

Reality of Algerian Electronic Journalism's Use of Artificial Intelligence Programs in Newsroom Editing Rooms: A Survey Study on a Sample of Journalists from Online News Sites

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Abstract

This paper delineates a field study conducted with a purposive sample of 30 Algerian journalists from El Chaab Online, Echorouk Online, and the Algerian International Channel AL24. Utilizing an electronic questionnaire distributed via Messenger, this investigation aimed to scrutinize the integration of artificial intelligence (AI) in journalistic practices. Employing a survey methodology, this research explores the application of AI tools in newsrooms and their implications for professional journalism.

The results reveal a predominant approval of AI utilization in journalistic endeavors, particularly in areas such as news gathering, verification, data analysis, and news story production. Nonetheless, there exists a tangible apprehension regarding the potential of AI to displace journalistic jobs in the future.

Keywords: Artificial Intelligence, Journalism, Media, Online News Sites, Newsrooms.

Introduction

In an era marked by profound technological transformations, artificial intelligence (AI) has emerged as a significant force across various industries, notably in journalism. AI's evolution from a theoretical concept to a vital instrument in digital content creation represents a fundamental shift in news production and media reporting processes. The adoption of AI in journalism transcends mere technological adoption; it is becoming an indispensable resource for journalists. AI assists in the

meticulous and transparent search, verification, and analysis of information, which is crucial to uphold the ethical standards of journalism.

Despite AI's benefits, its prevalence has sparked considerable unease among media professionals and practitioners within the realm of electronic journalism. Concerns range from AI's potential to disrupt job security to fears of it undermining privacy and ethical norms within journalism. This apprehension is compounded by worries that media proprietors might increasingly exclude the human element, which is integral to media operations.

This investigation provides a snapshot of the current employment of AI within Algerian electronic newsrooms, drawing on firsthand accounts from journalists about their experiences and professional practices in the domain of online journalism in Algeria.

Previous Studies

1. Artificial Intelligence Techniques in Media: Reality and Future Developments... An Applied Study on Communicators in Egyptian and Arab Media Institutions by Mona Mostafa Abdel Razek

This comprehensive study aimed to gauge the perceptions of communicators regarding the adoption of artificial intelligence (AI) technologies within their media practices and to foresee the future applications of AI in the media sector. Conducted among a purposive sample of 451 individuals from various Egyptian and Arab media institutions, the findings revealed a significant interest in AI news, with many respondents acknowledging AI's capacity to mimic human behavior across diverse media tasks.

The sectors that most frequently implemented AI technologies were ranked as follows: marketing, media, artistic, and administrative fields. Noteworthy AI applications in data journalism included the transformation of texts into various data formats, multilingual translation technologies, and the utilization of robotic aids in editorial tasks and news presentation, both in studios and on-field. A substantial majority of participants advocated for integrating AI technologies into media practices, highlighting their transformative potential (Abdel Razek, 2022, p01).

2. Artificial Intelligence Techniques and Their Impact on the Media Message Content at Foreign Newspaper Sites by Hala Ahmed El-Husseini Metwally and Doaa Hisham Jumaa Farahat

This investigation scrutinized the media content of prominent foreign newspaper sites, including The Washington Post, The Wall Street Journal, The New York Times, and The Guardian, to identify the prevalent AI mechanisms employed and their utilization in content production. The study concluded that these newspapers deploy a variety of AI techniques to ensure a consistently rich media presentation.

The utilization of AI varied among the newspapers, yet all benefited from digital revolution technologies in enhancing the interactive and educational aspects of their content. Notable technologies included Podcasts, distance learning platforms, Master class rooms, and live chats, which facilitated direct interactions between journalists and readers. This study emphasized that the surveyed newspapers maximized the advantages of digital technologies more effectively than other foreign newspaper sites (Metwally and Farahat, 2022, pp 1495-1519).

3. Global Survey on "Artificial Intelligence and Newsrooms" by the Google News Initiative and the Journalism Department at the London School of Economics

This comprehensive global survey stands as the largest study to date on the utilization of artificial intelligence (AI) within media operations worldwide. It questioned whether AI could replace journalists, encompassing 105 media organizations across more than 46 countries. The survey sought to understand how these entities employ AI, journalists' perceptions of AI technologies, and their attitudes towards such innovations.

The findings highlighted a significant disparity in AI capabilities between media outlets in wealthier northern countries and those in the southern regions. A notable 75% of the participants acknowledged having utilized AI in their journalistic endeavors at least once. While 40% of respondents reported no change in their perspective on AI—attributing this to their novice status or their institutions' lack of AI adoption—60% expressed concerns about AI's adherence to journalistic ethics. A significant majority (80%) concurred that AI is poised to become an essential component of journalism in the future (Al-Rimi, 2023).

Methodological Aspect of the Study

Study Problem:

The integration of artificial intelligence in media has emerged as a conspicuous trend, evident in both public and private sectors. AI's functionality mirrors that of human journalists in various aspects of media production, including information gathering, organization, storage, analysis, and dissemination. This technological integration is deemed essential for modern journalism, aligning with the digital era's demand for timely and continuous news tracking. The imperative for media institutions is to adopt AI to enhance the production of media materials that provide distinctive news and informational value to audiences.

This premise sets the stage for our examination of this phenomenon within the digital media landscape of Algeria, aiming to assess how Algerian journalists utilize AI in their professional routines and their personal and professional attitudes towards employing AI tools in crafting and disseminating news stories on online platforms.

Therefore, we pose the following main question:

What is the reality of artificial intelligence program usage by Algerian electronic journalism within newsroom editing rooms?

Sub-Questions:

- What do we mean by "artificial intelligence"?
- How does the study sample evaluate their understanding of AI and their proficiency with its techniques and tools?
- Has the study sample taken advantage of training opportunities for using AI in the media field?
- Do media institutions equip their newsroom editing rooms with AI programs and applications?

Hypotheses:

- The deeper the study sample's knowledge of AI, the more adept they are at employing its applications in media production.

- The study sample views AI as an indispensable tool that requires ongoing engagement and readiness for utilization.

Study Importance:

This study provides critical insights into the adoption and utilization of artificial intelligence (AI) by Algerian journalists within electronic platforms and journalism. It examines their personal and professional attitudes towards AI tools that support the creation of news stories and media reports, especially concerning event coverage.

Additionally, this research endeavors to assess the state of AI use within Algerian media institutions, identifying it as relatively nascent, particularly when compared to its application in Arab and international media contexts.

Study Objectives

- To investigate Algerian journalists' perceptions and attitudes regarding the use of AI in their professional practice.
- To offer a preliminary overview of how AI is being integrated and utilized within media institutions.
- To assess the proficiency of Algerian journalists in employing AI applications for producing media content.

Study Methodology and Tools

Research related to studying public or public opinion trends ties into survey studies, which aim to highlight the respondents' stance on a particular idea or issue that poses a research concern for the scholar. The survey method is among the most used in quantitative humanistic research, particularly exploratory descriptive studies. It can be a comprehensive survey of all the elements of the research community, or a sample thereof.

The survey method aims to identify and describe the basic components of the phenomenon under study in its natural setting (Dellio, 2024, p 247). Typically, surveys use questionnaires and interviews to collect and analyze data. It seems that the questionnaire is the most used tool in this type of research, and this is also the case with this study, which involved preparing an electronic questionnaire related to the research topic.

Several aspects were considered in formulating the questionnaire, including that it was directed towards the research topic, adapted to the respondents' academic and professional levels, and written in a way that avoids ambiguity, while also having a number of questions that encourage respondents to cooperate and respond (Dellio, *Foundations of Research and Techniques in Social Sciences: 130 Questions and Answers*, 1997, pp 74-75).

Research Community and Sample

The research community refers to the group that the researcher aims to study, meaning that any individual, unit, or element within that community is inherently a component of that community. The research community may consist of individuals from a public or specific categories within the society (Dandani and Hashem, 2016, p 102).

The research community for this study encompasses all Algerian journalists working in electronic journalism and online news sites; due to the large size of the research community and the difficulty of studying all its units, the necessity arose to work with a sampling system. The sample is a smaller unit from the original research community that can accurately represent the community (Dandani and Hashem, 2016, p 103).

A purposive sample of 30 Algerian journalists working at "El Chaab Online, Echorouk Online, and the Algerian International Channel AL24" was chosen, and they were surveyed through an electronic questionnaire sent to their accounts via Messenger.

2. Theoretical Aspect of the Study

2-1. On the Concept of Artificial Intelligence:

Artificial Intelligence (AI) is a discipline within computer science that involves mimicking human intelligence through computer models. This simulation involves two primary processes: teaching (acquiring information and rules) and reasoning (applying these rules to draw conclusions).

AI seeks to replicate intelligent human behaviors utilizing complex data systems, sophisticated algorithms, and diverse programming languages (Youssef, 2021, p 89). John McCarthy, one of the founding figures of AI, defines it as both a science and a

practice of engineering intelligent machines and sophisticated computer programs. This field endeavors to create systems capable of intelligent thought and action comparable to human cognition.

AI's development is underpinned by insights gleaned from understanding how humans think, learn, make decisions, and solve problems, and translating these processes into algorithms that can be executed by machines (Larara, 2023, p 53).

2-2 Artificial Intelligence in Media Professions

In the realm of professional media, AI has not only revolutionized traditional industrial sectors but has also made significant inroads into media institutions, enhancing the quality and professionalism of news production. AI technologies have induced profound transformations across various public life sectors, directly influencing media operations in photography, editing, linguistic proofreading, translation, and handling voluminous datasets (Maamari and Boushakoura, 2023, p 85).

AI is indispensable in media and journalism, markedly improving both work efficiency and content quality. By processing extensive data sets, AI tools can discern patterns and preferences among audiences, enabling journalists to tailor their content more effectively. AI's capabilities extend to the automatic generation of content, including articles and summaries, thereby expediting the media production cycle. It further enhances user engagement by delivering personalized content recommendations and analyzing sentiments and opinions expressed about the news, thus allowing journalists to gauge the impact of their content with greater accuracy.

Despite these advancements, AI presents both opportunities and challenges. It offers journalists sophisticated tools that enhance the efficiency of their work, such as the ability to quickly analyze data and identify prevailing trends. This technological empowerment allows journalists to concentrate more on creative and investigative tasks rather than mundane routines. Conversely, the integration of AI in news generation introduces challenges related to credibility and ethical standards.

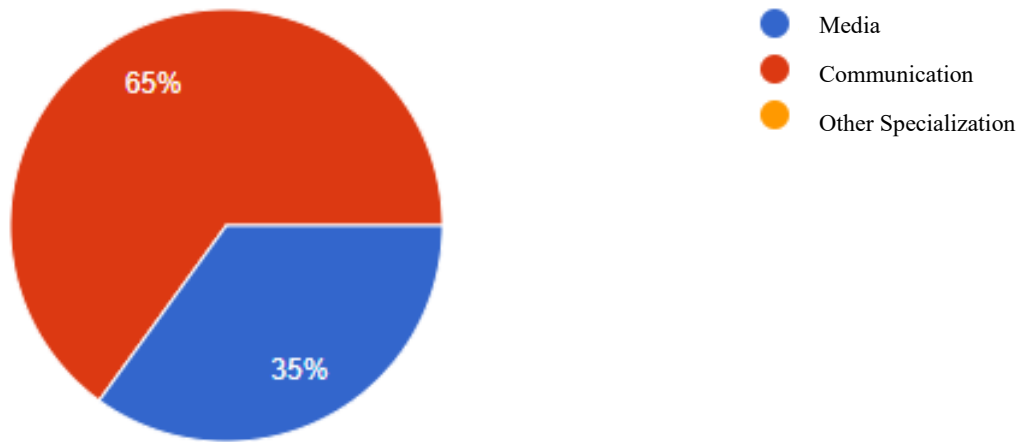
With the increased deployment of AI, there is an escalated risk of disseminating misinformation or inaccurate content. Thus, it is crucial for journalists to adhere strictly to ethical practices, ensuring that AI serves as an asset to enhance credibility and transparency in journalism. As the field evolves, journalists must also adapt by

acquiring new skills that allow them to understand and leverage AI technologies effectively in their work.

3- Practical Aspect of the Study (Analysis of Electronic Questionnaire Data)

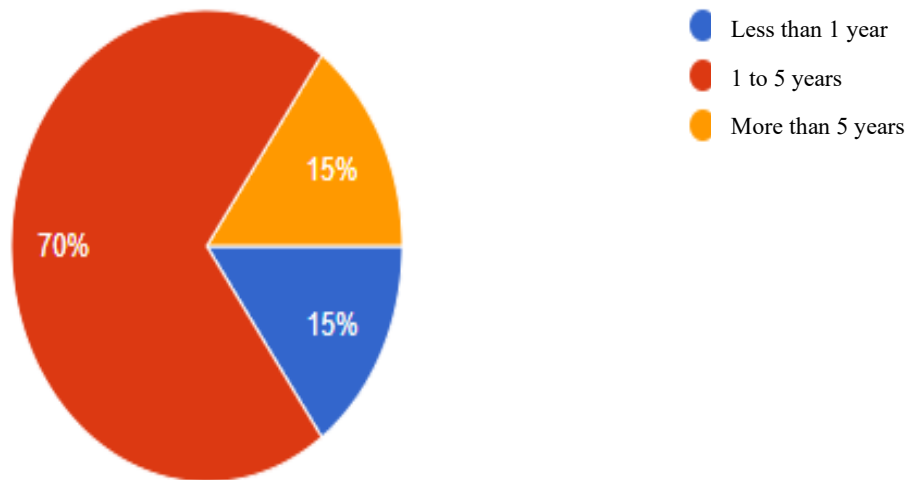
In this segment, we delve into the analysis of the data gathered from the electronic questionnaire responses provided by the participants of the study.

1. Educational Background of the Study Sample



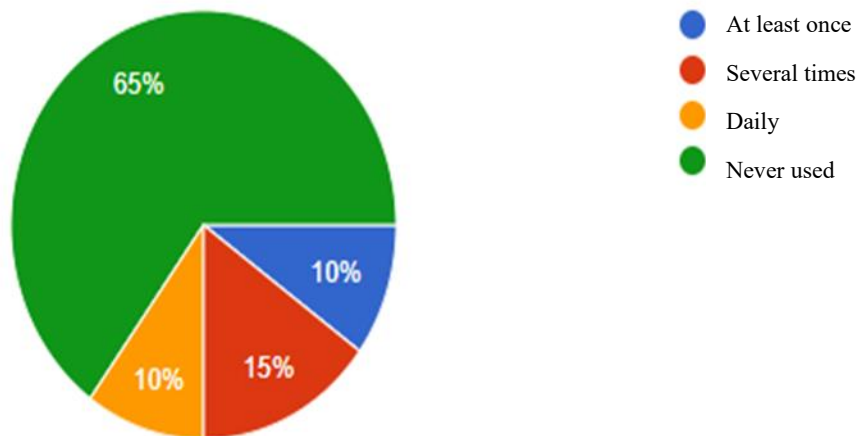
The educational background of the participants indicates that 65% have pursued university degrees in Communication, with a notable number obtaining master's level education in this field. The remaining 35% of the sample has academic credentials in Media Studies. This distribution highlights the typical educational pathways for those in the journalism profession, especially those engaged in higher education.

2. Duration of the Study Sample's Work in Electronic Journalism or News Websites



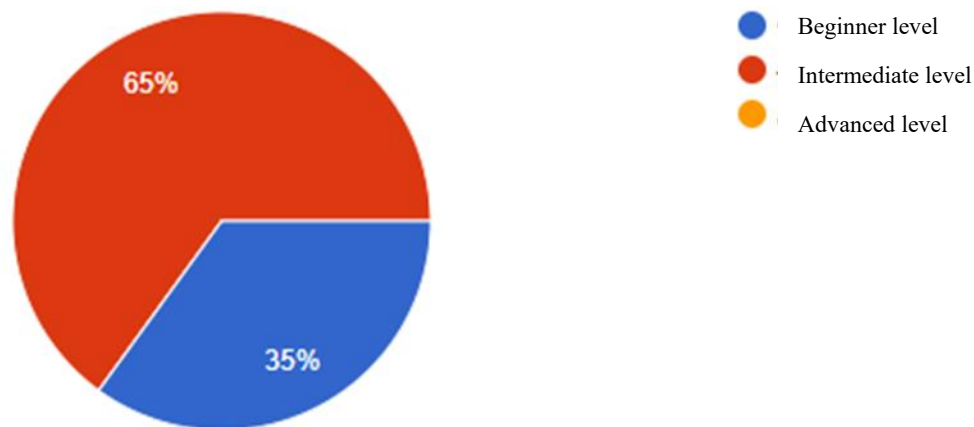
Analysis of work duration within electronic journalism reveals that a majority (70%) of the respondents possess between one to five years of experience in this sector. Meanwhile, 15% have over five years of experience, marking them as considerably seasoned in the field. The same percentage represents individuals relatively new to electronic journalism, underscoring a mix of emerging and established expertise within the sample.

3. Use of Artificial Intelligence Techniques by the Study Sample in Journalistic Work



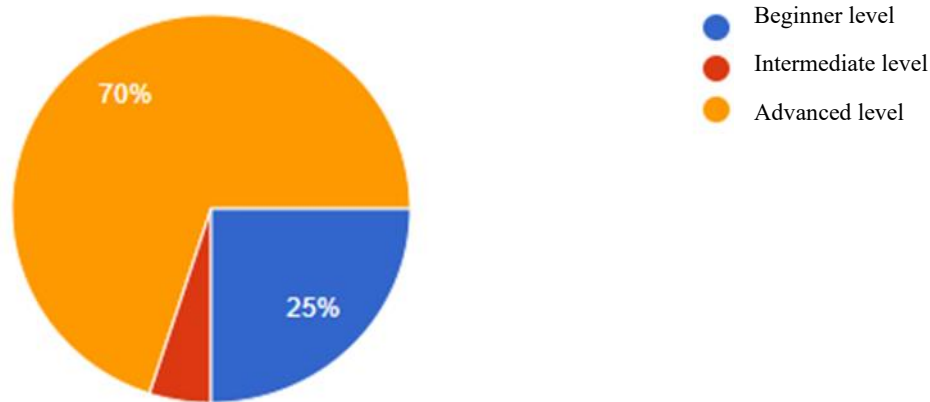
Regarding the adoption of AI technologies in journalistic work, 65% of the journalists surveyed reported that they have never used AI tools in their fieldwork. Conversely, 15% have utilized AI technologies on multiple occasions, and 10% employ these tools daily. This statistic also reflects that a portion of the sample has experimented with AI technologies at least once in their professional careers, suggesting varying degrees of engagement with AI across the sample.

4. Level of Study Sample's Knowledge on Artificial Intelligence and Its Uses



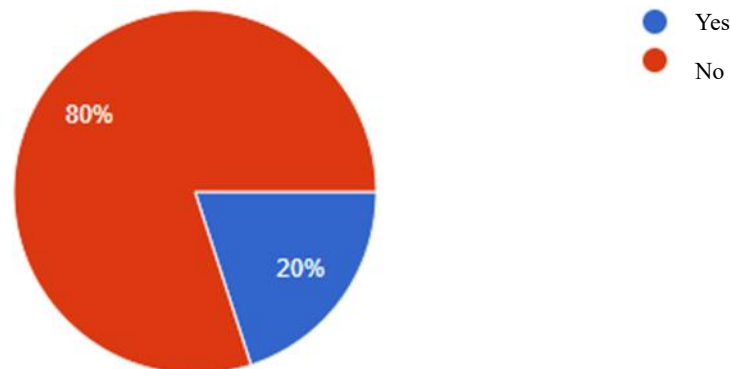
The responses concerning knowledge of AI show that 65% of the journalists rate their understanding as moderate, indicating a foundational but incomplete comprehension of AI technologies and their applications. The remaining 35% consider their knowledge of AI to be weak, which could contribute significantly to their reluctance or inability to use AI in their journalistic endeavors.

5. Study Sample's Participation in Training Courses on Artificial Intelligence Programs



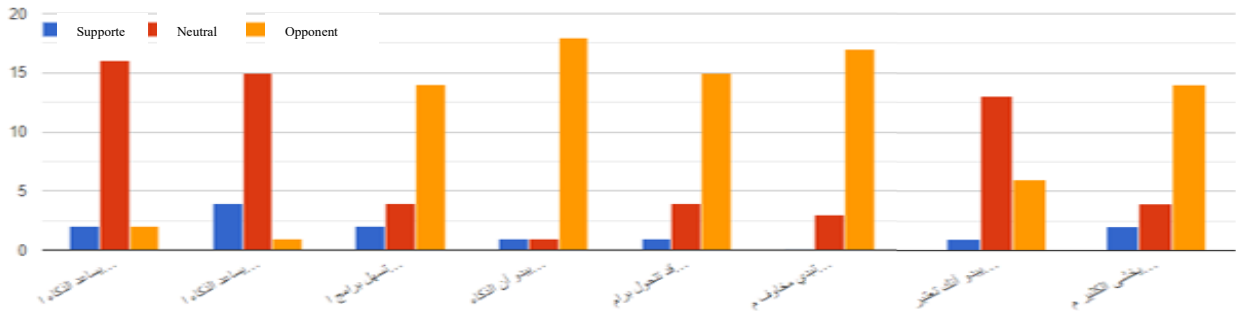
Regarding professional development, 70% of the journalists stated that they have not participated in any training courses on AI technologies. However, 25% have attended at least one training session on AI, and 5% have engaged in multiple training programs, reflecting a disparity in opportunities or initiative to undergo such training among the journalists.

6. Availability of Artificial Intelligence Programs for News and Data Editing in Newsrooms



When asked about the availability of AI programs for news and data editing in their respective newsrooms, 80% of respondents noted the absence of such technologies where they work. Only 20% reported that their media institutions provide access to AI applications in news editing, highlighting a significant gap in technological resources across different media outlets.

7. Study Sample's Attitudes Toward Certain Statements in the Survey Form



This part of the survey form contains eight statements, to which the respondents replied according to their attitudes. The data shows that most of the respondents are neutral towards the statement, "Artificial intelligence helps journalists write their news stories with professionalism and accuracy." The same goes for the second statement, "Artificial intelligence helps journalists overcome professional obstacles and risks, such as overcoming restrictions on freedom of expression and the right to access information."

The third statement, "Artificial intelligence programs facilitate the collection and verification of information," was supported by the study sample. On the other hand, most journalists consider artificial intelligence to become an essential element in journalism. Furthermore, the members of the study sample do not oppose the idea that artificial intelligence programs could become a means to spread fake and non-transparent news, thus recommending not to use them in newsrooms.

Most respondents expressed concerns that artificial intelligence programs do not respect the ethics of journalistic practice; however, their attitudes towards considering artificial intelligence a danger that undermines professional practice boundaries seem mixed, with most being neutral while others lean towards supporting this statement. Additionally, most journalists fear losing their jobs due to the dominance of artificial intelligence, a sentiment expressed by many, while a few of them are neutral towards this statement.

4- Study Results:

The analysis of the questionnaire data has yielded several critical findings, underscoring the importance of this study's focus on AI in journalism:

- The educational background of most participants, primarily in communication, may not adequately prepare them for the technical demands

of electronic journalism and website news editing. Specific training in electronic journalism might have been more advantageous.

- The relative novelty of most respondents to electronic journalism may explain their limited use of AI applications in their work.
- Three primary factors contribute to the low adoption of AI among the journalists surveyed:
 - Insufficient knowledge about AI.
 - Lack of availability of AI tools and applications within their media institutions for assisting in news production.
 - Limited opportunities to participate in training courses on the use of AI technologies in journalism.
- Despite these challenges, most journalists recognize the benefits of AI, particularly in enhancing efficiency in news gathering, verification, data analysis, and story production.
- Concerns about AI compromising journalistic ethics were significant, especially regarding the potential for its use in producing deceptive or fake news.
- The apprehension about job displacement due to AI advancements is a widespread concern among journalists, reflecting a critical issue as AI integration into journalism continues to expand.

Conclusion:

This study has explored the dynamic interplay between artificial intelligence (AI) and media practice through a purposive survey of journalists engaged in electronic journalism. The participants provided insights into their attitudes towards AI's role within media activities. The findings highlight a notable shortfall in the use of AI applications among journalists, particularly in the domains of news production, data gathering, and analysis. Based on these insights, the study concludes with several strategic recommendations designed to foster a more AI-integrated journalistic environment:

- Media institutions should provide AI programs within newsrooms to help their journalistic staff produce distinguished media content;
- It is essential to enable journalists to continuously attend training courses in the use of AI programs;
- Journalists should use AI within a legal framework dictated by the ethics of journalistic practice and general principles.

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