



Artificial Intelligence and Broadcasting in Information Driven Society: Imo State, Nigeria in Perspective

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ABSTRACT

Background: Artificial intelligence has affected all facets of human endeavour, including broadcasting, especially in this era of technological advancement.

Objective: The study amongst sought to ascertain extent to which the emergence of AI has impacted broadcasting in information-driven society like Nigeria, with a focus on Owerri, Imo State, Nigeria. The study was anchored on the diffusion of innovation theory.

Method: The study is a qualitative study. The researchers made use of in-depth interview as the research method. Interview guide served as the instrument for data collection. The population consisted of journalists in Imo State. Meanwhile the samples were purposively drawn from 5 broadcast stations in Imo State.

Result: It was found that Artificial Intelligence (AI) are used to generate information by a few broadcast stations in Imo State, Nigeria.

Conclusion: There is low level of application of Artificial Intelligence (AI) in broadcasting in Imo State, Nigeria.

Unique Contribution: This study has provided fresh ideas in the use of Artificial Intelligence (AI) in broadcasting in Imo State, Nigeria. It is hoped that this new insights would be found useful in future decision making among policymakers and key stakeholders in the industry. It will also benefit future researchers, media students and scholars, and indeed, the general public who constitute the media audience.

Key Recommendation: It was recommended that media stations and workers alike should join the moving train of adopting relevant AI tools and knowledge to avoid being left behind in the fast changing media environment.

Keywords: Broadcasting, artificial intelligence, media, information



INTRODUCTION

In recent years, the media outlets broadcast media inclusive have faced great disruption by the presence of technologically driven processes and approaches in the creation, production, and distribution of contents, products and services to target audience (Nader, et al., 2022). Artificial intelligence (AI), having emerged from the eras of science fiction, is fast becoming a veritable tool that aids society in addressing contemporary issues, with an inclusion of challenges faced by the broadcast industry worldwide. Currently, humans live in a world which is technologically driven and controlled by the tools of information and technology ranging from academics, businesses, politics and even communication, meaning that industries adaption and embracing of technological tools for sustainability is not up for debate or question (Nader, et al., 2022). This is not different from the broadcast world as “the journalism future and business models are bounded by technological deployment penetration” (de-Lima-Santos, 2021).

Broadcast media and technologically driven approaches penetration is without question in the creation, production, and distribution of contents and productions (Hernandez et al. 2015; Örnebring, 2010), which is showcased in novelties of news products and practices such as data journalism (Coddington 2015; Hermida& Young, 2019), immersive and drone journalism (Harvard, 2020; Kang et al. 2019), analytical practices (Nelson & Tandoc 2018; Ferrer-Conill&Tandoc, 2018). Tracing past records, communication gurus by expansion of knowledge, past studies and experiences have arrived to a conclusion that artificial intelligence (AI) capabilities in the broadcast world are continuously evolving on a daily, monthly and yearly bases respectively, aiding a cost efficient possession and affordability of computing power. The concept of AI summarily can be said “*to be a branch of computer science with focus on simulation of human intelligence*”(Broussard et al. 2019). AI in broadcast media can definitely ease the work load of the personnel in the journalism world who have limited resources without replacing journalists’ human and individual skills, enhancing new forms of audience participation and leveraging new products which seems to lead to an increment of news media consumption by the people.

Broadcast media industry over the years and beyond continue to serve as an essential part of the societies, acting as nexus between the people and the environment by the provision of information, entertainment, and educational contents across the globe, with the three main anchor work in synergy to achieve the goal of information gathering and dissemination of relevant information to the audience (Okoro, Nwafor, & Odoemelam, 2014). The survival of the broadcast is a result of the broadcasters' resilience and adaptability to offer content to audience (Punchihewa, 2018). Everyday experience gradually borders on the Artificial Intelligence (AI) inclusion and expatiation in years to come is without questions (Nader, et al., 2022). In a bid to maintain its relevance in the future, the broadcast media industry is caving in to the adoption of AI in operations from start to finish. Is Artificial Intelligence (AI) inclusion here to replace human? Is the broadcast media replacing man with machine? Is the Artificial Intelligence (AI) inclusion in the broadcast world of merit or harm causing? With an Artificial Intelligence (AI) inclusion in broadcast media, what next?



Research questions

These questions guided this study

1. To what extent has the emergence of AI impacted broadcasting in information driven society like Imo State, Nigeria?
2. What are the challenges in the use of AI in broadcasting in information driven society like Imo State, Nigeria?

LITERATURE REVIEW

Artificial Intelligence in the Media

A lot of individuals anticipate that AI techniques will lower investigative journalism costs (Broussard, 2015). But AI models are often developed for a certain narrative, thus new projects require the creation and training of these algorithms from scratch. High starting costs can therefore not be spread over a number of items (Stray, 2019). Similar to this, large sums of money must be spent on developing the technological infrastructure and hiring highly skilled workers to create the computer vision programs needed for investigative news initiatives (de-Lima-Santos & Salaverría, 2021). Additionally, a lot of outdated and biased datasets are used to train AI models, which can lead to a lot of ethical issues (Guzman & Lewis, 2020).

AI projects were effectively implemented by traditional media channels. Moreover, in order for elite media organisations to fully grasp the potential of artificial intelligence in the media, they must advance significantly. But there are also concerns associated with this application, like the possibility of distorted information being produced that might be exploited to mislead the public. Artificial intelligence (AI) technologies have emerged as a short-, medium-, and long-term component of a larger industry reconfiguration that began with digitalisation and the internet (Broussard et al., 2019; Erdal, 2011). While AI is a new tool that demands greater knowledge from those in the news industry to further assist and develop AI skills in newsrooms, it is not a panacea for journalism. Without specifically taking into account the power dynamics between different stakeholders, AI-enforcement techniques are crucial for making sure that AI systems follow moral and legal requirements (Broussard et al., 2019).

Ukwela (2021) in her study, proved that AI systems/tools can never replace human activities in broadcasting but improve broadcasting, the significant edges the AI presenter has over the human presenter in terms error, productivity, diversification and timeliness. Kang et al. (2019) also reported that AI presenters possess the technical ability of broadcasting with zero errors and high-quality productivity outcomes, increasing the possibilities of employment in broadcast world. Linden (2017), in a study revealed that newsrooms are increasingly becoming automated in presentation of news stories. Broussard (2015) found that AI techniques aids the reduction of investigative journalism costs. According to Guzman and Lewis (2020), AI models are typically trained on outdated and skewed datasets, which can lead to a number of ethical complications that ensure ethical journalism practices. According to Broussard et al. (2019), artificial intelligence



(AI) is a new tool that members of the business must comprehend in order to further promote and boost AI skills in the broadcast sector. It is not a panacea for journalism.

Theoretical Framework

The study was anchored on the diffusion of innovation theory. This theory was propounded in 1903 by a French sociologist Gabriel Tarde which is referred to as the process by which people adopt a new idea, product, practice, philosophy, and so on.” It also centered on the fact that certain conditions increase or decrease the likelihood adoption of a new idea, product, or practice by members of a given culture. This theory predicts that media as well as interpersonal contacts provide information and influence opinion and judgment. With relations to the study, AI adoption is growing across industries and countries as the world from the different industrial revolution eras. Innovation gets to the critical mass from a gradual process that involves the innovators sharing the idea and more people getting acquainted with the idea. Just as during the transition from the analogue broadcasting to the digital broadcasting, creation of an AI-in broadcast media gives speculation about its adoption in the nearest future. Paradoxically, the broadcast media as a tool for mass communication will also contribute to the adoption of AI presenters in broadcasting

METHOD

The study adopted the qualitative research method which was an in-depth interview research using the tools of interview guide. The population of the study consisted of the 190 registered journalists in Imo State. However, due to the nature of this study the researchers purposively selected 2 broadcast journalists each from the following stations namely Ozisa FM, Orient FM, Hot FM, Darling FM and Boss FM making it ten (10) participants in the study. The rationale for selecting these stations was based on the fact that they are popular among residents in Imo State because of their engaging programmes and they are easily accessible to the researchers. These journalists were selected because of their years of experience in the broadcast industry. The purposive sampling technique was used to reach out to the participants. The researchers had separate interview sessions with the participants and each lasted between 30 to 40 minutes at their convenience. The researchers utilised explanation building technique with themes in analyzing the data.

DATA ANALYSIS

Research Question 1: To what extent has the emergence of AI impacted broadcasting in information driven society like Imo State, Nigeria?

The interviewers asked the participants extent to which the emergence of AI impacted broadcasting in information driven society like Imo State, Nigeria. In their words they answered that:

AI is an integral part of the human society, even the journalism and broadcast world and as such is veritable tool in the world of broadcasting.

Well, I believe in growth and development. AI is not the enemy here but I can say most of the journalists and news men who refuse to innovate will be replaced.



Machine is man's greatest friend and worst nightmare, choose the one you want it to be for you, because in information driven society, it can be a foe or an ally even in the media world.

Artificial Intelligence (AI) inclusion is an avenue for growth and pushes any who fails to innovate and evolve away irrespective of who you are.

As can be seen from the aforementioned excerpts, the majority of the interviewees held varying opinions about the use of artificial intelligence (AI) in broadcast media. In general, they felt that AI would advance the industry rather than work against it, and that journalists and news reporters should be more creative and innovative in order to break away from the status quo and embrace new ideas.

Research Question 2: What are the challenges in the use of AI in broadcasting in information driven society like Imo State, Nigeria

The researchers asked questions about the challenges in the use of AI in broadcasting in information driven society like Imo State, Nigeria, some of their responses are summarised below:

Well, the lack of technical knowhow and proper education of journalist and media practitioners limits the full operations of AI in the average media world.

AI inclusion opens rooms for a more globalized form of broadcast but comes with many challenges such as funds and monetary provisions to acquire the needed equipment for operations.

AI tools are slowly taking the works of the average man just as many other professions. It is now so in the broadcast world, as many broadcasters in both private and government owned media houses have limited knowledge of technological advancements in the field of broadcasting especially as it concerns AI.

The issue of government policies and regulations with regards certain operations of media, stands as a big challenge to the full emission of AI tools in broadcasting

Another notable challenge of AI it seems to kill creativity and you know broadcasting is all about creativity.

The aforementioned excerpts reveal that the majority of interviewees have reached the general conclusion that artificial intelligence (AI) inclusion in the broadcast industry is not like a hostile takeover or war invasion, but rather a space for development and growth. However, there are numerous internal and external obstacles that hinder the full operation and emission of AI tools in the Nigerian media industry.



DISCUSSION

Artificial Intelligence (AI) inclusion in broadcasting is an avenue for a dynamic and unique form of broadcasting, growth in any industry is encouraged and, therefore, Artificial Intelligence (AI) inclusion in broadcast is a welcome development. The addition of artificial intelligence (AI) has, among other things, lessened the problem of backlog journalism format in the broadcast industry and opened opportunities for more advancements and growth in the media industry. Since artificial intelligence (AI) is a tool for the industry's growth rather than its enemy, news reporters and journalists are encouraged to be more innovative and to break from the journalism status quo. The impact of AI on broadcasting in Nigeria, an information-driven society, is felt at all levels. In the case of Owerri, Imo state, this impact is felt by both administrators and journalists. This is in consonance with the study of Broussard (2015) who revealed that AI techniques aid the reduction of investigative journalism costs. Also, Broussard et al., (2019) summarized that AI is not a silver bullet for journalism, but it is a new tool which required members of the industry to possess an understanding to further support and bolster AI capabilities in the broadcast world.

Perhaps, why the finding is so, could be as a result of the fact that people are always attracted to progress. The innovation of AI has the capacity to better journalism practice hence the reason for journalists' positive attitude in embracing it in their work. This study has been able to extend knowledge by looking at the contribution of artificial intelligence in broadcasting especially in Imo state from the angle of qualitative in-depth analysis.

Everything under earth or rather on earth that has advantage has a disadvantage so no matter how AI eases the stress of the broadcast world, AI inclusion opens rooms for a more globalized form of broadcast but it is slowly removing humanity in broadcasting. AI tools are not the enemy; it even encourages stress reduction for those who know how to use them. However, those who are not acquainted with the development need to upgrade and learn how to adopt it in their work schedule so as not to be replaced by a machine at work. Many challenges handicaps the successful and speedily emission and inclusion of AI in a society like Nigeria such as lack of technical knowledge and knowhow of the operations of these tools, the unwillingness to acquire relevant upgraded knowledge, government and media regulations and on goes the list. Artificial Intelligence (AI) inclusion in broadcast is a welcome development and such stations and news men respectively should invest in growing and developing beyond the usual practices in the broadcast world embracing the growth and innovations that comes with Artificial Intelligence (AI) practices and tools. This is in tandem with a study by Broussard, (2015) which views was that AI techniques aid the reduction of investigative journalism costs. Also, Ukwela (2021) in her study, proved that AI systems/tools can never replace human activities in broadcasting but improve broadcasting, the significant edges.

The challenges highlighted perhaps could be as a result of poor training on the use of artificial intelligence in journalism. Again, the media owners' attitude towards adopting advanced technology in improving the broadcast media industry. The study has been able to extend literature on the issues surrounding the use of AI in broadcasting especially in Imo state, Nigeria.



CONCLUSION

Broadcast media industry over the years and beyond continue to serve as an essential part of the societies, acting as nexus between the people and the environment by the provision of information, entertainment, and educational contents across the globe. Artificial Intelligence (AI) inclusion in broadcast media is not here to replace human journalism approach but journalist should innovate and be open for growth in the industry. Artificial Intelligence (AI) inclusion in the broadcast world should be treated as an avenue for growth and measures should be taken for proper introduction in the Nigeria media industry in other to compete effectively and efficiently in the global media space so as to be a positive force to reckon with in terms of creativity and innovation. The study recommends Artificial Intelligence (AI) inclusion in broadcast media in an information driven society like Nigeria is a welcome development practically affecting all aspects of the media world, it is therefore recommended that media stations and workers alike should join the moving train of adopting relevant AI tools and knowledge to avoid been obsolete in its operations and activities. With regards to the issues and challenges that obstruct the full application of AI tools operations in Nigeria, it is recommended that possible and pocket friendly avenues be created by government and international bodies that these local media houses be provided with knowledge and necessary materials needed for the growth of the broadcast world.

Ethical clearance

Ethical consent was sought and obtained from the respondents used in this study. They were informed that the research exercise was specifically for academic purposes, and their participation was voluntary and were notified that at any point they are willing to opt out.

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Conflict of interest

There is no conflict of interest that exist

Authors' Contributions

Emeka Williams Etumnu: Designed the methodology section also handled data curation and analysis, Chieme Azubuike: Writing of the initial draft and handled review of manuscript.

Availability of data and materials

The datasets on which conclusions were made for this investigation are available on reasonable request.



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