Journal of Peace, Development and Communication

Article:	**AI and the Future of Journalism: Perception of Pakistani Journalists on the Opportunities and Limitations of ChatGPT**
Author(s):	Rabeeia Ahmed Faculty, Department of Media Sciences, SZABIST University, Islamabad
	Waseem Ahmed Abbasi Senior Producer, HUM News, Islamabad
	Hira Shakil Faculty, Department of Media Sciences, SZABIST University, Islamabad
Published:	28th May 2024
Publisher Information:	Journal of Peace, Development and Communication (JPDC)
To Cite this Article:	Ahmed, R., Abbasi, W. A., & Shakil, H. (2024). AI and the Future of Journalism: Perception of Pakistani Journalists on the Opportunities and Limitations of ChatGPT. *Journal of Peace, Development and Communication, 08*(02), 145–157. https://doi.org/10.36968/JPDC-V08-I02-11
Author(s) Note:	Rabeeia Ahmed is serving as a Faculty Member at Department of Media Sciences, SZABIST University, Islamabad Email: rabeeia.ahmed@live.com
	Waseem Ahmed Abbasi is serving as a Senior Producer at HUM News, Islamabad Email: wabbasi96@gmail.com
	Hira Shakil is serving as a Faculty Member at Department of Media Sciences, SZABIST University, Islamabad Email: hirasalman.jan86@gmail.com

ABSTRACT

This research article attempts to analyze the capacity and limitations of ChatGPT and offers reflections on the implications of generative AI for journalists. It also examines the perception of Pakistani journalists regarding the opportunities and limitations of the software. The research has four major objectives; to investigate the knowledge of journalists regarding ChatGPT, to investigate the perception of journalists towards the opportunities and limitations of ChatGPT, to examine the extent of usage of the software among Pakistani journalists; and lastly to determine if Pakistani journalists favor the use of AI tools in content creation. A questionnaire was used to collect data from 200 Pakistani journalists associated with different media organizations. The findings indicate that according to the perception of Pakistani journalists, AI softwares usually hallucinates data which can lead to misinformation. The study also revealed that the human agency is required for effective use. They also believe that proper training is required for journalists in order to use these apps for enhanced performance instead of using it as a substitute.

Introduction

The landscape of journalism is undergoing a significant transformation influenced by the rapid development and integration of artificial intelligence technologies. The emerging artificial intelligence, particularly generative AI, represents a new frontier in media content creation, offering capabilities that range from automating routine reporting tasks to generating complex narrative content (Carlson, 2014). The way news is gathered, created, and disseminated is changing dramatically thanks to artificial intelligence, which has become a powerful instrument. Artificial intelligence algorithms have revolutionized news gathering by efficiently classifying vast volumes of data from several sources. AI can help journalists to get a complete analysis of the most recent events by tracking news headlines, social media trends, and other online content in real time (Simon, 2023).

In the global digital era, journalists are progressively utilizing AI tools in order to improve the overall quality and effectiveness of news reporting and storytelling. Furthermore, AI tools help in the news collection process and report writing. The fast speed artificial intelligence has made content creation easier with advance algorithms which gives journalists liberty to focus more on investigative work (Pavlik, 2023).

Artificial intelligence has found to be useful in news collection and verification. AI powered tools make it easier for journalists to scan large volumes of data to identify news patterns and trends, and even to verify sources and facts more efficiently. AI may also be significant in fighting fake news and misinformation which are prevalent on digital platforms. Additionally, AI helps keep an eye on breaking news and trending topics on social media enabling reporters to catch up with the emerging stories and stay up to date in this digital era (Diakopoulos & Koliska, 2016).

There is no doubt in the fact that these technologies have an immense potential to revolutionize the media industry however they also introduce challenges particularly in terms of accuracy, ethical considerations, and misinformation (Brennen et al., 2018). Emerging new media technologies are posing new ethical and legal concerns for news organizations who are using AI for content creation and distribution. Generative AI tools can increase efficiency and overall productivity in the newsroom however, there is a risk of mistakes, ethical issues, and a reduction in public trust all at the same time. AI can make it easy for people to misuse journalists' original work causing copyright issues; this creates a need for proper code of conduct for its usage in order to avoid such concerns (Miroshnichenko, 2018).

According to Jamil (2020), it is important to look into how artificial intelligence is affecting the journalistic practices in the under developing countries. There is no doubt that the adoption and integration of AI in journalism can provide several advantages to journalists and media organizations therefore, it is important to explore how journalists perceive these changes.

This study explores the perception of Pakistani journalists towards ChatGPT which is a prominent example of generative AI. It is crucial to understand these perceptions as journalists' attitudes towards these tools will likely shape the future of journalism in Pakistan and beyond. The findings of the study can help media organizations and educational institutions in Pakistan to develop policies, training programs, and strategies in order to facilitate the effective and ethical use of ChatGPT and other tools in journalism. The research has the following objectives:

- To investigate the knowledge of Pakistani journalists regarding ChatGPT.
- To investigate the perception of journalists towards the opportunities and limitations of ChatGPT.
- To assess how frequently Pakistani journalists are using ChatGPT in their professional roles.
- To determine the attitudes of Pakistani journalists towards the integration of ChatGPT and other AI tools in journalism.

Literature Review

The literature review for this study consists of three different strands. The first part explores the broader implications of AI in journalism while especially focusing on ChatGPT, the second one focuses on AI usage in Pakistani media landscape, and the third mentions journalist perceptions of AI technologies.

Generative AI in Journalism

New media technologies are changing the way of journalism works. Studies have shown that AI tools can automate news writing, help with data analysis, and even create detailed stories (Van Dalen, 2012; Carlson, 2019). On one hand, these advancements carry great potential for efficient reporting, on the other hand they also bring up some serious concerns. A fear also exists regarding AI replacing human journalists or producing misleading or incorrect news articles (Diakopoulos, 2019).

Additionally, there are ethical questions about how clear AI generated content is and who is accountable if AI news is found to be inaccurate (Wu et al., 2021). An analysis of the content produced by ChatGPT shows that these tools have limitations to meet journalism standards. It needs to be further verified, processed, and revised by a professional journalist before it can be published in the media. Although ChatGPT is an impressive tool for information generation and processing, it has significant shortcomings for each of the six analyzed standards: it produces biased content, lacks current information, has a strong contextual dependency, can fabricate facts, and omits data sources (Zagorulko, 2023).

Even though AI has some advantages and may help reduce some undesirable phenomena, the GPT press releases content lacked the necessary factuality and credibility, which are believed to be crucial elements of the news text. Based on the existing findings, tools like ChatGPT aren't quite as good at creating news articles as human journalists are. However, as artificial intelligence continues to develop and more data becomes available, along with increased internet access, the ability of AI to produce journalistic content is expected to improve significantly (Nagyová & Hudíková, 2023).

AI and Pakistani Media

The unique media landscape of Pakistan is characterized by a blend of traditional media dominance alongside a rapidly growing digital media sphere. This blend makes it an interesting case for studying how AI is being integrated within Pakistani media environment (Hassan & Akhtar, 2021).

As new media technologies are emerging rapidly, Pakistani journalists should focus on enhancing their skills and responsibilities instead of viewing AI advancements as a threat. The media organizations should also engage in AI research, policy development, and cross-government cooperation in order to adapt well with the changing landscape. Several challenges

are faced by Pakistani journalists in implementing AI driven changes in journalism such as insufficient resources, limited data availability, and a digital divide. Therefore, it is important to address these issues to improve the efficiency of automated journalism and to incorporate AI tools effectively (Chandio et al., 2024).

AI is transforming journalism through the automation of news production and distribution eliminating for human intervention. Pakistani journalists should embrace this change and train for tasks beyond algorithms, such as in-depth analyses and investigative reporting. Automation may replace routine topics but also creates new jobs in news-generating algorithms development (Jamil, 2020).

Journalist Perceptions of AI Technologies

The adoption of new media technologies in journalism is heavily influenced by the perceptions and attitudes of journalists towards that technology. According to Gondwe's research (2023), human agency is required at every step of Chatbot utilization. Journalists need proper knowledge of these tools in order to use them for their own benefits. African journalists indicated that there are a lot of biases and stereotypes in the system. According to a journalist, ChatGPT will never assist in crafting a feature story that challenges Western narratives.

On the other hand, Western studies show a wide range of perceptions including optimism about the benefits of AI in journalism and fears about job security and the degradation of journalistic quality (Thurman & Schifferes, 2012; Ferrucci, 2020).

The Pakistani journalists claim that adequate support and training programs are required for proper implementation of AI in journalism (Shah et al., 2024). Body of the reviewed literature reveal that there is a lack of research on how journalists in developing countries perceive the arrival of AI technologies. Therefore, there is a need for specific studies in order to understand the acceptance and utilization of AI in journalism within different cultural and economic contexts.

This research study aims at finding out the perceptions of Pakistani journalists regarding ChatGPT's role in their profession.

Theoretical Framework

This study is supported by the Mediamorphosis theory. Developed by Roger Filddler in 1997, the theory examines how new media emerge and transform the media landscape, thus affecting communication patterns, media industries and, more broadly, societal interaction. It is also referred to as digital morphosis. This term became widely used after its introduction by Roger Fidler in his book Mediamorphosis: Understanding New Media, where the scholar explains the way new media emerge from the already existing ones due to their complete transformation. According to Fidler, "New media do not displace old media; they transform them". Thus, the impact of new media on traditional one is much more complicated. This transformation is usually the result of a complicated interaction between perceived needs, political pressures, and social and technological progress.

According to Fidler (1997), mediamorphosis is a unified way of thinking about how communication media have evolved technologically. He took the ideas of co-evolution, convergence, and complexity as the foundation for his mediamorphosis theory. According to Ekeli and Enobakhare (2013), the main stance of Fidler is that as new media forms evolve and develop, they gradually and to varying degrees influence the development of other existing

media such that the existing media converge with the emergent media to improve their operations, and the emergent media displace the existing ones.

Research questions

RQ1: What is the level of understanding among Pakistani journalists regarding the capabilities and functionalities of ChatGPT?

RQ2: What are the perceived opportunities and limitations among Pakistani journalists regarding the use of ChatGPT in their work?

RQ3: How frequently do Pakistani journalists use ChatGPT in their professional tasks?

RQ4: What are the attitudes of Pakistani journalists towards the integration of ChatGPT and other AI tools into the journalism workflow?

Method

In this study, a standardized questionnaire was given to a sample of respondents using a quantitative survey research approach. The questionnaire comprised of 11 close-ended and 1 open-ended question. The researchers used stratified proportional random sampling to ensure maximal representation and reliability. The sample of the study consisted of 200 professional Pakistani journalists from diverse media backgrounds. In order to gather information from respondents, a standardized questionnaire was distributed via Google Docs. The survey included questions on their knowledge of ChatGPT, perceptions of its utility and risks, usage of ChatGPT and their attitude towards the adoption of ChatGPT and other AI tools in journalistic practices. The researchers used prior literature to determine the potential opportunities and limitations of ChatGPT in journalism. An open-ended question was added in the end of the survey to explore Pakistani journalists' perspectives on whether AI will ever replace human journalists. The aim was to encourage people to share detailed and thoughtful answers so the researchers could better understand their worries, hopes, and predictions for their careers.

Data was analyzed using SPSS whereas the tables were created in Microsoft office. The researchers employed standard research techniques like pretesting the survey, guaranteeing anonymity for participants, and gathering a diverse sample of Pakistani journalists in order to ensure the reliability and validity of data.

Results

Table 1: Demographic Information of Respondents

Demographic Feature	Total Responses	Percentage (%)
Age		
Under 25	21	10.5
25-34	83	41.5
35-44	60	30
45-54	30	15
55 or above	6	3
Gender		
Male	137	68.5
Female	63	31.5
Position		
Reporter	64	32
Editor	48	24
Producer	33	16.5
Freelancer	35	17.5
Other	20	10
Type of Organization		
Newspaper	42	21
Online news media	88	44
Television	65	32.5
Radio	5	2.5
Years of Experience		
Less than 1 year	20	10
1-5 years	59	29.5
6-10 years	73	36.5
More than 10 years	48	24

N=200

Table one presents a comprehensive breakdown of demographic characteristics of survey respondents, categorized by age, gender, position, type of organization, and years of experience in journalism. Each category is listed with corresponding counts and percentages of respondents falling into each subgroup. Most number of journalists belong to 25-34 age group representing 41.5% of the sample. 68.5 percent of the total respondents are male, and 31.5 percent are female journalists. Data reveals that overall 32% respondents are reporters followed by 24% editors, 16.5% producers, 17.5% freelancers and 20% others i.e. anchor etc. Table one also shows that the majority of respondents are from online media, and 36.5% have between 6 and 10 years of experience.

Table 2: Knowledge of ChatGPT among Pakistani Journalists

Knowledge level	Responses	Percentage %
Very Familiar	46	23
Moderately Familiar	75	37.5
Slightly Familiar	63	31.5
Not Familiar at All	16	8

N=200

Table 2 shows 46 respondents, or 23% of the total, are very familiar with ChatGPT, indicating a high level of understanding or expertise. 75 respondents, making up 37.5% of the total, have a moderate level of familiarity. 63 respondents, or 31.5% of the total, are slightly familiar, implying a basic understanding that may lack depth. 16 respondents, or 8% of the total, have no familiarity with ChatGPT, indicating a complete lack of knowledge or exposure.

Table 3: Extent of Usage of ChatGPT in Journalistic Practices

Usage	Responses	Percentage %
Daily	25	12.5
Weekly	46	23
Monthly	34	17
Rarely	64	32
Never	31	15.5

N=200

Table 3 reveals a distribution skewed towards less frequent use, with the largest group of respondents using ChatGPT rarely, followed by weekly, and then those who never use it at all. 34 respondents use the software monthly representing 17% of the total while 25 respondents use the service daily, making up 12.5% of the total.

Table 4: Perception Towards Opportunities of ChatGPT

Statement	Responses	Percentage %
ChatGPT enhances journalistic productivity	106	53
ChatGPT helps produce more diverse content	98	49
ChatGPT may automate key journalistic tasks	145	72.5
ChatGPT helps in data verification	35	17.5

N=200   (Multiple responses allowed)

72.5% of respondents acknowledge that ChatGPT has the capability to automate significant aspects of journalism, indicating a strong belief in its potential to handle routine or repetitive tasks effectively. 17.5% of the respondents believe that ChatGPT is helpful in

verifying data, showing a relatively lower confidence in its ability to perform this specific function compared to other areas. 106 journalists agree that ChatGPT enhances journalistic productivity. This view is held by 53% of the respondents, indicating a majority perception that ChatGPT can increase efficiency or output in journalistic tasks. 49% of respondents believe that ChatGPT contributes to content diversity, suggesting that nearly half of the surveyed journalists see ChatGPT as beneficial for broadening the range and variety of journalistic content.

Table 5: Perception Towards Limitations of ChatGPT

Statement	Responses	Percentage %
Misinformation/Inaccuracy	169	84.5
Biased Content	175	87.5
Lack contextual understanding	195	97.5
Ethical Issues i.e. transparency	117	58.5
Dependence on technology	65	32.5

N=200   (Multiple responses allowed)

Table 5 indicates that 97.5% of the respondents are worried about the lack of contextual understanding in content generated by ChatGPT. More than 80% showed concerns about biased content and inaccuracy. 32.5% of the sample expressed concern about an over dependence on technology, suggesting that a minority of journalists worry about becoming too reliant on AI tools, potentially at the cost of traditional journalistic skills and autonomy.

Table 6: Attitudes Towards the Integration of ChatGPT and other AI Tools in Journalism

Descriptors	Responses	Percentage
Favorable	60	30
Cautious	113	56.5
Neutral	22	11
Unfavorable	5	2.5

N=200

30% of the respondents are optimistic about the role of AI in their field. 56.5% have reservations, 11% of the respondents neither opposes nor strongly supports AI in journalism, possibly due to uncertainty or insufficient information about its implications. 2.5% have an unfavorable view of AI integration likely due to concerns over issues such as misinformation, loss of jobs, or ethical dilemmas.

Table 7: Perceived Needs for Support and Training

Type of Support/Training	Responses	Percentage (%)
Technical training on AI tools	155	77.5
Ethical guidelines specific to AI	120	60
Workshops on integrating AI with traditional journalism	143	71.5
Regular updates on AI advancements	113	56.5
Other (specify)	30	15

N=200 (Multiple responses allowed)

According to table seven, 77.5% of the respondents believe that technical training is essential, indicating a strong demand for skill development to effectively use AI technologies in journalism. 60% of respondents highlighted the need for ethical guidelines specific to AI. 71.5% of journalists showed high interest in understanding how AI can complement rather than replace traditional journalism skills. 56.5% believe staying informed about ongoing developments in AI is necessary, underscoring the fast-evolving nature of AI technologies and their implications for journalism. 15% of journalists indicated other forms of support/training are needed which include access to paid version of ChatGPT, specialized data journalism skills and legal issues concerning AI.

Discussion and Conclusion

The survey explored journalists' knowledge of ChatGPT, the extent of usage, perception of its opportunities and limitations, attitudes towards its integration in journalism, and perceived needs for support and training. From the data, it appears that journalists' knowledge of ChatGPT varies, with a considerable portion being either moderately or very familiar with this tool. However, there is still a significant minority that is only slightly familiar or not familiar at all with it.

According to the survey results, most Pakistani journalists believe that ChatGPT has the capacity to automate many journalistic tasks. They consider it to be fruitful in the creation of diverse content and data verification. This study also explored the perceptions of Pakistani journalists regarding the limitations of ChatGPT. Many journalists are extremely worried about the realistic ability of ChatGPT to produce biased results moreover, they are anxious about the circulation of fake information. Results also indicate that concerns exist regarding ethical issues and ChatGPT's lack of contextual understanding among Pakistani journalists.

Journalists in Pakistan have mix attitudes towards the integration of ChatGPT and other AI tools, more than 50% of the respondents are cautious about the role of AI in their profession. This reveals that most of the journalists have reservations about the incorporation of AI tools in the field of journalism.

Results of this study indicate that Pakistani journalists are in favor of training programs that can provide support in the effective utilization of AI tools. Many journalists believe workshops are required in order to teach users how new AI tools can be integrated with traditional journalistic methods. Data also shows that Pakistani journalists are interested in understanding the ethical guidelines when it comes to the use of AI in journalism. They think

regular updates should be available on AI advancements so that they can keep up with the changing media landscape.

The open-ended question in the survey was useful in understanding journalists' overall feelings about AI usage in journalism. Many journalists mentioned a concern of losing their job to AI because they believe these tools are becoming more efficient with each passing day. Some Pakistani journalists are hopeful about AI and they believe that it will enhance the quality of their work and they will use it for their own benefits. As of now, most of the journalists feel that AI is not there yet in terms of efficiency and human agency is still required to carry out journalistic tasks.

Overall, the findings suggest that AI have the potential to revolutionize journalism in Pakistan however journalists have majors concerns regarding its future ramifications and current limitations. It is recommended that media organizations and academic institutions should develop rigorous training programs to help journalists in the better understanding of ChatGPT and its use in journalism. It is also important to propose ethical guidelines in order to ensure an appropriate use of AI in journalism so that the issues of bias, transparency and accountability can be resolved.

References:

Brennen, J. S., Howard, P. N., & Nielsen, R. K. (2018, December). An Industry-Led Debate: How UK Media Cover Artificial Intelligence. Oxford; Reuters Institute for the Study of Journalism.

Carlson, M. (2019). Automating judgment? Algorithmic judgment, news knowledge, and journalistic professionalism. *New Media & Society, 21*(3), 550-568. https://doi.org/10.1177/1461444818795097

Carlson, M. (2014). The robotic reporter: Automated journalism and the redefinition of labor, compositional forms and journalistic authority. *Digital Journalism*, *3*(3), 416–431. https://doi.org/10.1080/21670811.2014.976412

Chandio, S., Memon, S., Ibupoto, N. A., & Rasheed, Z. (2024). Age of artificial intelligence in Pakistani media landscape: challenges and opportunities. *International Journal of Contemporary Issues in Social Sciences*, *3*(1), 1546–1555.

Diakopoulos, N. (2019). *Automating the news: How algorithms are rewriting the media*. Harvard University Press.

Diakopoulos, N., & Koliska, M. (2016). Algorithmic transparency in the news media. *Digital Journalism*, *5*(7), 809–828. https://doi.org/10.1080/21670811.2016.1208053

Ekeli, E. O. & Enobakhare, J. O. (2013). Social media and the changing nature of journalism practice in Nigeria. In D. Gambo (Ed.) The Nigerian Journal of communication 1(1):118- 138.

Ferrucci, P. (2020). What's AI doing in the newsroom? An analysis of the impact of artificial intelligence on the labor of journalism. *Journal of Broadcasting & Electronic Media, 64*(2), 222-239. https://doi.org/10.1080/08838151.2020.1751916

Fidler R. F. (1997). *Mediamorphosis: Understanding new media*. New York: Pine Forge Press.

Gondwe, G. (2023). ChatGPT and the Global South: how are journalists in sub-Saharan Africa engaging with generative AI?. *Online Media and Global Communication*, *2*(2), 228- 249. https://doi.org/10.1515/omgc-2023-0023

Hassan, S., & Akhtar, B. (2021). Digital journalism in Pakistan: Opportunities and challenges. *Journal of Digital Media & Policy, 12*(1), 87-104. https://doi.org/10.1386/jdmp_00030_1

Jamil, S. (2020). Artificial Intelligence and journalistic practice: The crossroads of obstacles and opportunities for the Pakistani journalists. *Journalism Practice*, *15*(10), 1400–1422. https://doi.org/10.1080/17512786.2020.1788412

Miroshnichenko, A. (2018). Ai to bypass creativity. will robots replace journalists? (the answer is "yes"). *Information*, *9*(7), 183. https://doi.org/10.3390/info9070183

Nagyová, P., & Hudíková, Z. (2023). Artificial Intelligence as a creator of journalistic content. *Media & Marketing Identity*, 356–367. https://doi.org/10.34135/mmidentity-2023-36

Pavlik, J. V. (2023). Collaborating with CHATGPT: Considering the implications of Generative Artificial Intelligence for Journalism and Media Education. *Journalism & Mass Communication Educator*, *78*(1), 84–93. https://doi.org/10.1177/10776958221149577

Simon, F. M. (2023). Escape me if you can: How ai reshapes news organisations' dependency on platform companies. *Digital Journalism*, *12*(2), 149–170. https://doi.org/10.1080/21670811.2023.2287464

Shah, M. H. A., Khoso, I. A., & Dharejo, N. (2024). Journalist Perceptions and Views towards the Integration of AI-based Applications in the Journalism Industry in Pakistan: Expansion of the UTAUT Model. *Annals of Human and Social Sciences*, *5*(2), 317–326. https://doi.org/https://doi.org/10.35484/ahss.2024(5-II)30

Thurman, N., & Schifferes, S. (2012). The future of personalization at news websites:

Lessons from a longitudinal study. *Journalism Studies, 13*(5-6), 775-790. https://doi.org/10.1080/1461670X.2012.664341

van Dalen, A. (2012). The algorithms behind the headlines. How machine-written news redefines the core skills of human journalist. *Journalism Practice*, *6*(5–6), 648–658. https://doi.org/10.1080/17512786.2012.667268

Wu, S., Tandoc Jr., E. C., & Salmon, C. T. (2021). Journalism reconfigured: AI, algorithms, and accountability in the newsroom. *Journalism Studies, 22*(12), 1587-1603. https://doi.org/10.1080/1461670X.2021.1925610

Zagorulko, D. I. (2023). Chatgpt in newsrooms: Adherence of AI-generated content to journalism standards and prospects for its implementation in digital media. *"Scientific Notes of V. I. Vernadsky Taurida National University", Series: "Philology. Journalism,"* *2*(1), 319–325. https://doi.org/10.32782/2710-4656/2023.1.2/50