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ROLE OF ARTIFICIAL INTELLEGENCE FOR WRITING AND EDITING NEWS STORIES BY JOURNALISTS IN BORNO STATE, NIGERIA

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Abstract
This paper examine the role of Artificial Intelligence for writing and editing of news stories in media industries in a global society. A study on Journalists in Borno State, Nigeria. The paper has the following objectives: examine whether journalists in Borno State use AI for writing and edition of news stories; find out the type(s) of AI application used most for writing and editing of news stories; find out whether the use of AI has enhanced the quality and productivity of writing news stories; and identify some major challenges of using AI applications for writing and editing of News stories. Survey research method was adopted through the use of structured questionnaires where 120 copies of questionnaires were administered to registered Journalists. Data were collected and analyzed through the use of frequency distribution table. The sample size of the study are the registered journalists comprises of seven (7) Chapels that formed the Nigeria Union of Journalists in Borno State which stood at 148. The study revealed that 114(95%) of the respondents have knowledge about the use of AI for writing and editing of news stories. The researchers used the Technology Acceptance Model to shade more light on the topic. The research found that the types of AI use most by Journalists are the ChatGPT which recorded the highest respondents stood at 43(35.8%). Furthermore, the study found that, AI can be used in both Print and Broadcast Media for writing and editing of news stories including pictures for news stories. The study concluded that, despite the challenges of networks and subscription of data, AI applications are reliable to some certain degree. The study also revealed that there were so many media organizations which have already adopted the use of AI applications for writing and editing of news stories around the world. The study concluded that, AI has met up with the challenges of time consuming in writing and editing of news stories. However, the researchers have recommended that since the use of AI has widely been accepted by journalists in media organizations, they should be encourage to invest much in the development of local contents for AI to recognize, in order to enhance the quality and productivity in writing and editing of news stories globally.
Keywords: Artificial Intelligence (AI), writing, editing news stories, media industries

Background to the Study

The advent of digital computers have convinced many scientists around the world that machines in the future could exhibit human intelligence. This assertion became true as a result of the presence of programmers, who uses different software to program machines and redirect them to do things considered to be hard for the human mind to do. In most recent time, most communication has been changed largely due the use of computer technology and its applications, which most journalists around the world have accepted and adopted in news writing and editing of news stories in most media industries, where the use of these applications became visible especially, in the areas of social networking and micro blogging services, enabling its users to send and read other users' messages on tweeters, facebook, e-mail, and many more, (ICT Student's Book 2024).

The use of Artificial Intelligence (AI) as translators, have become indispensable tools for breaking language barriers in media industries globally, with lots of benefits, too numerous to mentions but few among others are: Enhancing Speed and efficiency, Bridge Multilingual Gaps, Save time and money, Get Accurate up-to-date results, etc., (Hamid, 2024).

Journalists in the media industries creates, illustrates, and info-graphics news stories, (Carlo 2023), and that, AI Generative tools, are used in newsrooms to create high-quality texts and reports, reducing the time spent on the job by journalists, and can still employed several applications to achieve quality work in every aspect instantaneously. (Carlo, ibid) further stated that, some AI Voice Generators and AI Transcriptions, are the cornerstone applications in newsroom, which are used for transcription of audio interviews, or discussions into written content, that helps in facilitation, archival, and easy dissemination of information, aiding in verbal exchange of conversation that can swiftly converted into text.

AI application, that was receives more recognition by journalists and researchers across the global in some developed nations was VG's Jojo, which according to Carlo, (ibid), is unlike manual transcription which is time consuming, but enable transcription, faster and more accurate, utilizing sophisticated algorithms, for accuracy, decipher speech, even in noisy environment, or with multiple speakers, among others.

Statement of the Problem

For a society to exist, certain criteria must be met. In those days, before the advent of computer technology, primitive tribe had sentinels who scanned their environment, and reported back to them about the happenings around them. Councils of elders also make decision and interpreted facts, while tribal meetings made decisions in their meetings and interpreted to the rest of the group in the society, (Dominick, 2013).

Bitrus (2021), also noted that, the world is increasingly becoming an information society, where information is a key driver of development, and that, the information technology is the major mechanism sustaining the information society. However, the introduction of the expert system, a set of interactive computer programs have taken the lead and ushered in new method of communication and technology that can solved most problems human find it difficult to carryout, and have changed the pattern through which information are sourced and disseminated in the global society.

Objectives of the Study

The objectives of study were to;

1. examine whether journalists in Borno State use AI for writing and editing of news stories,
2. find out the type of AI applications used for writing and editing of news stories,
3. find out whether the use of AI has enhanced the quality and productivity in news writing and reporting,
4. identify the challenges of using AI applications for writing and editing of News stories.

Review of Related Literature

The use of AI has become a dominant paradigm in a global society, where most institutions use it in different field of endeavor, journalists can easily use various types of AI, the expert system, a set of interactive computer programs to solve some complex problem without human intervention, have revolutionized and changed the pattern through which we communicate and disseminates information globally and that AI application technology, in most organization today have carried out activities in place of humans, this according to (Williams and Sawyer, 2007), are; automated virtual representatives. Furthermore, this can easily help journalists automate the process of data creation and extraction and enhanced the quality and productivity of news writing and editing in every media organization globally.

According to Marikyan and Papagiannidis (2023), for one to understand the role of AI one need to substantiate it to the TAM model which it primary objective is to illuminate the processes underpinning the acceptance of technology to predict the behaviour of and provide a theoretical explanation for the successful implementation to technology, perhaps, the TAM has three stage process, whereby external factors (System Design Features) trigger Cognitive responses, Perceived Ease Of Use (PEOU) and Perceived Usefulness (PU) which in turn form an effective response (intentional attitude toward the use of technology).

Artificial intelligent is a wide ranging branch of computer science that attempts to build smart machine with human intelligence aspects, (Daniel 2023), while citing (Alhassan (2023), outline and stated that, AI can be applied in different field of human endeavor, such as: Libraries in order to carry out some activities like; content indexing, document matching, content summarization, quality of services, automate the process of metadata creation and extraction, enhancing the quality and consistency of bibliographic records, identify and correct errors and inconsistencies, among others, which journalism professions are part of it.

Grammar checker software, is one of the AI application that helps the writers to check grammar, paraphrasing of sentences, and editing of writings, for the user to have a qualitative write-up, free from grammatical errors, etc. AI has ushered in many journalists

in the media industries to create illustrations, infographics and allow news stories to be disseminated, (Prato 2023), and that this was possible as a result of the Generative AI software installed in news room to create high quality texts and reports, reducing the time spent on the developing of the news stories by Journalists using handwritten.

The use of AI like Alexa Skills was introduced at The University of South California to fulfil various services, have also helped the users in solving some frequently ask questions, in giving answers to them and many more. Alexa Skills application was introduced with a Database to search for desired information, (Hussain and Shahid, 2022). This shows that, the integration of AI in the media industry has laid a positive improvement, in every aspect of human endeavour, particularly in aiding in information services to the users (Cox, 2021), and that AI has helped Journalists also in automating the process in the information creation and extraction, and give the user correct, errors free and legible writing. There are lots of AI tools used by journalists in their profession today, these includes; Chatsonic, Chat GPT, Gemini AI (Former Googlebard), Perplexity AI, Forefront AI, Bing AI, and Ask AI, among others, that are available for information sourcing and dissemination globally.

ChatSonic is a revolutionary Chat Software application, invented by Samanyou Garg and Abhishek Bhardwaj in 2021, it is a simplified communication boosts that help the user to stay organized like the ChatGPT AI, but with superpower. ChatSonic integrate the Google search to create content with the latest information, and can generate visuals, voice commands, and many more. It is an AI application that enables organizations to utilize its power to personalize client interactions. A sophisticated machine learning model based on neural networks, combine with scripted dialogue in order to simulate human speech. ChatSonic, is used for text and image creation, and connected with Google search that helps to come up with hyper-relevant content. It can generate any kind of content, either blog posts, emails, tweets post, product descriptions, advertisement, Facebook, WordPress, among others. ChatSonic can simply use on *www.freegpt.me,* a free version and fewer features for use, but needs subscription for authenticity, (www.https://ChatSonic.Pro, 2024).

Gemini AI (Former Googlebard), was designed to offer a personalized and contextualized conversational experience, enabling users to access information more efficiently effectively, by integrating Gemini into its ecosystem, and Google aimed to provide users with a seamless and intuitive way to interact with information, by tapping into Google's resources, Gemini will provide the user with comprehensive and reliable responses to their queries. The competition in the AI industry today has become an intense one, which as a result leads to the development of companies like Open AI, which Microsoft is now investing heavily in developing advanced Chatbot models, (Hamid, 2023).

Yang (2018), stated that, a variety of high-technological computer-based language programs is developing rapidly, and that, one of the leading computer program is an AI-

based Automatic Evaluation System (ABAES), that enable the writers writings, especially, in checking grammatical errors from learners' writings, can easily be analyzed and identified automatically by using this AI-based Online Grammar Checker Program. Some of the types of grammar aspects assisted by the AI grammar checker, includes; Tense, Verb form, Subject-verb agreement, Word form, Word choice, Word order, and Punctuation, which are distinctions, although sometimes, it seems difficult to analyze the specific failures of the grammar checker, manually". On the other hand, these error types, can easily be identified and make suggestion on how writers can draw out some sentences and change the wrong words, (Yang, ibid). The AI assistants, are actually the world of writings, by suggesting to us on how we interact with technology, helping us by solving some tasks, like answering questions and creating content. Google Bing AI as the name implies, have already added AI like Bard and Bing-Chat to their platforms for more efficiency. Research also revealed that, there is another new player already in the market, and is of great significant to the users, the "Perplexity AI", Aayush (2024).

Perplexity AI is a Chabot-style search engine that allow users to ask questions in human natural language, allowing the AI gather information from multiple sources on the web databases, and provide responses instantaneously. The AI has the following features that enable its uniqueness among some of the AI used by many writers or information seekers, thus; Content Generation- design to aid in crafting insightful content; Accurate Information – deploys large language models trained on comprehensive text and code datasets, among others, Mobile Application-brings the platform directly to your device, user friendly application features voice search, supports numerous languages, saving and sharing of questions and answers; Chrome Extension-efficient for enhancing browser experience; understand a topic – providing information and helping with research from any databases, etc., Aayush (ibid).

Another common editing software use by journalists according to (Foust, 2009), is the word processing, which enable the user work with text, and enable the writer to check for grammar, spelling checking, font size, style and the font types, and that the Journalists use Adobe Photo shop for working with pictures, while for sound they use video editing software multimedia elements. Foust, (ibid) further buttressed that journalists, nowadays use different styles to indicate different types of text, such as, bold, for headlines and smaller text, for subheads, and in some cases even smaller text for the main copy stories.

According to Emem (2024), stated that, "on 29th January 2022, the Bayelsa State executed a memorandum of understanding with logistics delivery company Zipline to enhance the preservation of crucial cold chain medications and expand the distribution of essential medical supplies to remote health facilities across the State. The program stated in 2023 where more than 13,500 delivery of medical supplies including 537,000 doses of vaccines to health facilities has been made."

In most media industries around the world, the use of AI is very significant, because it helps in editing of work in any form. Research revealed that PhotoRoom is one

of the world's most popular software application that can be used in both mobile and desktop computer devices and has a lots of features among which are: Edit photos quickly and accurately without any efforts. PhotoRoom simplifies any image, maintaining focus on the foreground that is twice as accurate as any other AI application. It helps in creating backgrounds instantly, and uses power of AI to create realistic, studio-quality backgrounds for any product images in seconds. It expand images beyond their borders with AI, resize any photo images for any platform and expand the scene around your image, with just a click on your computer system. PhotoRoom can remove and replace objects with an instant swipe away, imperfections with our retouch tool and fill the space with new elements, and edit hundreds of photos, (Sebastian, Sue Darte, and Jacob, 2024).

According to Oseni (2024), in the new world of AI in media industry, AIs are employed to carryout searches, called "Prompts" where the user, just enter their requests into an image generator of the AI image tool and allow it produces image for usage. Moreover, the AI "Prompt" has enhanced the productivity of writings and afforded many with a limitless information at their disposals to generate a desired result, such as text or images, through the use of neural networks, and many more.

Theoretical Framework

The study is anchored on the Technology Acceptance Model (TAM) propounded by Davis (1989), which according to him is an information system theory that models how users come to accept and use technology. The actual system that the users use is the end-point where people use the technology to achieve what they wanted to do. However, the TAM model is related to the objectives of this study because it aims at modelling how users come to accept and use the technology for writing and editing of news stories in media industries.

Research Methodology

The research strategy adopted for this study is the survey research design. The reason is that, it provides a systematic process for collecting data from the respondents on the topic of the study as well as data on the use of AI for news writing and editing in the Mass Media industries around the world.

The sampling technique adopted was purposive sampling, this is because purposive sampling is a non-probability sampling that is selected based on characteristics of a population and the objective of the study, (Crossman 2018). The study purposively selected 120 registered Journalists out of the 148, using them based on the criteria that all use Artificial Intelligence for news writing and editing of their news stories.

The sample size of the study was the registered members of the Nigeria Union of Journalists Borno State Council, comprising of seven (7) chapels, totaling 148. Karlinger (1986) posits that when samples are carefully drawn, a sample of 600 to 700 respondents can give an apparent picture of characteristics of a population of about 100,000.

Results

Table 1: Knowledge of AI

Variable	Frequency	N = 120 Percentage = 100%
Do you have knowledge of AI		
Yes	114	95
No	6	5
TOTAL	**120**	**100**

Source: ***Field Survey 2024***

Table 1 above indicate that 114(95%) of the respondents were exposed to the use of Artificial Intelligence (AI) and have used it in one form or another in the writing and editing, while those who are not literate much in the use of AI stood at, 6(5%). These results shows that there is a huge number (95%) of Journalists active users of AI in journalism practices.

Table 2: Types of AI Usage

Variable	Frequency	N = 120 Percentage = 100%
Types of AI		
ChatSonic	11	9.2
Ithor	6	5
Gemini	16	13.3
Bing	5	4.2
Perplexity	3	2.5
AI Grammar Checker	13	10.8
Chatbot	14	11.7
ChatGPT	43	35.8
PhotoRoom	9	7.5
Others	0	0
TOTAL	**120**	**100**

Source: ***Field Survey 2024***

Here table 2 shows the most commonly used AI platforms in news writing and editing outlined sequentially are; ChatSonic with 11(9.2%), Ithor recorded 6(5%), Gemini recorded 16(13.3%), Bing, recorded 5(4.2%), while Perplexity 3(2.5), AI Grammar Checker recorded 13(10.8%), and Chatbot also recorded 14(117%), also ChatGPT recorded 43(35.8%) and PhotoRoom 9(7.5%).

Table 3: Enhancement of Quality and Productivity

Variable	**Frequency**	**N = 120 Percentage = 100%**
Has the use of AI enhanced the quality and productivity of writing and editing of news stories?		
Yes	118	98
No	2	2
TOTAL	**120**	**100**

Source: ***Field Survey 2024***

In assessing the quality and productivity of AI in writing and editing of news stories, Yes recorded 118(98%) agreed that AI has enhanced the quality and productivity of writing and editing of news stories in journalism practices, while No, stood at 2(2%) on the other hand stated that AI has not enhanced the quality and productivity in news writing and editing of news stories.

Table 4: Challenges of AI usage in writing and editing of news stories

Variable	**Frequency**	**N = 120 Percentage = 100%**
Challenges of AI		
Fact checking limitations (Transparency and Accountability)	20	16.7
Purely machine based oriented	35	29.2
Doesn't understand local content	41	34.2
Lack of interest	3	2.5
Network problems	7	5.8
Need subscriptions	14	11.7
Total	**120**	**100**

Source: ***Field Survey 2024***

Table 4 above which is the checking limitations (Transparency and Accountability) stood at 20(16.7%), while. Purely machine based oriented recorded 35(29.2%), Doesn't understand local content, recorded 41(34.2%) and Lack of Interest, stood at 3(2.5), while Network Problems, recorded 7(5.8%) and Need subscriptions, recorded 14(11.7%). Here the table revealed that, the major challenges of the AI, is lack of understanding the local content which is seen to be on the high rank, with record of 41(34.2%).

Discussion of Findings

The first finding from the data presented in this study revealed that the 114(95%)

of AI users, apparently revealed that vast majority of journalists are literate and tech-savvy AI applications. While, the second finding in this study revealed that 43(35.8) shows the types of AI, most commonly used by Journalists is the ChatGPT which is seen to be on the higher level among others.

The third finding of this study shows that 114(98%) of Journalists who use AI for writing and editing of news stories attested that AI has enhanced the quality and productivity of their work, far better than the manual methods use before, and that as a result, many Media organizations around the world have adopted the use of AI in their profession.

The fourth which is the last data analyzed revealed some of the major challenges of using AI for writing and editing of news stories, attributed to the fact that AI doesn't understand most of the local content use in the writing, which is on the higher level of 41(34.2%). Other challenges also attributed to the fact that the AI is machine based which stood at 35(29.2%). The findings of this study thus underscore the potential of AI where Journalists have been using for writing and editing since the early 2010s which marked a remarkable history in the life of journalism profession.

Conclusion

This research work established the relationship between Journalism and Artificial Intelligence, expressions and aiding in news writing and editing of stories for dissemination to the general public by integrating the core tenets of AI production and the Technology Acceptance Model, the study illuminated the ways in which technology can be utilized to convey the essence of Journalism practices globally. This investigation revealed the digital tools can effectively use to capture and communicate the unique characteristics of journalists to a broader audience.

Recommendations

1. Adoption of AI in Journalism: The study reveals that AI is widely used by journalists in Borno State, Nigeria, for writing and editing news stories. It is recommended that media organizations and journalism institutions encourage and invest in AI-powered tools to enhance the quality and productivity of journalism practices.
2. Training and Capacity Building: The study showed that a significant number of journalists are using AI applications, but there may be a need for training and capacity building to ensure effective utilization of these tools. It is recommended that media organizations and journalism institutions provide regular training and workshops on AI-powered tools for journalists.
3. Development of Local Content Understanding AI: The study highlighted that one of the major challenges of using AI is its inability to understand local content. It is recommended that researchers and developers focus on creating AI-powered tools that can understand and process local content, including languages and dialects.

4. Addressing challenges of AI usage: The study identifies several challenges associated with AI usage, including fact-checking limitations, purely machine-based orientation and network problems. It is recommended that media organizations and journalism institutions address these challenges by developing strategies for fact-checking, promoting human-AI collaboration, and ensuring reliable internet connectivity. Exploring other AI applications*: The study reveals that ChatGPT is the most commonly used AI application among journalists. It is recommended that researchers and developers explore other AI applications, such as ChatSonic, Gemini, and Perplexity, to determine their potential in enhancing journalism practices globally.

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