International Journal of Innovative Social Sciences & Humanities Research 12(1):77-85, Jan.-Mar., 2024

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Perception of Registered Journalists on Job Security in the Era of Artificial Intelligence in Katsina State

LAWAL, Bashir Abdullahi

Department of Mass Communication and Management
Hassan Usman Katsina Polytechnic
Katsina State, Nigeria
Email: hajbash2010@gmail.com
+2348067812782

ABSTRACT
As AI continue to shape the journalism landscape, it is essential for journalists to possess adequate awareness and understanding of its capabilities and limitations. Awareness implies providing adequate information and up-dates to help people prepare themselves and take positive action to overcome threats. The perception of registered journalists vary. Some believe that AI can be harnessed as a powerful tool to amplify their work rather than replace it entirely. Others perceived it as a threat to job security. The objective of the study was to examine the perception of registered journalists on job security in the era of artificial intelligence in Katsina State, Nigeria. Descriptive survey research design was adopted for the study. The population of the study comprised two hundred and eighty-four (284) registered journalist from Eleven (11) media organizations in Katsina State, Nigeria. The entire population was used. The instrument for data collection was a 5- point rating scale instrument titled: Questionnaire on Journalists Job Security in the Era of Artificial Intelligence (QJJSEAI) developed by the researcher. The instrument was validated by 3 experts and was tested for reliability using Cronbach Alpha which yielded a reliability coefficient of 0.86. Data collected were analysed using mean and standard deviation to answer the research questions and t-test to test the hypotheses. Results indicated that there is a high extent of Artificial Intelligence (AI) awareness among registered Journalists in Katsina State and there is a high extent to which learning new skills in AI-assisted reporting ensures job security in the era of artificial intelligence. It was recommended that Media organizations should invest in comprehensive AI training and retraining programmes to equip journalists with the needed skills in AI technology.
Keywords: Artificial Intelligence, journalism landscape, media organizations

INTRODUCTION

Artificial Intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think, learn and do things like humans. It encompasses several subfields, including machine learning, natural language processing, computer vision, robotics, and expert systems, all working together to achieve intelligent behaviour. AI is a branch of computer science (CS), concerned with the scientific study of what problems can be solved, what tasks can be accomplished, and what features of the world can be understood computationally (i.e., using the language of Turing Machines), and then to provide algorithms to show how this can be done efficiently, practically, physically, and ethically (Rapaport, 2019). AI is a technology that allows machines to learn and do things on their own efficiently and faster. AI involves performing human tasks such as recognizing images or performing repetitive tasks

(Broussard et al., 2019). It has emerged as a transformative technology with the potential to revolutionize various industries, including journalism.

AI in journalism practice enables generating of news articles and using computer programmes to collect and analyses data relevant in the newsroom. Nwabueze and Okereke (2021) noted that AI have the potential to enhance efficiency, accuracy, and personalization in news delivery, allowing journalists to adapt to the changing media landscape. AI can complement the effort of journalists by performing routine tasks, thereby opening up new possibilities for journalists to explore. For Galily (2018), AI has become an indispensable part of the field of media and has brought about radical transformations in the field of journalism. In the same vein, Loosen (2018) maintained that AI has advanced the journalism field through automated content production which has facilitated the production of news. AI integration in media industry has helped to reduce the costs of investigative journalism (Broussard, 2018).

As AI continue to shape the journalism landscape, it is essential for journalists to possess adequate awareness and understanding of its capabilities and limitations. Awareness implies providing adequate information and up-dates to help people prepare themselves and take positive action to overcome threats. Awareness is about truth and facts that removes misconception about a phenomenon, thing or a person. In the study of Udoh, Nsude and Oyeleke (2022) it was found among others that all the journalists registered under the aegis of the Nigerian Union of Journalists (NUJ) in Ebonyi State are aware of the use of artificial intelligence for news production. In a similar study, Udoh, Nsude, Oyeleke and Ezeali (2022) revealed that journalists in Ebonyi State are aware of artificial intelligence for news writing but do not believe that news from this source is reliable. The perception of registered journalists vary. Some believe that AI can be harnessed as a powerful tool to amplify their work rather than replace it entirely. In this regard, Mattia (2019) asserted that AI can augment the power of journalists, opening up new possibilities and unexplored territories if a good partnership between humans and technology is synchronized.

Some scholars like Picard (2014) perceived threats of job displacement by AI-powered tools, and changes in the traditional media business model. In other words, AI can potentially replace certain journalistic functions. Furthermore, Ali and Hassoun in Lawal (2024) expressed concern about the potential implications the future of journalists, and more profoundly, the fact that human presence in the newsroom is shrinking, because human reporters will no longer be the definitive sources of news. One aspect of overcoming the pessimistic perception of AI taking over journalists' jobs could be to learn new skills in the AI era.

Journalists may need to secure their jobs in the AI era by learning new skills. Ade-Ibijola and Okonkwo (2023) considered this imperative that learning the theoretical and practical skills is required for the development, implementation, and use of AI applications. Furthermore, Lassebie (2023) elucidated that skills needed to develop and maintain AI systems, and to adopt, use and interact with AI applications, will become more important. Thus, there is no prejudice in the digital space, as everyone requires digital skills (Onyinye, 2023). Learning new skills would improve one's confidence to use technology for work, learning and daily life as a journalist. How this applied specifically to registered journalist in Katsina State is subject to further investigation. Therefore, this study zeroed its investigations on knowing how the emergence of artificial intelligence (AI) can, or has been impacting journalism practice in Katsina State, Nigeria. Also, attention was given to demographic characteristics of the journalists, particularly to gender and age. This further serve as intervening variables for the study. The inclusion was necessary because the journalists are male or female and of various ages which can influence their extent of their perception. In a previous study related to gender, age and cultural differences on the envisioned future impact of AI on humankind, Grassini and Ree (2023) revealed that males have a more positive perception on AI technology compared to females, but there was no significant difference in age. In other word, males are more comfortable with AI than females and this may affect their perception of job security differently. This claims are subject to empirical investigation, which this study is interested on.

Statement of the Problem

Artificial Intelligence is an important component for the fourth Industrial Revolution (41R) which has the potentials to change the way of living, work and interactions with fellow humans (Schwab, in Eke et al,

2023). AI has grown worldwide and is applied in different sectors to quicken production processes, increase productivity, ensure accuracy and ease in ways businesses are run. Journalism has equally been influenced by AI. It has helped to promote journalistic processes, and produce results quickly in broadcast and print media. AI can enhance the growth of the media by making large data collection, collation and dissemination cheaper and faster. Artificial intelligence has made remarkable strides in automation, data analysis, and language processing, providing new opportunities for journalists to enhance their work. Automated news writing, sentiment analysis, and data-driven reporting have become commonplace.

Despite the contribution to development, there are concerns that AI is likely to be a threat to people because of features of performing activities that were in the past preserved for humans. There are fears that it could replace many jobs as more jobs will be automated in the near future. In this regard, an economist, Sachs in Toh (2023) predicted that up to 300 million jobs across the globe could be automated in one way or the other by the wave of Artificial Intelligence. This will eventually enhance efficient production and cost reduction. However, there are fears that the increase in the sophisticated use of Artificial Intelligence (AI) may result into a high volume of job loss, laziness, and redundancy, among other negative effects in the media industry. In the assertion of Bhargava, Bester & Bolton (2020), the adoption of artificial intelligence could lead to job loss for some groups of journalists and many others.

Understanding the challenges AI pose to job security would be essential for effective policy implementation and responsible use of Artificial Intelligence (AI) technologies in the media industry. Unfortunately, proper attention has not been given by scholars in journalism profession on the challenges AI has on job security of journalists in Katsina State. It is on this background that a study in this area becomes imperative to close the gap in knowledge.

Objective of the Study

The main objective of the study was to examine the perception of registered journalists on job security in the era of artificial intelligence in Katsina State, Nigeria. Specifically, the study ascertained the extent of:

1. Artificial Intelligence (AI) awareness among registered Journalists in Katsina State Nigeria
2. Learning new skills in AI-assisted reporting ensures job security in the era of artificial intelligence

Research Questions

The following Research Questions were formulated to guide the study:

1. What is the extent of Artificial Intelligence (AI) awareness among registered Journalists in Katsina State Nigeria?
2. What is the extent to which learning new skills in AI-assisted reporting ensures job security in the era of artificial intelligence?

Hypotheses

The following null hypothesis guided the study and were tested at 0.05 alpha level of significance:

$H0_1$: There is no significant difference in the mean score of male and female registered journalists on the extent of artificial intelligence awareness in Katsina State.

$H0_2$: There is no significant age difference on the extent to which learning new skills in AI-assisted reporting ensures registered Journalists' job security in the era of AI

METHODOLOGY

Descriptive survey research design was adopted for the study. The population of the study comprised two hundred and eighty-four (284) registered journalist from Eleven (11) media organizations in Katsina State, Nigeria. The entire population was used, thus no sample for the study and census sampling technique was applied. The instrument for data collection was a 5- point rating scale instrument titled: Questionnaire on Journalists Job Security in the Era of Artificial Intelligence (QJJSEAI) developed by the researcher. The instrument was validated by 3 experts and was tested for reliability using Cronbach Alpha which yielded a reliability coefficient of 0.86. Data collected were analysed using mean and standard deviation to answer the research questions and t-test to test the hypotheses.

RESULTS

Results from data analysis were presented in this chapter as follows:

Research Questions

Research Question One: *What is the extent of Artificial Intelligence (AI) awareness among registered Journalists in Katsina State Nigeria?*

The data analysis for Research Question one is presented in Table 1.

Table 1: **The Mean and Standard Deviation on Extent of Artificial Intelligence (AI) Awareness among Registered Journalists**

S/N	What is the Extent of Your AI Awareness in the following:	$\bar{X}$	SD	Decision
1	AI technology having a wide range of application fields	3.66	0.57	High Extent
2	AI will eventually become part of every news story	3.57	0.56	High Extent
3	Automation is becoming the future of journalism	3.46	0.54	Moderate
4	AI software enhances automatic news stories production	3.51	0.56	High Extent
5	Intermediate level of knowledge	3.44	0.72	Moderate
6	Machines are programmed to think like humans	3.50	0.62	High Extent
7	Machine are learning fast	3.66	0.70	High Extent
8	AI possess ability to handle large data	3.69	0.61	High Extent
9	AI programmes are involve in news writing	3.51	0.53	High Extent
10	AI performing journalistic functions	3.59	0.53	High Extent
	Grand Mean	**3.55**		**High Extent**

Table 1 reveals that the mean scores range between 3.69 and 3.44. However, both scores were greater than the criteria mean of 3.00. Similarly, the standard deviation scores range between 0.72 and 0.53, indicating that there was not much deviation in the mean scores. Furthermore, the grand mean score was 3.55. This indicates that there is a high extent of Artificial Intelligence (AI) awareness among registered Journalists in Katsina State, Nigeria.

Research Question Two: *What is the extent to which learning new skills in AI-assisted reporting ensures job security in the era of artificial intelligence?*

The data analysis for Research Question two is presented in Table 2.

Table 2: **The Mean and Standard Deviation on Learning New Skills in AI-Assisted Reporting**

S/N	Extent Learning New Skills in the Era of AI	$\bar{X}$	SD	Decision
11	Ability to maintain AI systems in newsroom is needed in AI era	3.54	0.55	High Extent
12	Ability to adopt AI in reporting is needed in AI era	3.61	0.55	High Extent
13	Ability to use AI to write news is needed in AI era	3.64	0.54	High Extent
14	Journalists requires ability to interact with AI applications	3.52	0.41	High Extent
15	AI skills helps in expanding investigative capabilities to enriching storytelling	3.59	0.59	High Extent
16	Journalists requires skills to function effectively in the digital age	3.55	0.64	High Extent
17	Learning new skills would improve one's confidence to use technology for work	3.52	0.55	High Extent
18	By learning to use AI-powered tools can significantly increase productivity	3.53	0.62	High Extent
19	learning natural language processing (NLP) techniques enables journalists to analyse public sentiment	3.49	0.53	Moderate
20	By embracing AI-driven content creation tools, journalists can produce immersive and personalized narratives that captivate audiences in new and exciting ways.	3.46	0.51	Moderate
	Grand Mean	**3.54**		**High Extent**

Table 2 shows that the mean scores range between 3.64 and 3.46. However, both scores were greater than the criteria mean of 3.00. In addition, the standard deviation scores range between 0.64 and 0.41, indicating that there was not much deviation in the mean scores. Furthermore, the grand mean score was 3.54. This indicates that there is a high extent to which learning new skills in AI-assisted reporting ensures job security in the era of artificial intelligence.

Research Hypotheses

Research Hypothesis One

There is no significant difference in the mean score of male and female registered journalists on the extent of artificial intelligence awareness in Katsina State.

The t-test analysis of data collected to test null hypothesis one is presented in Table 3

Table 3: T-test Analysis of Male and Female Registered Journalists on the Extent of Artificial Intelligence Awareness in Katsina State

S/N	Gender	N=284	Mean	Std.	Df	t-cal	t-crit	Decision
1	Male	170	3.66	0.55	282	0.28	1.97	Accept
	Female	114	3.68	0.59				
2	Male	170	3.56	0.56	282	0.20	1.97	Accept
	Female	114	3.57	0.56				
3	Male	170	3.45	0.52	282	0.45	1.97	Accept
	Female	114	3.48	0.56				
4	Male	170	3.52	0.58	282	0.47	1.97	Accept
	Female	114	3.49	0.51				
5	Male	170	3.41	0.72	282	0.73	1.97	Accept
	Female	114	3.48	0.71				
6	Male	170	3.50	0.61	282	0.07	1.97	Accept
	Female	114	3.50	0.62				
7	Male	170	3.64	0.67	282	0.64	1.97	Accept
	Female	114	3.70	0.75				
8	Male	170	3.70	0.59	282	0.40	1.97	Accept
	Female	114	3.67	0.65				
9	Male	170	3.52	0.51	282	0.72	1.97	Accept
	Female	114	3.48	0.56				
10	Male	170	3.61	0.51	282	0.23	1.97	Accept
	Female	114	3.55	0.56				
	Grand Mean					**0.41**		**Accept**

Table 3 reveals that all the items were accepted. This is because the calculated-t values were less than the critical-t value of 1.97. More so, the grand mean value of the calculated-t of 0.41 was also less than the critical-t value. This indicates that there is no significant difference in the mean score of male and female registered Journalists on the extent of artificial intelligence awareness in Katsina State.

Research Hypothesis Two

There is no significant age difference on the extent to which learning new skills in AI-assisted reporting ensures registered Journalists' job security in the era of AI

The t-test analysis of data collected to test null hypothesis two is presented in Table 4

Table 4: T-test analysis of Age Difference on the Extent to which Learning New Skills in Ai-Assisted Reporting Ensures Registered Journalists' Job Security in The Era of AI

S/N	Age	N=284	Mean	Std.	Df	t-cal	t-crit	Decision
11	Below 44	99	3.65	0.55	282	2.38	1.97	Reject
	Above 45	185	3.49	0.55				
12	Below 44	99	3.68	0.58	282	1.57	1.97	Accept
	Above 45	185	3.57	0.53				
13	Below 44	99	3.65	0.57	282	0.27	1.97	Accept
	Above 45	185	3.63	0.53				
14	Below 44	99	3.52	0.52	282	0.07	1.97	Accept
	Above 45	185	3.52	0.51				
15	Below 44	99	3.67	0.60	282	0.59	1.97	Accept
	Above 45	185	3.54	0.58				
16	Below 44	99	3.66	0.68	282	0.61	1.97	Accept
	Above 45	185	3.49	0.61				
17	Below 44	99	3.54	0.55	282	0.54	1.97	Accept
	Above 45	185	3.51	0.55				
18	Below 44	99	3.64	0.64	282	0.22	1.97	Accept
	Above 45	185	3.47	0.60				
19	Below 44	99	3.53	0.55	282	0.97	1.97	Accept
	Above 45	185	3.47	0.52				
20	Below 44	99	3.49	0.54	282	0.03	1.97	Accept
	Above 45	185	3.45	0.49				
	Grand Mean					**0.72**		**Accept**

Table 6 shows that one item (11) was rejected because its respective calculated-t values was greater than the critical-t value of 1.97. The other five items (12. 13, 14, 15, 16, 17, 18, 19 and 20) were accepted because the calculated-t values were less than the critical-t value. However, the grand mean of the calculated-t value of 0.72 was greater than the critical-t value of 1.98. Null hypothesis two was accepted; indicating that there is no significant age difference on the extent to which learning new skills in AI-assisted reporting ensures registered Journalists' job security in the era of AI.

DISCUSSION

Table 1 the finding indicated that there is high extent of Artificial Intelligence (AI) awareness among registered Journalists in Katsina State Nigeria. This implies the registered the journalists possess good knowledge about the potentials and threats associated with the use of AI in the newsroom. The findings aligned with Udoh, et al (2022) that journalists in Ebonyi State are aware of artificial intelligence for news writing but do not believe that news from this source is reliable.

Having a good knowledge and understanding about something helps one perform effectively in that respect. This is buttressed by Harrison (2023) who found awareness to be a key indicator of success in a range of performance environments. Awareness is crucial especially as technology continues to advance at a rapid pace. It is essential for journalists to stay updated and informed about AI developments in order to report and deliver news stories accurately and effectively. AI awareness offers numerous benefits to journalists, revolutionizing the reporting process and strengthening investigative journalism. Journalists with AI knowledge can address ethical concerns associated with AI's impact on media. Awareness of the benefits of AI can help eliminate the fear that AI has come to steal away jobs. In addition, understanding algorithmic biases, data privacy, and automated content generation allows journalists to responsibly navigate AI-driven journalism. More so, awareness of AI empowers journalists to incorporate its potential into their storytelling, providing richer and more engaging content. By having the awareness on how to

utilizing AI-powered tools, journalists can perform automated data analysis, identify trends, and gain valuable insights. Moreover, AI algorithms can sift through vast amounts of data, enabling journalists to quickly gather relevant information for their reports.

In today's digital world, AI technology is powering journalism profession and journalists are not ignorant of that fact. Adequate awareness of journalists about the work environment which they operate enable them to take advantage of many situations such as utilizing the benefits of AI to improve performance. In this regard, the finding agree with Dhiman (2023) that the knowledge of artificial intelligence is transforming the journalism field. By being aware and utilizing AI, journalists can provide readers with comprehensive and in-depth information, helping them understand complex issues and policies in the society. Awareness also enable journalists to exercise editorial judgment and critical thinking to analyse AI-generated insights thoroughly to ensure balance reporting.

Findings further revealed in Table 3 that there is no significant difference in the mean score of male and female registered Journalists on the extent of artificial intelligence awareness in Katsina State. Awareness is a natural instinct that is not restricted to any particular gender. Both males and females possess awareness about themselves, others and the dynamic nature of their environment. This include the awareness of one's working environment. The finding is strengthen by the assertion of Udoh, Nsude and Oyeleke (2022) that all the journalists registered under the aegis of the Nigerian Union of Journalists (NUJ, inclusive of males and females) in Ebonyi State are aware of the use of artificial intelligence for news production. As AI becomes more prevalent in journalism, awareness of how AI function, helps journalists to understand and navigate the ethical considerations surrounding its use. Journalists can leverage AI technology to detect and combat disinformation, enabling the public to make informed decisions based on accurate news.

In Table 2 findings revealed a high extent to which learning new skills in AI-assisted reporting ensures job security in the era of artificial intelligence. The finding confirm that learning is a continuous process for a lifetime, transiting from school to work and beyond. The finding is in line with Carlsen (2016) who maintained that learning is a lifelong activity which is rooted in the integration of experiences and living, covering lifelong (cradle to grave) and life-wide learning for people of all ages, delivered and undertaken through a variety of modalities and meeting a wide range of learning needs and demands.

Learning is the best way to acquire skills. In this regard, the finding correspond with Malec (2022) that learning is the process of gaining new skills, knowledge, understanding, and values. Over the years, man has continued to acquire through learning, new knowledge, skills and experiences to improve upon his life and live successfully. Soni (2012) maintained that learning help in the acquiring and updating abilities, interests, knowledge and qualifications beginning from the pre-school years to post retirement, which promotes the development of knowledge and competences necessary for adaptation to the knowledge-based society and also valuing all forms of learning. It help people to acquire skills that enable them to survive in a dynamic-technological society.

It is obvious that the fourth industrial revolution (automation era) has brought extensive changes in the nature of work. One of the changes is that automation is likely to displace workers and the same time new occupations will be created for those who have the required skills. In this regard, the finding is supported by Raa, et al (2019) that emerging occupations are likely to be disproportionately concentrated in the non-routine and cognitive category, and require skills that cannot be easily automated. Journalists must equip themselves with appropriate skills to navigate both work and society in the era of AI.

As AI continues to revolutionize the field of journalism, acquiring new skills in this domain offers numerous benefits to journalists. These skills empower journalists to leverage AI technologies for enhanced data analysis, automate repetitive tasks, personalize news delivery, and improve fact-checking. By embracing AI, journalists can stay at the forefront of the evolving media landscape, delivering high-quality and impactful news stories to their audiences. Also, journalists can increase their market value and professional worth by staying current with the most recent technologies and trends. Staying current with the most recent technologies will not only guarantee journalists their job security but help them work efficiently.

In Table 4 finding further indicate that there is no significant age difference on the extent to which learning new skills in AI-assisted reporting ensures registered Journalists' job security in the era of AI. In other words younger journalists who are below 44 years of age and those above 45 years have the same tenacity to learn new skills. Learning is from birth to grave and no one is too young or too old to learn new skills useful for professional growth and sustainability. The findings is supported by Broady in Wilson (2016) that younger people and older adults can both be influenced and taught about technology in the same way. Even though older adults may require more attention and time to be taught about computers due to the newness of the machines but the concept of learning is irreplaceable. Learning most always take place in one form or the other.

The finding revealed no gap emerging in the learning to adopt and utilize technological innovations among the different age groups. In this respect the finding is contrary to previous studies that revealed age divide between the younger and older adults in the adoption of technology. For instance Yap, Tan and Choon (2022) posited that despite the advantage of adopting technologies, the elderly are slower to adopt new technologies compared to younger adults. Similarly, Pruchno (2019) found that despite increases in technology use among older people, many lag behind. However, the finding is in line with Onyinye (2023) that there is no prejudice in the digital space, as everyone requires learning digital skills. Journalists like others require learn new skills to enable them function effectively in the digital age. Embracing the AI era presents numerous benefits for journalists who are willing to learn new skills.

CONCLUSION

AI is already becoming the largest driver of technology in the 21st century. It has gained acceptance among many across the globe. It has no limitation to gender, age or location. As a results many fields of human endeavour are becoming automated. The use of AI in newsrooms is no more alien to most journalists. AI is being used to breakdown data so as to seek patterns, and report same, using different media types. AI is friendly to use by journalists of all ages and gender. Embracing AI technology can amplify journalistic capabilities, leading to more efficient, timely and accurate reporting. As AI continues to shape the journalism landscape, it is essential for journalists to stay well-informed and aware of its potential. By creating effective awareness and investing in training to acquire skills, journalists can navigate the AI-driven era and realize its transformative potential as well as ensuring their job security.

RECOMMENDATION

Based on the findings of the study, it was recommended as follow:

1. Training institutions for journalism should incorporate AI awareness modules in journalism curricula to expose future journalists to AI.
2. Media organizations should invest in comprehensive AI training and retraining programmes to equip journalists with the needed skills in AI technology.

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