adding that journalists should not perceive AI to be a danger to the practice; since, even machines need human commands to complete jobs since they are unable to do it on their own.

In their study, Ali and Hassoun (2019) established a similar finding that artificial intelligence technologies are seen as enhancing journalism in the digital age, particularly because of their capacity to address some of the most pressing issues facing modern journalism, such as the fight against fake news, editorial policy-compliant news editing, and content personalization. Also, the finding of Yasin, Iqbal and Islam (2021) supports the finding of this present study that AI use improves the working abilities of journalists. From a Nigerian perspective, Nnamdi and Nwanyanwu (2021) supports the established benefits of AI in journalism practice by adding that AI is helping to verify and fact check news stories.

Conclusion

In conclusion, thanks to the quick development of digital technology, journalism worldwide is going through a historic change. This development is significant because it is yet another example of how technological advancement has affected media firms' organizational structures and activities significantly. The newsroom has been completely rebuilt as a result of artificial intelligence, which is regarded as the most significant revolution in journalism in the digital age. On the other hand, these technologies have a tremendous deal of promise to improve journalism as it stands today, particularly by enabling journalists to process large amounts of data quickly, produce and disseminate news stories based on structured data, and provide more varied coverage.

Therefore, it is crucial that journalists adapt to and embrace these developments, particularly in emerging nations like Nigeria. In their newsrooms, Nigerian journalists should embrace and implement artificial intelligence. Although there are difficulties with adoption, they must begin somewhere and eventually become better. Professional journalism is not now threatened by AI, at least not yet. In other words, artificial intelligence technologies in the digital age have enhanced journalism but cannot fully replace journalists, suggesting that new technologies will support, not replace, their profession.

Recommendations

Following the findings of this study, the researcher recommends that:

- i. Media houses and establishments should encourage their employees to try using AI for their day to day task. Also, it is a responsibility of the media houses to start trainings and symposium for their employees on how to use AIs effectively for journalism.
- ii. Due to the cost of funding, it is recommended that governments should render financial help to media house, as grants, in order for them to setup the things needed for AI.
- iii. Individual journalists should take it upon themselves to advance their knowledge and practice of using AI to perform journalism related tasks in order to prepare for the time when AIs will become a key player in journalism practices.

REFERENCES

- Ajzen, I. (1985). From Intentions to Actions: A Theory of Planned Behavior; in J. Kuhl and J. Beckmann (Eds), *Action Control: From Cognition to Behavior*. New York: Springer Verlag, 11 – 39.
- Ali, W. & Hassoun, M. (2019). Artificial Intelligence and automated journalism: Contemporary challenges and new opportunities. *International Journal of Media, Journalism and Mass Communications (IJMJC)*, 5 (1), 40 – 49.
- Amal K. (2010). *Modern Communication Technology and its Role in Developing Journalistic Performance*. Cairo: Dar Alaalem Alarabi.
- American Press Institute. (2022). *What is Journalism?* Retrieved from <https://www.americanpressinstitute.org/journalism-essentials/what-is-journalism/>
- Asemah, E. S., Gujbawu, M., Ekharefo, D. O., Okpanachi, R. A. (2012). *Research Methods and Procedures in Mass Communication*. Jos: Great Future Press.
- Britannica, T. & Editors of Encyclopaedia. (2020). Journalism. *Encyclopedia Britannica*. Retrieved from <https://www.britannica.com/topic/journalism>
- Burns, E., Laskowski, N. and Tucci, L. (2022). *What is artificial intelligence (AI)?* <https://www.techtarget.com/searchenterpriseai/definition/AI-Artificial-Intelligence>
- Collan, M. and Tetard, F. (2007). *Lazy user theory of solution selection*. In Proceedings of the CELDA 2007 Conference, Algarve, Portugal, December 7-9, 273-278.
- Davis, F. D., Bagozzi, R. P. and Warshaw, P. R. (1989). User acceptance of computer technology: A Comparison of two theoretical models. *Management Science*, 35, 982-1003.
- European Science-Media Hub (2019). Are journalists ready for a future with AI? *European Science-Media Hub*. <https://sciencemediahub.eu/2019/06/26/%F0%9F%93%B0-are-journalists-ready-for-a-future-with-ai/>
- Fay, R. (2020). CUSMA's Data and Intellectual Property Commitments Could Inhibit Domestic Policy Flexibility. Presentation on 26 February 2020 at the Standing Committee on International Trade, the Canadian Parliament. Centre for International Governance Innovation, Waterloo, ON. Available at: <https://www.cigionline.org/articles/cusmas-data-and-intellectual-property-commitments-could-inhibit-domestic-policy>.
- Fishbein, M. & Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*. MA: Addison-Wesley, Reading.
- Khattab, A. (2010). Modern Communication Technology and its Role in Developing Journalistic Performance, Cairo: *Dar Alaalem Alarabi*, 34.
- Luengo, G. (2021). *Media trust & information in the digital age*. ASEF Media Handbook. 12th ASEF Journalists' Seminar. Singapore: Asia-Europe Foundation (ASEF).
- Marconi, F. (2017). *Report: How artificial intelligence will impact journalism*. Associated Press. Retrieved from: <https://insights.ap.org/industry-trends/report-how-artificial-intelligence-will-impact-journalism>
- Momani, A. M. and Jamous, M. (2017). The evolution of technology acceptance theories. *International Journal of Contemporary Computer Research*, 1(1), 51–58.
- Napoli, P. M. (2011). *Audience Evolution: New Technologies and the Transformation of Media Audiences*. Columbia University Press.

- Newman, N. (2020). *Journalism, Media, and Technology Trends and Predictions 2020*. Reuters Institute for the Study of Journalism. <https://reutersinstitute.politics.ox.ac.uk/journalism-media-and-technology-trends-and-predictions-2020>
- Nnamdi, C. N. and Nwanyanwu, M. (2021). Utilization of Artificial Intelligence in Journalism in Nigeria. *KIU Journal of Social Sciences*, 7 (2), 205–212.
- Nworgu, K.O. (2010). Introduction to broadcasting. In K. O. Nworgu (Ed.) *Mass Communication, Theory and Practice*. Owerri: Ultimate Books.
- Ohaja, E.U. (2003). *Mass Communication Research and Project Report Writing*. Lagos: John Letterman Ltd.
- Picard, R. G. & Pickard, V. (2017). ‘Essential Principles for Contemporary Media and Communications Policymaking’ *Reuters Institute for the Study of Journalism*, 7, 30–31 <http://reutersinstitute.politics.ox.ac.uk/publication/essential-principlescontemporary-media-and-communications-policymaking>
- Pihlajarinne, T. & Alén-Savikko, A. (n.d.). *Introduction to Artificial Intelligence and the Media*.
- QuestionPro Survey Software (2021). *Online Surveys: What are They, Advantages & Examples*. Retrieved from <https://www.questionpro.com/blog/what-are-online-surveys/>
- Saad, S. & Issa, T. A. (2020). Integration or replacement: journalism in the era of artificial intelligence and robot journalism. *International Journal of Media, Journalism and Mass Communications (IJMJC)*, 6 (3), 1 – 13
- Salazar, I. (2018). Robots and artificial intelligence. New challenges of journalism. *Doxa Comunicación*, 27, 295 - 315. <https://doi.org/10.31921/doxacom.n27a15>
- Salazar-Garcia, I (2003). *Internet as a source of information: the deep network analysis and journalistic utility (doctoral thesis)*. San Pablo CEU University. Madrid.
- Tom, V. (2018). *10 things about AI every newsroom should know. Preparing your newsroom for the artificial intelligence revolution*. Retrieved from <https://medium.com/jsk-class-of-2019/10-things-about-ai-every-newsroom-should-know-19745dac8ad7>
- Ukpong, E. N. & Okpongpong, G. I. (2020). Application of artificial intelligent (AI) in traditional media: An appraisal. In IfeyinwaNsude: *African Communication Systems in the Era of Artificial Intelligence (AI)*.
- Yasin, Z., Iqbal, N. and Islam, I. (2021). Use of artificial intelligence in journalism by Pakistani and foreign journalists. *Journal of Peace, Development and Communication*, 05 (04), 2021, 34 – 47, <https://doi.org/10.36968/JPDC-V05-I04-03>.